ARTICLES

ENVIRONMENTAL EQUITY: THE NEXT GENERATION OF FACILITY SITING PROGRAMS

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I. INTRODUCTION

Environmental equity refers to the equal distribution of environmental risks across population groups. Conversely, environmental inequity exists when risks are disproportionately borne by particular population groups. Hazardous waste facility sites can be seen as indicators of environmental risk, at least to the extent that they pose actual, potential, and perceived risks.¹ Such risks can be economic, negatively affecting surrounding property values, or health-related, exposing populations to cancer-causing agents. Thus, demographic trends around facility locations are a measure of how environmental risks are distributed across population groups.

A number of published reports have called attention to inequitable siting of hazardous waste facilities in the United States. Recently, however, these findings have been challenged. In the April 1994 issue of Evaluation Review, the article, “Hazardous Waste Facilities ‘Environmental Equity’ Issues in Metropolitan Areas” (Evaluation Review Report) reaches a different conclusion. While previous studies have noted that hazardous waste facilities are more likely to be found in areas occupied by poor and minority populations,² the Evaluation Review Report claims

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¹ See Charles J. McDermott, Balancing the Scales of Environmental Justice, 21 FORDHAM URB. L.J. 689, 691-94 (1994). McDermott, Director of Government Affairs, WMX Technologies, Inc., an environmental services company, argues that “[t]here are wide gaps between perceived risks and actual risks” associated with waste management. Id. at 693.

² See generally GENERAL ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STA-
that there are "no consistent and statistically significant differences in the racial or ethnic composition of tracts that contain commercial [treatment, storage, and disposal of hazardous waste facilities] and those that do not."3

Given the tenor of the on-going debate over whether certain population groups bear a disproportionate share of environmental risks, the Evaluation Review Report most likely will accelerate the war of numbers and statistics. On both sides, proponents are sure to produce facts and figures to prove or disprove the existence of environmental inequities associated with hazardous waste facility sites. Regardless of the outcome of the statistical and quantitative debate, the concept of environmental equity — the equal distribution of environmental risks across populations groups — will survive. The idea of environmental equity will particularly persist in the context of hazardous waste facility siting under the rubric of fairness in process and equality of outcome in future siting. To be sure, the Clinton Administration has elevated the proposition that no one population group should bear a disproportionate share of environmental risks to a national goal,4 and the relationship between race, class, income, and the environment has emerged as a high-profile media subject.5


Despite the lack of evidence suggesting racial and economic inequities in the distribution of hazardous waste facilities, calls for environmental equity in future facility siting will continue, because equity is often defined by public perception. Many minority communities, poor communities, environmentalists, and civil rights activists are now convinced that the poor and minorities suffer from environmental injustices, and statistics are unlikely to alter their convictions.  

This article argues that the statistical debate over whether environmental inequities in the location of hazardous waste facilities exist should not, by itself, dictate whether environmental equity measures are employed by public and private actors in siting facilities in the future. Instead, to make siting processes more legitimate in the eyes of all parties involved, facility siting programs should be shaped to promote equity through fairness and equality measures with respect to both process and outcome. Fairness in process includes engaging as much as possible all parties with interests at stake in the siting process from the start. Specifically, race, ethnicity, income, and the history of past siting practices should be essential elements of site assessments. Environmental equality exists where facility sites with a greater proportion of minorities or poor people do not occur in numbers greater than other sites. In the context of facility siting, these environmental equity measures are consistent with the direction and spirit of siting program evolution, and should be the cornerstone of future facility siting policies.

The article begins by placing the issue of environmental fairness in the historical, legal, and social context of race relations in the United States. The article argues that the legacy of slavery...
and sanctioned and covert acts of discrimination against racial and ethnic minority people should not be overlooked in working towards environmental equity. Part II provides a brief overview of three studies, two noting the existence of environmental inequities, and a third challenging this view. This section holds that the limits of statistical analysis preclude any immediate or final conclusions about the distribution of facilities across population groups and related environmental risks. Part III describes how the federal government, states, and grass-roots organizations have responded to claims of environmental inequities. Part IV describes the evolution of siting programs in the United States. As siting processes have evolved over time, they have enhanced fairness and legitimacy through compensation and public participation enhancement measures. Part IV concludes that the next generation of siting programs should institutionalize fairness measures that recognize the importance of distributing hazardous waste facilities equally across racial, ethnic, and income groups. Part V maintains that new siting paradigms should weigh race, ethnicity, income and the history of siting practices. This section also argues that because environmental equity benefits all population groups, it should be an important part of environmental policy at all levels of public and private siting activity. This article concludes that in light of the legacy of unequal treatment of particular population groups in the United States and in the face of evidence suggesting disparate siting practices, poor and minority communities should be suspicious of unfair facility siting — and the resulting unequal distribution of environmental risks. These suspicions can be put to rest by creating siting programs that are fairer in process and outcome.

II. CAUSE FOR CONCERN: A HISTORICAL PERSPECTIVE OF UNEQUAL TREATMENT

Perhaps the best way to understand the deep suspicions of minority populations as to whether environmental risks have been equitably distributed is to put race and ethnicity into social and historical perspective. A brief review of the histories of Black-Americans and Mexican-Americans is particularly illustrative of two minority groups which have been subjected to une-

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7. "Race differentiates among population groups based on physical characteristics of a genetic origin (i.e., skin color), and 'ethnicity' refers to differences associated with cultural or geographic differences (i.e., Hispanic, Irish)." EPA Equity Report, supra note 2, at 10.

8. The principle of environmental equity is equally applicable to other locally unwanted land uses such as sewage treatment plants, prisons, and incinerators.
A Tradition of Exploitation and Unequal Treatment

The beginning of the Civil War in 1861 signalled the end of slavery in the United States. After the defeat of the Confederate Army in April of 1865, the Thirteenth Amendment was ratified in December of 1865 to abolish slavery.

Prior to the ratification of the Thirteenth Amendment, the Constitution supported the institution of slavery. Indeed, the drafters of the Constitution vigorously debated the issue of slavery, with Thomas Jefferson and Benjamin Franklin opposing the practice. In the end, the Constitutional Congress delegates chose to give constitutional support to slavery rather than risk impairing an already tenuous coalition of states. When slavery

9. For the purposes of this article, "Black-Americans" refers to all groups of people of the black race in the United States. "Mexican-Americans" refers to all people who either were once citizens of Mexico or are descendants of people who were at one time Mexican citizens.
11. Id. at 85. Section one of the Thirteenth Amendment states that "Neither slavery nor involuntary servitude... shall exist within the United States..." U.S. CONSt. amend. XIII, § 1.
12. Slavery was rampant in the United States even before the original colonies declared their independence from Britain:
The American institution of slavery began in 1619, when a Dutch warship sold twenty African slaves to the settlers in Jamestown, Virginia. During the next two centuries, many millions of Africans were brought to the American colonies in chains. By 1760, there were over three hundred thousand slaves in the American colonies; by 1790 there were almost seven hundred thousand. At the time of the [American] Revolution, there were black slaves in every state.
13. In Thomas Jefferson's initial draft of the Declaration of Independence, he included slavery and the slave trade as objections against the King. FARBER & Sherry, supra note 12, at 148. Ironically, Jefferson himself possessed over 200 slaves. Id. But see Douglas L. Wilson, Thomas Jefferson and the Character Issue, THE ATLANTIC, Nov. 1992, at 57 (arguing we should not judge Jefferson based solely upon the fact that he owned slaves). Benjamin Franklin was president of the Pennsylvania Society for the Abolition of Slavery. FARBER & ShERRY, supra note 12, at 154.
14. See FARBER & Sherry, supra note 12, at 154 (explaining how Benjamin Franklin refused to deliver an address before the Constitutional Convention on behalf of the Pennsylvania Society for the Abolition of Slavery "because it would have inflamed the Southern delegates."). The southern states viewed slavery as an essential part of their way of life, believing that their local economies were dependent on slave labor to a large extent. For example, Charles Cotesworth Pinckney, delegate from South Carolina, stated that:
While there remained one acre of swamp-land uncleared of South Carolina, I would raise my voice against restricting the importation of negroes.
was finally abolished by the ratification of the Thirteenth Amendment in 1865, real improvements in the lives of former black slaves were not immediate. A constitutional amendment simply could not alter the legacy of slavery that had encompassed generations.

Like Black-Americans, Mexican-Americans have inherited a long history of unequal treatment and discrimination, especially in the Southwest. The history of exploitation of the Mexican ethnicity dates back to the conquest of present-day central Mexico. The invading Spanish conquered the indigenous peoples and systematically destroyed an entire culture. A new hierar-

I am . . . thoroughly convinced . . . that the nature of our climate, and the flat, swampy situation of our country, obliges us to cultivate our lands with negroes, and that without them South Carolina would soon be a desert waste.


The Constitution contains approximately ten clauses supporting the South's demands that slavery be preserved. These are: (1) Article I, Section 2, three-fifths clause; (2) Article I, Section 2, taxation clause; (3) Article I, Section 8, insurrection clause; (4) Article I, Section 9, fugitive slave clause; (5) Article I, Section 9, direct taxation clause; (6) Article I, Section 9, export duty clause; (7) Article I, Section 10, expoli duty clause; (8) Article IV, Section 2, fugitive slave clause; (9) Article IV, Section 4, republican government clause; and (10) Article V, Section 9, unamendability clause. WILLIAM M. WIECEK, THE SOURCES OF ANTISLAVERY CONSTITUTIONALISM IN AMERICA, 1760-1848 62-63 (1977). See also FARBER & SHERRY, supra note 12, at 153, 174.

15. These two minority groups are not the only ones with a history of unequal treatment in the United States. Clearly, American Indians, Asians, Jews, and other identifiable minorities have endured systematic and, often, government-sanctioned discrimination. For the purposes of this article, however, only the two largest minority groups, namely Black-Americans and Mexican-Americans, will be used as examples.

16. Race, technically, refers to black and white. Thus, Mexican-Americans and other Latinos are classified as white, although there are Latinos who are black. Ethnicity is a subset of the white or black race. For example, Mexican-Americans are an ethnicity, as are Puerto Ricans and Cubans.

17. See INTRODUCTION TO CHICANO STUDIES 3, 9-10 (Livie Isauro Duran & H. Russell Bernard eds., 2d ed. 1982) [hereinafter CHICANO STUDIES]. Duran and Bernard briefly described the brutality of the conquest of central Mexico:

Between 1519 and 1562 . . . the Indian population of central Mexico alone fell from 25 million to 2.5 million . . . Indians were moved from mountains to coastal plantations where they died, unable to adjust to the environment. They were herded off to work in the mines, where they died of exhaustion and malnutrition. And many were just killed outright for refusing to become slaves . . . .

Id. at 9. It is important to note, however, that thousands of Indian allies who were enemies of the Aztecs assisted Hernando Cortés in the defeat of the Aztec empire. Id. at 8.

Interestingly, the European Spanish culture and identity did not entirely replace the indigenous cultures and languages. Rather, the encounter resulted in a new ethnicity, where cultures and languages mated to produce an entirely new identity, the Mexican. Neither Spanish nor Indian, the Mexican was a hybrid of both. See id. at 9. By contrast, the United States was populated by white Europeans who "neither incorporated [American Indians] racially into the population nor even used
chy was established where the white European Spaniard population was the elite; followed by the mestizos, or the mixed races of Spanish and native Indians as a middle class; and the darkskinned indigenous peoples at the bottom of the hierarchy.

Mexico lost what is now the southwest and western United States in the Mexican-American War, which was ended by the ratification of the Treaty of Guadalupe Hidalgo. The Treaty provided that Mexicans who chose to remain on United States soil were guaranteed to keep their property rights, maintain their unique culture, and continue speaking Spanish.18

In theory, the purpose of the Treaty of Guadalupe Hidalgo was to preserve the status and property of Mexicans in the newly acquired territories. In reality, however, the United States constructively and deliberately violated almost every term of the treaty.19 Many Mexicans lost their real property because they were unable to produce documentation of ownership that would satisfy legal standards in U.S. courts.20 With their ownership rights lost, many Mexican-Americans found themselves living in barrios or communities segregated from their white counterparts and often in the poorer and neglected sections of towns and cities. In short, within years of the enactment of the Treaty of Guadalupe Hidalgo, Mexican-Americans found themselves on the fringes of society on their own native land.

With this historical background of Black-Americans and Mexican-Americans in mind, it is not surprising that these groups

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18. "The present Treaty provides amply and specifically in its 8th and 9th Articles for the security of property of every kind belonging to Mexicans, whether acquired under Mexican grants or otherwise . . . ." Letter from James Buchanan to the Minister of Foreign Relations of Mexico, reprinted in CHICANO STUDIES, supra note 17, at 183. See also JULIAN SAMORA & PATRICIA VANDEL SIMON, A HISTORY OF THE MEXICAN-AMERICAN PEOPLE 100 (1977).


20. SAMORA & SIMON, supra note 18, at 101; see also CHICANO STUDIES, supra note 17, at 11.
have experienced unequal treatment in many arenas. In housing, for instance, blacks were sometimes segregated from whites out of fear that a mixing of the races would prove detrimental to both blacks and whites. Such segregation was implemented by way of "real estate practices, intimidation, and legal regulations." Even today, real estate practices in some areas of the country subject blacks to unequal treatment. For example, preliminary studies for the Boston area show that race, not income, is the dominant factor explaining racial discrepancies in the borrowing of money related to the purchase of homes and real estate. Evidence shows that blacks are rejected three times more than whites for mortgages in greater Boston even when blacks in higher income categories are compared to their white counterparts.

Education is another area impacted by unequal treatment. "Separate but equal" educational facilities and systems for blacks and whites were legally maintained in the United States for many years under the Supreme Court's holding in *Plessy v. Ferguson.* In practice, however, separate was anything but equal. For this reason, *Brown v. Board of Education* overturned *Plessy in*


22. *Id.* See also GEORGE R. METCALF, *FAIR HOUSING COMES OF AGE* 29 (1988) (stating, in part, that racial equality in housing has not been achieved at the same rate as racial equality in jobs and education due to white prejudice.).


24. Zuckoff, *supra* note 23, at 1; *Home Mortgage Disclosure Act Data,* supra note 23, Table 1. Previously, the issue revolved around the lack of minority lending in predominantly ethnic neighborhoods, commonly referred to as "redlining." See Zuckoff, *supra* note 23, at 1. Redlining is the practice of delineating certain areas of a city with a red mark on a map and refusing to make loans because of the suspected high risk. Although preliminary evidence indicates that race is probably the primary reason for mortgage loan discrepancies, other reasons yet to be studied, such as heavier debt loads and lower-quality credit histories among minorities, may also play a role in the inequity. *Id.*

Aside from lending practices, other commentators have reported that blacks who attempted to move into white neighborhoods have sometimes been met with violence. Farley, *supra* note 21, at 15. See also ANDREW HACKER, *TWO NATIONS: BLACK AND WHITE, SEPARATE, HOSTILE, UNEQUAL* 36 (1992). "Jim Crow" laws also allowed some cities the right to specify certain areas as white or black. In 1912, for instance, the Virginia State Legislature passed such a law. Farley, *supra* note 21, at 15. However, laws blatantly delineating white and black neighborhoods were declared unconstitutional by the Supreme Court in 1917. Buchanan v. Warley, 245 U.S. 60 (1917) (holding unconstitutional a city ordinance forbidding any "colored person" to live on a block where the majority of residents were white).

The court recognized that segregation created a greater evil; namely, the deliberate subordination of blacks.  

Mexican-Americans also experienced discriminatory treatment in the classroom. For example, up until the 1970s, many students were punished for speaking Spanish in school and area grounds. Moreover, gerrymandering, or the drawing of district boundaries according to racial and ethnic lines, was used as a way to segregate Mexican-American and Black-American students from whites. The resulting districts created disparities in tax revenues as well, thus establishing both relatively wealthy white and poor black and ethnic minority school districts.

Equal treatment in the workplace also suffers from the legacies of discrimination against Black-Americans and Mexican-Americans. Persons from these groups have often been relegated to assume the “low-status positions” in employment, even within trade organizations. Furthermore, in many employment sectors Black-Americans remain underrepresented in spite of many gains.

Arrest rates by race show that the Black-American arrest rate is disproportionately high relative to the black community share of the population in the United States. This trend also extends to include offenders, victims and prisoners. Most troubling of all is the disparate use of capital punishment in the United States across racial lines: the death penalty is imposed in greater numbers where victims were white and defendants black.

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29. See SAMORA & SIMON, supra note 18, at 163.

30. Id.

31. Id. at 170.

32. See HACKER, supra note 24, at 108-12. With respect to “African American professionals”, Asante and Mattson explain that:

[[the “revolution” of the 1960s changed many of the discriminatory practices of the past preparing the way for more access [to managerial occupations]. However, the residual effects of historical discrimination continue to the present day and account for the low percentage of African Americans in managerial positions . . . . Learning to live with black professionals was one of the most difficult lessons whites had to learn in order to change their attitudes about African Americans. The lessons have not been fully learned in some quarters even now, but the situation is far different and more equitable than it has ever been.]]

ASANTE & MATTSON, supra note 10, at 179.

33. ASANTE & MATTSON, supra note 10, at 180-81.

There are also numerous reports about the historic discriminatory treatment Mexican-Americans have experienced within the criminal justice system. According to one account, “[d]uring the period from 1865 to 1920, there were more lynchings of Mexican-Americans in the Southwest than of Black-Americans in the Southeast.”

Finally, there have been many instances of unequal provision of municipal services across racial communities. For example a series of cases have come before the Eleventh Circuit dealing with disparate provision of municipal services. The court of appeals in those cases inferred illegal discriminatory treatment by examining “the nature and magnitude of the disparity; [the] foreseeability of the disparate impact of the official action; the legislative and administrative history of the decisionmaking process; and the knowledge that the action would cause the disparate impact.” In those cases, black communities existed in relative squalor, as compared to their white cohorts.

On balance, however, federal, state, and local governments have acted to outlaw most overt forms of discrimination in many areas. Black-Americans and Mexican-Americans also have made progress towards equal treatment and acceptance in the United States. Still, the words of Alexis de Tocqueville in the 1830s remain descriptive of race relations today:

A natural prejudice leads a man to scorn anybody who has been his inferior, long after he has become his equal; the real inequality, due to fortune or the law, is always followed by an imagined inequality rooted in mores . . . . [I]n the modern world the hard thing is to alter mores . . . . The law can abolish servitudes, but only God can obliterate its traces.

35. DOCUMENTARY HISTORY, supra note 19, at 181.
37. Godsil, supra note 36, at 417 (citing Ammons, 783 F.2d at 988 and Dowdell, 698 F.2d at 1186).
40. ALEXIS DE TOCQUEVILLE, DEMOCRACY IN AMERICA 314 (J.P. Mayer & Max Lerner eds. & George Lawrence trans., 1966).
Indeed, given that inequality still abounds in modern U.S. society, it is no wonder that ethnic and racial minorities find themselves constantly in search of more equality and equal treatment.

In summary, as these varied historical accounts illustrate, Black-Americans and Mexican-Americans have been the subject of various forms of racial and ethnic discrimination. These groups have been relegated to the bottom rungs of society in the United States, often enduring unequal treatment in areas such as housing, employment and municipal services. Certainly, minority communities living in areas that evidence suggests are environmentally riskier than their white counterparts may view this dubious distinction as another example of the legacies of inequality which they confront daily.

B. Statistical Evidence of Environmental Inequities

A study conducted by the General Accounting Office (GAO) in 1983 found that in the Environmental Protection Agency’s Region IV three of the four area’s off-site hazardous waste landfills were located in communities where blacks made up the majority of the population. The GAO Report also found that in all four sites, blacks in “surrounding census areas had lower mean income[s] than the mean income for all races combined” and represented the majority of persons below poverty level in those areas.

The GAO Report was followed in 1987 by a highly publicized report published by the United Church of Christ Commission for Racial Justice entitled, “Toxic Waste and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites” (Commission Report). The Commission Report found that areas with the highest number of commercial hazardous waste facilities had the highest mean percentage of residents who are members of a minority group. By contrast, the report noted that those areas with no waste facilities had a lower proportion of minority residents. Furthermore, the Commission Report stated that the percentage of minorities in a community was a stronger predictor of the degree of commercial hazardous waste activity than was household income, the value of homes, the number of uncontrolled waste sites or the estimated amount

41. GAO Report, supra note 2, at 1. Region IV is comprised of the following eight states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.
42. Id. at 3.
44. Id.
of hazardous wastes generated by industry. According to the Commission, their findings "represented a consistent national pattern."

Contrary to the findings of the GAO Report and the Commission Report, researchers at the Social and Demographic Research Institute and Northeast Regional Environmental Public Health Center at the University of Massachusetts at Amherst found no consistent or significant differences in the racial or ethnic composition of tracts containing commercial hazardous waste facilities and those that do not. The authors of the 1994 Evaluation Report indicated that the GAO Report and the Commission Report relied on larger units of geographic aggregates — ZIP code areas — which contained or bordered commercial hazardous waste facilities. The researchers, using census tract areas as the basis for their areal aggregates, did not find the disparities in facility locations as reported by the GAO in 1983 and the Commission in 1987.

Because census tract areas are smaller than ZIP code divisions, the researchers were able to focus on unit areas physically closer to hazardous waste facilities without having to include information from census tracts that were in the same ZIP code areas yet not immediately bordering the facility. They found that when larger areas were analyzed their findings changed "dramatically": areas with facilities had higher percentages of blacks and Hispanics than other tracts. The authors concluded "that whether minorities are exposed to greater risks depends on how distance from [treatment, storage, and disposal] facility sites is related to that risk, an issue on which there is currently little knowledge."

As these studies show, there is evidence showing both inequitable past siting practices and no significant disparities. The findings are only preliminary; clearly, further research is necessary to understand better the nature of the relationship between

45. Id.
46. Id. at xiii.
47. See Evaluation Review Report, supra note 3, at 127.
48. Id. at 135-36.
49. Id. at 136.
50. Id. at 123. The Evaluation Review Report has its critics. Robert D. Bullard, professor of sociology at the University of California at Riverside, for example, criticized the study for using census tract areas as the basic units for analysis. Bullard claims that such units "are too large for meaningful analysis." Robert Braile, No Pattern of Bias Found in Locating Toxic Waste Plants, BOSTON GLOBE, May 10, 1994, at 3. Benjamin Goldman, of the Jobs and Environment Coalition (based in Boston, Massachusetts), faults the study for considering only 36,923 of 61,258 tracts, thereby excluding more white rural areas and distorting the results. Id. Moreover, other critics reproach the study for focusing on incinerators and other similar facilities, overlooking "the broad range of injustices that minorities face..." Id.
race, income, hazardous waste facilities and risk. Nevertheless, full comprehension of this relationship may never be realized.

C. The Limits of Quantitative and Risk Analysis

While statistics are useful tools for describing siting trends and determining risks, they have limits. For this reason, we may never know the full extent of the relationship between race, environmental risks and human health. In turn, this uncertainty complicates further the determination of costs associated with a hazardous waste facility.

Inherent in the siting of a hazardous waste facility is "that some risk is unavoidable, especially to the residents of the area immediately around the facility."\textsuperscript{51} This, however, does not necessarily mean that the facilities are unsafe; "rather, assessments of safety entail profound value judgments by all of the individuals involved."\textsuperscript{52} That is, acceptable levels of risk vary by individual. According to some, the wealthy tend to value a risk-free environment higher than their poorer counterparts.\textsuperscript{53} Still, placing an accurate measure on "value judgements" is far from an exact science.

There are limits to the technical aspects of risk assessment because "risk assessment is not a purely scientific endeavor."\textsuperscript{54} Risk assessment depends on estimations disagreed upon by many scientists.\textsuperscript{55} For instance, the impact of toxic substances on human and biological health is not entirely clear, because present research technologies and methodologies are "very inadequate for ascertaining how much and in what way segments of the population are exposed to a particular chemical."\textsuperscript{56} Yet the National Research Council has noted that exposure to hazardous waste is related to "a variety of symptoms of ill health in exposed persons, including low birth rate, cardiac anomalies, headache, fatigue, and a constellation of neurobehavioral problems."\textsuperscript{57} The Council also suggested that there are "excesses of cancer in resi-

\textsuperscript{52} Id. at 62-63.
\textsuperscript{53} See, e.g., LAWRENCE S. BACOW, WASTE AND FAIRNESS: NO EASY ANSWERS, FORUM FOR APPLIED RESEARCH AND PUBLIC POLICY 43, 44-45 (Spring 1993).
\textsuperscript{54} MICHAEL WILLIAM MULLEN, THE ROLE OF RISK ASSESSMENT AND COMMUNICATION IN COMMUNITY RESPONSES TO HAZARDOUS WASTE MANAGEMENT PROJECTS: POTENTIAL ABUSES OF RISK ASSESSMENT, IN PSYCHOSOCIAL EFFECTS OF HAZARDOUS TOXIC DISPOSAL ON COMMUNITIES 10 (DENNIS L. PEEK ED., 1989).
\textsuperscript{55} Id.
\textsuperscript{56} J. CLARENCE DAVIES ET. AL., AN ISSUE REPORT: DETERMINING UNREASONABLE RISK UNDER THE TOXIC SUBSTANCES CONTROL ACT 9 (1979).
dents exposed to compounds, such as those that occur at hazardous waste sites.” Moreover, risk assessment cannot account for the “dynamic processes of individual, community and national consensus building and policy development on waste management and other issues.”

In summary, we cannot reach final conclusions about the relationship between race, ethnicity and environmental risk because of the uncertain nature of risk assessment. At best, studies can document demographic trends around hazardous waste facility sites. Because current technologies cannot provide a standard of proof high enough to show conclusively the health impacts of environmental risks associated with hazardous waste facilities, it is time to take proactive steps to avoid discovering in the future that serious damage was done to Black-American and Mexican-American populations because of unfair siting practices. As former EPA administrator Douglas Costle has observed, “[s]ociety must make some cold-eyed calculation about how much it can afford to preserve human life... [but] cost benefit analysis, no matter how precise, cannot replace social policy judgements.”

III. ENVIRONMENTAL EQUITY IN THE PUBLIC LIGHT

A. Public Concern

Putting aside the findings of the GAO Report, the Commission Report, and the Evaluation Review Report, the issue of “environmental racism” has been taken to the streets and community meetings across the United States. As early as 1982, local black groups in Warren County, North Carolina, organized against what they perceived as discriminatory dumping of haz-

58. Id. On the other hand, Joan Z. Bernstein, Vice President of Environmental Policy and Ethical Standards at Waste Management, Incorporated, has stated that “only a very small number of the epidemiological investigations of [populations living near hazardous waste sites] have shown any clear associations between the incidence of serious diseases and the presence of waste sites or contaminated media.” Joan Z. Bernstein, The Siting of Commercial Waste Facilities: An Evolution of Community Land Use Decisions, 1 KAN. J. L. & PUB. POL’Y 83, 85 (1991).


60. COST BENEFIT ANALYSIS AND ENVIRONMENTAL REGULATIONS: POLITICS, ETHICS AND METHODS 156 (Daniel Swartzman et. al., eds. 1982). Julie A. Rogue, assistant professor at the Graduate School of Architecture and Urban Planning at the University of California at Los Angeles has also argued that “[r]ather than requiring hard ‘proof’ that risks exist and adverse effects occur, the obvious evidence that hard-hit communities are bearing the brunt of multiple hazards should be sufficient to take action now toward a more just environmental regulatory system.” Overview: Environmental Equity, ENVIRONMENT 4 (Sept. 1994).
ardous waste in their community. Grass-roots groups took to the streets, protesting the dumping of more than 6000 truckloads of soil contaminated with polychlorinated biphenyl (PCB) in a community that was more than 84% black. A more recent example of grass-roots minority activism occurred in Kings County, California in 1991. There, Mexican-American farm workers and growers alike joined together to oppose the siting of a hazardous waste incinerator in their rural community. Academic and other institutions also have explored environmental justice issues through conferences and lecture series.

As with many other issues of environmental justice, siting practices have been challenged in the courts. For the most part, these efforts have been unsuccessful where plaintiffs have relied on constitutional equal protection jurisprudence. In these instances, plaintiffs were unable to meet the requisite discriminatory intent standard. To prevail on a federal equal protection theory, a plaintiff must show more than disparate impact of a law or state action on a particular group of persons; the plaintiff also must demonstrate discriminatory purpose or intent. However, because state officials rarely act with overt discriminatory purpose, showing unlawful intent through circumstantial evidence is nearly impossible. For this reason, legal commentators agree

61. BULLARD, supra note 6, at 35.
62. Id. at 36-37.
66. E.g., Washington v. Davis, 426 U.S. 229, 239 (1976) (holding that a violation of the Fourteenth Amendment Equal Protection Clause requires proof of discriminatory purpose; a showing of disproportinate effect is not enough); Arlington Heights v. Metropolitan Housing Corp., 429 U.S. 252, 265 (1977) (same).
that attacking environmental inequities in the courts on a federal equal protection theory is not very effective or efficient.\footnote{67}

In \textit{Bean v. Southwestern Management Corp.},\footnote{68} for example, the plaintiffs challenged a decision by the Texas Department of Health to grant Southwestern Waste Management a permit to operate a solid waste facility at the edge of the City of Houston.\footnote{69} The plaintiffs alleged that the decision to site the facility in their community and adjacent to an un-airconditioned high school was a violation of 42 U.S.C. § 1983, because the decision was partly motivated by racial discrimination.\footnote{70}

The plaintiffs argued that the permit approval was consistent with a pattern of discrimination in the siting of other solid waste sites.\footnote{71} After reviewing the data, however, the court did not find systematic discrimination. The plaintiffs also alleged that the permit approval process itself was tainted with discrimination.\footnote{72} Although the plaintiffs relied on three sets of data to show discriminatory intent, the court determined that the data were not enough to prove discriminatory intent.\footnote{73} Notwithstanding its


\footnote{69} \textit{Id.} at 674-75.


\footnote{71} \textit{Bean}, 482 F. Supp. at 677.

\footnote{72} \textit{Id.} at 678.

\footnote{73} \textit{Id.} The first set of data included only two solid waste sites located in their community, which the court did not find "statistically significant" enough to show discrimination. \textit{Id.} The second set of data showed that while the area in question contained 15% of Houston's solid waste sites, it contained only 6.9% of Houston's population, of which 79% were minority. \textit{Id.} Instead of inferring discrimination from these figures, the court noted that it made sense for the City of Houston to locate such facilities in areas with little population, and that half of the target area waste sites were in census tracts with a population greater than 70% Anglo. \textit{Id.} Focusing on the city as a whole, the third set of data was presented to show discriminatory effects resulting from the siting process. \textit{Id.} Although the court claimed that this information was persuasive, it nonetheless discredited the data's conclusiveness. \textit{Id.} at 679.
holding, the court criticized the siting decision because “it simply does not make sense to put a solid waste site so close to a high school, particularly one with no air conditioning . . . [n]or does it make sense to put the [undesirable facility] so close to a residential neighborhood.”

In *East Bibb Twiggs v. Macon-Bibb County Planning & Zoning Commission*, the plaintiffs charged the Macon-Bibb County Planning and Zoning Commission (Commission) with racial discrimination under the Fourteenth Amendment for the Commission’s decision to site a solid waste facility in a predominantly black community. The Commission initially denied a conditional use application for the operation of the facility because 1) the facility would be located next to a residential area; 2) the area would be subject to heavy truck traffic; and 3) the additional traffic and noise would be “undesirable” in a residential area. However, the Commission later reversed itself and subsequently granted the applicants permission to site the facility in the Black community. Although the plaintiffs presented several newspaper articles describing a series of actions by the Commission which allegedly proved discriminatory purposes, and revealed that the Commission was aware of racial and socio-economic discrimination in the community, the court found no illegal discrimination in the Commission’s decisionmaking.

Similarly, the plaintiffs in *R.I.S.E., Inc. v. Kay* could not provide evidence inferring discriminatory purpose in the siting of a landfill in their community. They claimed that they were deprived equal protection under the Fourteenth Amendment because landfills were routinely sited in predominantly Black communities. Although the court found that the siting of landfills in King and Queen County, Virginia, from 1969 to the time of trial had a disproportionate impact on black residents, it held that the plaintiffs did not provide sufficient evidence to prove the requisite discriminatory purpose. Rather, the court noted that

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74. *Id.* at 679-80.
76. *Id.* at 882.
77. *Id.* at 883.
78. *Id.* at 885.
79. *Id.* at 885-86. The plaintiffs cited to a study on housing in which the Commission found that racial and socio-economic discrimination existed in the community. *See Macon-Bibb County Planning and Zoning Commission, Action Plan for Housing* (Mar. 1974).
81. *Id.* at 1149.
82. *Id.*
the administrative steps taken by the Board of Supervisors (Board) to purchase the site and to authorize its use as a landfill showed "nothing unusual or suspicious." In the court’s opinion, the Board “appear[ed] to have balanced the economic, environmental, and cultural needs of the County in a responsible and conscientious manner." Further, the court indicated that the Board was responsive to the concerns of citizens opposed to the landfill. For example, the Board created a citizens’ advisory group, assessed other site recommendations made by a neighborhood group, and discussed with the landfill operator ways to lessen the negative impact of the facility. The court commented that the Equal Protection Clause does not impose an affirmative duty to “equalize” the effects of official decisions on different social groups; rather, the Equal Protection Clause only prohibits government officials from intentionally discriminating on the basis of race. In essence, much like in Bean and East Bibb, the court endorsed a process that leads to the disproportionate placement of facilities in black communities.

With little hope for lasting and reliable remedies through the courts under federal equal protection jurisprudence, political and legislative avenues have emerged as more promising sources for relief.

B. The Federal Government’s Response

Faced with a growing concern among civil rights activists and environmentalists over what potentially could evolve into a “politically explosive environmental issue[]”, then-EPA Administrator William K. Reilly created the EPA Environmental Equity Workgroup in July of 1990. The objective of the Workgroup was “to assess the evidence that racial minority and poor communities bear a higher environmental risk burden than the general population.” The final report, published in June 1992, noted six major findings, one of which indicated that minority populations experienced “higher than average exposures” to pollutants in the air, hazardous waste facilities, contaminated fish, and agricultural pesticides in the workplace. Although the EPA Equity Re-

83. Id. at 1149-50.
84. Id. at 1150.
85. Id.
86. Id.
87. Id.
88. Cf. Gareis-Smith, supra note 67, at 72-78 (describing how Title VI can be used to combat environmental inequities).
90. EPA Equity Report, supra note 2, at 2.
91. Id. at 3.
port stated that exposures to pollutants and other environmental risks do not always have a detrimental impact on human health, it indicated that high exposures do present "a clear cause for health concerns." The Report explained that low-income and minority communities have a greater than average potential for exposure to pollutants because they are inclined to live in areas with high levels of air pollution, or are more likely to live near hazardous waste facilities.

Against this backdrop the Clinton Administration expressed a commitment to addressing "environmental injustice." At a NAACP meeting in July of 1993, Vice President Al Gore stated that "[i]t's time we stopped automatically putting waste dumps and other forms of pollution in neighborhoods that have the least political and economic power." On February 11, 1994, the White House released President Bill Clinton's Executive Order Number 12,898. Entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," the order appears to be a response to claims that the Federal government is not doing enough to combat what some have labeled "environmental racism." Executive Order 12,898 embodies the administration's resolve and articulates a series of measures to "achiev[e] environmental justice."


Divided into six sections, Executive Order 12,898 begins with general statements of implementation. Under section one, agencies are directed to make attaining environmental justice part of their mission "by identifying and addressing . . . disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority populations and low income populations." Section one also calls for the establishment of an "Interagency Working Group on Environmental Justice" (Working Group) whose purpose is to help federal agencies establish "criteria for identifying disproportionately high and adverse human health or environmental effects on minority and low income populations."

92. Id.
93. Id. at 12.
95. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (1994). Briefly, an executive order is an order or regulation issued by the president for the purpose of interpreting, implementing, or giving administrative effect to a provision of the Constitution or law.
96. Id.
97. Id. The Working Group is also to coordinate the efforts of various federal agencies to encourage cooperation among the agencies in achieving environmental
Section two of the order compels federal agencies to ensure that their programs, policies, and activities do not have the effect of excluding persons or populations from participation in or receipt of benefits, or of discriminating against people on the basis of race, color, or national origin. In section three, the order provides for improvements in research, data collection, and analysis, and calls for environmental human health research, "whenever practicable and appropriate," to include "diverse segments of the populations in epidemiological and clinical studies," such as minority populations, low-income populations, and other "high risk" groups. Moreover, federal agencies are to "provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies."

Federal agencies are charged with collecting, analyzing, and maintaining data to assess and compare environmental and human health risks borne by populations identified by race, national origin, or income. This information is to be used by agencies to ascertain "whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority and low-income populations."

Similarly, agencies are to collect and analyze data on:

- the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of substantial Federal environmental administrative or judicial action.

The information collected and maintained pursuant to the Executive Order would be made available to the public. The order also provides that "wherever practicable and appropriate"

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98. Id. at 7630-31.
99. Id. at 7631. Such analyses serve "to identify multiple and cumulative exposures."
100. Id.
101. Id.
102. Id.
103. Id. at 7632.
104. Id.
the public documents, notices and hearings shall be translated to accommodate "limited English speaking populations."105

2. Analysis of Executive Order 12,898

Although broad in its scope, Executive Order 12,898 does qualify its provisions by noting that it is intended only to enhance internal management of the executive branch. The order does not "create any right, benefit, or trust responsibility . . . enforceable at law or equity . . . ", nor does it "create any right to judicial review involving the compliance or noncompliance of the United States, its agencies, its officers, or any other person with this order."106 Finally, the order states that federal agencies are to assume financial costs related to compliance.107

Overall, the Executive Order addresses two areas that are critical to any future equal distribution of environmental risks. The first is the mandate for the systematic gathering of data on race, income and environmental hazards. Published studies on the distribution of environmental risks have noted the lack of data on race, income and environmental hazards as a major obstacle to understanding better the nature of the issue. For example, the EPA Equity Report indicated that "[i]t is clear that more study of this issue is required to fully understand the association of race, income, and facility location."108 And the Evaluation Review Report noted that there is little known about the relationship between distances from a hazardous waste facility and risk.109

The second critical area addressed by the Executive Order is the call for public participation and access to information gathered by federal agencies. Allowing the public the opportunity to influence the development and design of research strategies would alleviate past criticisms that federal agencies are not responsive to the needs of the public or claims of environmental inequities.110 Furthermore, such full disclosure would provide concerned persons, academic institutions, and non-governmental organizations with data needed to conduct their own studies and to reach independent conclusions. The information also would give state planning and environmental agencies the ability to improve on current risk allocation practices and strategies.

105. Id.
106. Id. at 7632-33.
107. Id. at 7632.
108. EPA Equity Report, supra note 2, at 15.
109. See Anderton, supra note 3.
110. E.g., 2 ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES 72-121 (1992).
Still, Executive Order 12,898 is not without its drawbacks. The jurisdictional limits of the order naturally precludes state actors and agencies. Thus, a major component of governmental environmental and regulatory activity is beyond the order's scope. Moreover, the order fails to provide communities that may already be experiencing a disproportionate share of risks with a firm legal foundation for relief. By its very terms, the order does not provide any legal or equitable entitlements enforceable by law. At most, the order instructs federal agencies to comply only if "it is consistent with" or "permitted by . . . existing law," and limits implementation only "to the greatest extent practicable."\(^\text{111}\)

In short, Executive Order 12,898 promotes environmental fairness in a number of ways, but its actual impact on future facility siting is unclear at best. Nevertheless, there are positive signs that states are following suit with their own efforts to exact environmental equity within their jurisdictions.\(^\text{112}\)

**C. One State's Response: The Florida Environmental Equity and Justice Commission Act**

In May of 1994, Florida Governor Lawton Chiles approved the Environmental Equity and Justice Commission Act (Equity Act).\(^\text{113}\) Citing a study conducted by the National Law Journal,\(^\text{114}\) the Florida law notes that there are discrepancies in how penalties for environmental infractions are imposed upon violators in white communities versus minority communities; that penalties are greater in white areas than in minority areas; that Superfund site evaluations were processed faster in white communities than in minority communities, as were clean-up efforts; and that clean-up remedies were instigated in white communities whereas containment was used more frequently in minority communities.

\(^{111}\) Exec. Order 12,898, \textit{supra} note 95, at 7629.


Massachusetts lawyers have formed the Environmental Justice Network, one of the few of its kind in the country. \textit{Id.} Another such organization is the Environmental Poverty Law Working Group (EPLWG), a national network of attorneys working on environmental justice issues. EPLWG is coordinated by Luke W. Cole, of the Center on Race, Poverty and the Environment in San Francisco, California. Telephone Interview with Luke W. Cole, Staff Attorney, Center on Race, Poverty and the Environment, California Rural Legal Assistance (Mar. 6, 1995).

\(^{113}\) 1994 Fla. Sess. Law Serv. 999 (West).

\(^{114}\) Journal Study, \textit{supra} note 2, at S1, S2.
Similarly, the law acknowledged the findings of a report published by the U.S. Environmental Protection Agency in 1992 (EPA Equity Report) which “suggest[s] that minorities and low-income communities bear a higher environmental risk burden compared to that of the general population . . . .” Following the recommendations of the EPA Equity Report, the Florida legislature crafted a law that creates an Environmental Equity and Justice Commission (Commission) “to examine and determine the possible disproportionate . . . concentration of environmental hazards” in minority and poor communities. The Commission is charged with determining how the state can address the inequities “with emphasis on future prevention.” The Commission is also responsible for producing a “report” on the demographic information of “major targeted sites” in Florida, with the intent to discover the existence and extent of environmental inequities. The Commission has the option of drafting model legislation addressing issues exposed by the report. The Equity Act appropriates $100,000 for the purposes of establishing and funding the Commission’s activities.

The Equity Act is significant in that it contains an unambiguous mandate for state actors to follow. Having thus laid the initial step of creating a plan of action to study environmental equity issues, presumably the state is progressing toward rectifying past inequities and preventing future ones. Finally, the law establishes a precedent for other states to follow, containing text which can be used as a blueprint for similar laws in other jurisdictions.

Outside the sphere of federal and state government, commentators have called for reforms in siting processes because they claim siting inequities are caused by flawed siting programs. These criticisms will be addressed in the context of discussions on the evolution of siting programs.

IV. THE EVOLUTION OF SITING PROGRAMS

In general, improvements in siting processes have revolved around enhancing public participation and reducing negative as-
pects of unwanted facilities. As can be expected, reforms have been shaped by the failures and successes of past experiences.

Hazardous waste management itself has gone through several stages of development. Prior to the enactment of the Resource Conservation and Recovery Act (RCRA) in 1976, state management plans were concerned mainly with solid waste.123 After 1976, the federal government left states with the responsibility of managing hazardous waste under RCRA. This led to the next generation of siting schemes. States responded with a series of siting programs which used a variety of siting strategies, including local participation and compensation. Not satisfied with the newer siting models, one major city enacted a scheme whereby facilities are distributed equally geographically across the municipality.124 These various phases of development are discussed below.

A. Early Efforts

Garbage disposal has always been controlled by the states.125 In turn, states delegated the responsibility of disposal to municipal and county governments.126 For the most part, however, early state statutes dealing with solid wastes did not treat hazardous waste differently.127 In fact, only California, Illinois, Minnesota, New York, and Oregon had statutes addressing hazardous wastes.128 In states that regulated landfill use, there were no requirements to separate solid wastes from hazardous wastes.129 For all practical purposes, hazardous waste management was dominated by private industry.130

Industry controlled siting, funding, and ownership of facilities, limited only by occasional local, state and federal regulations. Federal regulation often did not go beyond "establishing waste management policies, grants and technical assistance, and enforcement of environmental legislation."131 In general, the federal government's involvement in waste management was

126. Id.
127. Id.
128. Duffy, supra note 123, at 762.
129. Canter, supra note 125, at 429.
131. Id. at 26.
shaped by the view that such management should defer to levels of government nearest to industry and the public.\textsuperscript{132}

State and local governments, on the other hand, had limited influence over siting. Municipalities, as agents of the state, issued permits to facility operators and approved final site selection, subject only to judicial review.\textsuperscript{133} Developers tarnished siting practices under this framework by not informing local residents and officials of their plans. In effect, facilities were sited first, then local governments endorsed the developer's plans by executing feasibility studies, purchasing the site, building the facility, and conforming with local laws that frequently were modified to suit the developer's needs.\textsuperscript{134} Any public participation occurred long after the developer and local government had made critical decisions.\textsuperscript{135}

In short, early efforts at dealing with the disposal of hazardous waste were modest, leading to disastrous results: generators of waste often dumped their wastes on roadides or contracted with third parties who then released the wastes into the environment.\textsuperscript{136} In 1978, for example, the Environmental Protection Agency (EPA) estimated that up to 90% of hazardous wastes had been disposed of improperly.\textsuperscript{137} The passage of RCRA in 1976 marked the beginning of the next generation of hazardous waste facility siting in the United States. Purportedly regulating toxic substances from "cradle to grave," RCRA leaves the task of implementing its national policy\textsuperscript{138} and siting hazardous waste facilities largely to the states.\textsuperscript{139}

B. \textit{Post-RCRA Siting Programs}

The Resource Conservation and Recovery Act relegated the siting of hazardous waste facilities to the states for several rea-

\begin{thebibliography}{9}
\bibitem{132} Id.
\bibitem{133} Id. at 27.
\bibitem{134} Id. at 25.
\bibitem{135} Id.
\bibitem{136} Duffy, \textit{supra} note 123, at 762-63.
\bibitem{137} Canter, \textit{supra} note 125, at 423 (citing OFFICE OF WATER & WASTEWATER MANAGEMENT, U.S. ENVIRONMENTAL PROTECTION AGENCY, SOLID WASTE FACTS: A STATISTICAL HANDBOOK 4 (SW-694) (1978)). Canter also provides several notorious examples of improper disposal: Love Canal, New York, where buried wastes percolated through soil and into yards, homes, ditches, and playgrounds; a 210 mile stretch of country roads in North Carolina where thousands of gallons of toxic wastes were dumped; and the "Valley of Drums" in Kentucky where some 17,000 barrels of wastes were abandoned. Canter, \textit{supra} note 125, at 424.
\bibitem{138} RCRA's policy is that "wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment." 42 U.S.C. § 6902(b) (1988).
\bibitem{139} Duffy, \textit{supra} note 123, at 766.
\end{thebibliography}
sons. First, it was Congress' intent to leave to the states the job of implementing the national hazardous waste management program.\textsuperscript{140} Moreover, the EPA viewed regional planning rather than nation-wide management as a more capable "level of control."\textsuperscript{141} Indeed, states have always held police power and authority over land use controls,\textsuperscript{142} and they are perhaps better suited to craft siting programs that cater to the specific needs of their citizens.\textsuperscript{143}

State siting programs implemented during this period can be categorized roughly into three types: the super review model, the site designation model, and the local control model.\textsuperscript{144} Briefly, the super review model is the most common.\textsuperscript{145} Using this approach, regulatory agencies examine site qualifications after a developer submits a proposal. Under the site designation model, preferred sites are first selected across a given state prior to the review of any proposals.\textsuperscript{146} The local control model is characterized by the ability of local governments to control all aspects of siting, including the option of enacting tough local laws that effectively ban hazardous waste facilities.\textsuperscript{147}

Although the models differ in how and when siting proposal by developers and state actors are acted upon, most contain several common features. These include compensation and incentives; public participation mechanisms; and technical assistance grants, components typically absent in pre-RCRA schemes.

\begin{itemize}
\item \textsuperscript{140} Canter, supra note 125, at 433.
\item \textsuperscript{141} Id.
\item \textsuperscript{142} Id. Land management, for the most part, has always remained at the local level for several reasons. Land owners and developers are closer to and more familiar with local government. Thus, when land use issues arise, typically the problems are of a local nature and so people rely on the immediate levels of government. Barbara Clark, An Expanded Role for the State in Regional Land Use Control, 70 Cal. L. Rev. 151, 154-55 (1982). Moreover, local officials are more familiar with local issues and the concerns of land owners. Hence, local government officials may be more responsive, especially if their political careers were at stake. Id. at 155. Similarly, control over land use and ownership is related to "a prominent source of political power." Id.
\item \textsuperscript{143} Canter, supra note 125, at 433.
\item \textsuperscript{144} Mata, supra note 122, at 401-08.
\item \textsuperscript{146} E.g., Minn. Stat. Ann. § 115A.18 to .22 (West 1987 & Supp. 1994).
\end{itemize}
Compensation and incentive mechanisms operate to relieve local opposition by making facilities more attractive. This is done by compensating host communities for costs assumed due to the unwanted facility. Developers and the state also may provide incentives beyond compensation to make hosting a facility a lucrative venture. For example, Connecticut law allows developers and host communities to negotiate incentives that may include payments to landowners for falling land values; purchase of buffer zones around facilities; accommodations for open space or recreational facilities for the community; purchase of public safety equipment; and compensation for road repair costs.

Another notable improvement over pre-RCRA siting efforts is the enhancement of public participation. Measures such as appointing local residents to temporary positions on state siting boards increase the degree and quality of local participation. Such membership "prove[s] effective in convincing host communities of the fairness of the siting program." By encouraging this kind of input, it is believed that the legitimacy of the siting process is improved. In general, legitimacy in site selection refers to the perception of the general public that a fair and open process was followed in selecting a site.

Open administrative hearings to the general public before critical decisions are made also promotes public input and legitimacy. In this manner local concerns are thought to be incorporated into decision-making processes. Beyond this, local siting boards also can be formed so that local interests are aired with greater efficiency and weighed with more scrutiny.

Finally, technical assistance grants provide an important, though indirect, way to increase participation at the local level and to augment legitimacy. Some state siting programs allocate


149. CONN. GEN. STAT. ANN. § 22a-128(c) (West 1985). Colorado law similarly provides that facility operators must pay fees to host municipalities to offset costs associated with the facility, COLO. REV. STAT. ANN. § 25-15-214 (West 1990), and Minnesota calls for compensation to "promote the health, safety, comfort, and economic development and well-being of the county and its citizens. . . ." MINN. STAT. ANN. § 115A.191(5)(c) (West 1987 & Supp. 1993).


151. Canter, supra note 123, at 451 (emphasis added).

152. See id.

funds for parties who are interested in participating in the siting process but who lack the financial resources to do so. The intent is to remove the barriers which keep local interests from playing a meaningful role in the siting process.

In summary, siting programs have evolved from being dominated largely by private industry when waste management and site selection were relatively unrestrained. Pre-RCRA siting often excluded public input, at least as to material decision-making. This exacerbated public opposition, diminishing overall legitimacy of the process in the eyes of the public. After Congress enacted RCRA in 1976, states were charged with implementing a national policy of accounting for hazardous wastes from "cradle to grave." Subsequently, states ratified a variety of siting programs, many instituting public participation and legitimacy-enhancing measures designed to reduce public opposition, streamline the siting process, and produce fairer results.

Advancements in siting schemes continue today, as exemplified by the progressive program recently enacted by New York City. In addition to expanded public participation, New York's siting scheme calls for geographic fairness, with the aim of "furthering the fair distribution among communities of city facilities." Though only effective within New York City, the program is supposed to prevent the siting of many facilities in a community and to alleviate associated negative impacts by considering the "number and proximity" of facilities within a given area.

Although an in-depth discussion of the shortcomings of siting models is beyond the scope of this article, their drawbacks relate essentially to the fact that none of the schemes take account of community characteristics such as race, ethnicity, income nor the past history of siting outcomes. As such, current siting models fail to address the concerns of poor communities and especially minority communities who believe facilities are unequally distributed according to the racial and economic composition of certain communities. Without siting measures that deliberately account for race and income, groups that are wary of signs of unequal treatment will remain distrustful of state siting

156. Id. art. 6.42.
157. See Mata, supra note 122, at 136-40 (providing a critique of state siting schemes).
programs. Understandably, suspicions are fueled by a long history of unequal treatment and discrimination. For these reasons a new siting strategy is needed — one that advances fairness considerations.

V. The Siting Credo and Environmental Equity: The Next Generation in Facility Siting Development

Arguably, findings such as those reported by the Evaluation Review Report potentially can erode justification for fairness of process and equality in siting outcomes. After all, if there are no disparities in the geographical distribution of facilities, with respect to race and income, then why should anything be done about it?

One answer to this question has to do with the legitimacy of siting processes. As suggested above, legitimacy is promoted when potential host communities have a meaningful role in the decision-making process. Without a degree of legitimacy in a site selection program, one can expect greater public opposition, with local residents resentful over having no input in the location of an unwanted facility. Indeed, legitimacy is essential to equitable siting practices.

Professors Lawrence Susskind and David Laws, of the Massachusetts Institute of Technology, have noted that “[i]t is not difficult to see why a community selected as a host site is likely to fight back . . . . Fairness, more than adequacy of technical judgments [over site suitability], may be at the core of their complaints.”158 They explain:

[If] legitimate differences in perspective have been dismissed without public discussion, if questions about acceptable levels of risk were not addressed, if judgements about the validity or appropriateness of information and modeling assumptions could not be called into question, it is no wonder that host communities gain support when they claim that they have been treated unfairly.159

From this perspective, Laws and Susskind introduced a “Facility Siting Credo” (Credo), formulated from the experience of many siting experts and practitioners who participated in the 1989-90 National Workshop on Facility Siting, sponsored by M.I.T. and the University of Pennsylvania’s Wharton School of Business.

159. Id.
Composed of several elements, the Credo promotes trust and consensus building among participants in a siting process, by engaging as many interested parties and their concerns as possible. Moreover, the Credo advances geographic fairness (Credo element thirteen) as a way to prevent communities from being inundated with undesirable facilities. As Laws and Susskind note, "[u]nless residents in potential ‘host’ communities are treated as knowledgeable individuals who can make an important contribution, and unless their concerns are treated as legitimate, most siting processes will fail." In a strong sense, the Credo represents years of siting program development and thus merits extended discussion where the elements appear to promote environmental equity.

A. The Facility Siting Credo: Strengths and Weaknesses

Credo element one is "seek consensus." Groups that may be affected by a siting decision should be involved in the siting process to avoid "uncertainty, ambiguity, and legitimate differences of opinion .... Differences can be addressed by searching for new ways of framing questions or different ways of packaging trade-offs." Laws and Susskind argue that a siting process that allows participation is less likely to be charged with unfairness, and suggest that appointment of "neutral professionals" to manage consensus building may be necessary to ensure that the process is viewed as fair. Presumably, the call for participation of all interested groups includes minority organizations, advocates for the poor, and civil rights groups. Taken to its literal end, element one pays respect to the views of interested parties who might otherwise be excluded from meaningful participation. On the downside, however, forming a consensus implies that some of the parties involved must make compromises to accommodate the needs and concerns of others. Without a firm commitment to environmental equity, a consensus may come at the expense of those who are politically weakest.

The second Credo element is "[w]ork to develop trust." Laws and Susskind claim that the lack of trust is the greatest obstacle to reaching consensus, and note that much mistrust comes from siting officials assuming that affected communities are bound by siting decisions if technical grounds are adequate and

160. Id. at 29.
161. Id. at 36.
162. Id.
163. Id.
procedural criteria are satisfied. They argue that siting authorities should acknowledge ambiguities over benefits and risks associated with the given facility. Similarly, they refer to the siting of many facilities in "poor or otherwise disadvantaged areas . . . as another source of mistrust." Thus, element two encourages full disclosure of all possible risks associated with a proposed facility, whether or not a potential host community is sophisticated enough or capable of educating itself to understand fully the consequences of serving as host.

With respect to environmental equity, being forthright about possible risks would promote the equal treatment of all communities, regardless of socioeconomic status. On the other hand, it would take a commitment of financial resources for poor and politically weak communities to allow them to appreciate the benefits and risks of a proposed facility. The building of trust is an empty objective unless it is accompanied with the necessary financial support and expertise of professionals. Thus, developing trust should include providing the resources needed.

Credo elements nine through thirteen deal with issues of fairness. By "[k]eep[m]ing] multiple options on the table" (element nine), "[m]ak[ing] the host community better off" (element ten), and "[s]eek[ing] acceptable sites through a volunteer process" (element eleven), the Credo advances measures that can allay the apprehension a community experiences when it faces the prospect of hosting a facility. For instance, by having several options available during the entire siting process, at least until the final decision, potential host communities will not feel trapped or

164. Id.
165. Id.
166. Id. "Set realistic time tables" is the third Credo element. Id. Laws and Susskind note that it takes time to build consensus, and indicate that realistic time tables can mark progress, thereby mitigating against the use of delaying tactics. Id. at 37. Another element is "[g]et agreement that the status quo is unacceptable" or, that there is a need for a facility. Id. Similarly, element five is "[c]hoose the design that best addresses the problem" and six is "[g]uarantee that stringent safety standards will be met." Id. Elements four, five and six together relate to the need, type, and features of a proposed facility and address the technical aspects of facility siting.

Element seven is "[f]ully compensate all negative impacts of a facility." Id. Where negative impacts are unavoidable, Laws and Susskind argue that compensation for host communities should be negotiated, with agreements stating clearly who will pay what to whom and when. Nevertheless, "compensation should only be used in relation to impacts over and above minimum health and safety standards specified by law." Id. at 38. Related to seven, element eight recommends that "[c]ontingent agreements" be used. Id. These agreements would take effect when accidents occur or new technologies emerge so that original agreements are affected. Under such an agreement, facilities could be shut down indefinitely. As an example, they note that permits can be temporary, requiring periodic renewal. Id.

167. Id. at 38-39.
“held hostage” to compensation negotiations. Laws and Susskind contend that “[t]his may seem unduly costly both in political and financial terms, but the costs are likely to be less than those associated with picking one best site and then having to retreat to a second best alternative if the first one does not work out.”  

In the context of environmental equity, having multiple options available during the process suggests that a poor or minority community would not automatically be selected as the only viable site.

By making the host community better off, the community is made to feel as though it is getting the better end of the deal. Making a community better off means rewarding the host community beyond mitigation of the facility’s negative impacts. Moreover, Laws and Susskind argue that “[i]f people understand the need for a facility, and the risks associated with it, if health and safety standards will be met and adverse impacts mitigated or compensated, and if sufficient additional benefits are provided, it may be that communities will compete to host a facility.” Hence, the opportunity to find a volunteer community to host a facility is optimized, and the likelihood that a community will exhibit some post-siting backlash is diminished. If a community offers to serve as host, there is an implication that it is willing to assume the risks, rather than have risks imposed involuntarily. Making the host community better off suggests that a host community will be given the chance to weigh its own worth and to participate in determining what would make it “better off.”

Nevertheless, creating a better off host community can be construed as exchanging public health for financial gain. As one local resident stated when faced with the prospect of living near a landfill that came with tax benefits, “We need all the money we can get to upgrade our school system. But we shouldn’t have to be poisoned to get improvements for our children.” As such, a

168. Id. at 38.
169. Id.
170. Id. Likewise, the Credo suggests a competitive siting process (element number 12). Id. at 39. Laws and Susskind warn, however, that “[a] competitive process must ensure that the level of benefits to a host community is reasonable; the competitive or bidding process should not be used to reduce benefits to a level below that required to compensate for all non-mitigable impacts.” Id.
171. Bullard, supra note 6, at 94, quoting Charles Stread. Vicki Been, however, argues quite persuasively that “[b]ecause [compensation] programs are here . . . to stay, the environmental justice movement should be prepared to meet them head on. It should begin to formulate a more thoughtful and comprehensive policy about compensated siting programs.” Vicki Been, Compensated Siting Proposals: Is It Time to Pay Attention?, 21 Fordham Urb. L.J. 787, 824 (1994).
siting outcome may not be voluntary when benefits are used to entice an otherwise reluctant community. That is, in light of how desperately poor some communities can be, volunteerism is a matter of perspective. Certainly, a relatively wealthy or politically strong community would not gain much by "volunteering."

Finally, Credo element thirteen is "[w]ork for geographic fairness." 172 Laws and Susskind acknowledge that compensation and incentives may not always guarantee fairness in the distribution of costs. Specifically, a concentration of facilities in a geographic area is undesirable. Noting that geographic fairness will not always appear as an issue, they argue that a point system for siting unwanted land uses is one way to distribute facilities across wider areas.

Geographic fairness, however, may not necessarily produce equitable siting results. For example, although a series of siting decisions in a given state or region may not create a concentration of facilities in a given geographic area, the net result may be that siting decisions disproportionately place facilities in poor or minority areas. Although geographic fairness may be achieved, the greater evil of environmental inequity, in the form of economic or racial discrimination, may still result.

In spite of the comprehensive nature of the Facility Siting Credo, and its aim to mitigate costs associated with undesirable facilities, it falls short of directly addressing environmental equity issues. In all fairness, however, the Credo was not created to address environmental equity issues, and as written, the environmental fairness concerns of poor communities, minority communities, environmentalists, and civil rights activists are addressable by the Credo's generic language. Still, considering the dubiety surrounding past distributions of environmental risks, race and income deserve categorical mention: "Being open about the difficulties of decision making and acknowledging past mistakes can help to rebuild trust. Attempts to hide problems, conceal uncertainties, or ignore the legitimate concerns of opponents will further undermine trust." 173 For many minority and poor communities and their proponents, trust is precisely the missing element in state siting programs. Therefore, new siting schemes should encompass ways to gain the trust of these historically isolated groups.

172. Laws & Susskind, supra note 156 at 38.
173. Id. at 36 (describing element number two, work to develop trust).
B. The Facility Siting Credo Plus: Toward Environmental Equity

Significantly, the Siting Credo is about procedure and public perceptions of fairness. The Credo enhances the effectiveness of siting processes by promoting public acceptance of siting outcomes. The Credo, however, does not address directly the concerns of minority communities, poor communities, environmentalists, and civil rights advocates who charge that siting processes unfairly impact poor and minority communities. Indeed, the Credo is a promising beginning to a more equitable siting program. In addition to the Credo elements, an optimal siting program should account for the socioeconomic characteristics, and the racial and ethnic composition of potential host communities. These factors should be weighed against the history of siting decisions in the given state or locality to avoid the disproportionate siting of facilities in communities containing greater percentages of vulnerable groups.\(^\text{174}\)

With a few minor modifications, the Credo elements can be shaped to promote environmental equity explicitly. To begin with, an additional element calling for the considerations of race, socioeconomic status and general demographics of potential host communities would ensure that environmental equity issues are addressed directly. These factors are reasonable considerations, especially since at least one state already has laid the groundwork for this kind of demographic analysis. Florida state law calls for a report containing “historical and current demographic information, including statistics of the surrounding population of each [hazardous waste] site.”\(^\text{175}\) The Florida Equity Act places an “emphasis on future prevention,” such as the siting of facilities to avoid environmental risk.\(^\text{176}\)

Another element that would make the Credo more responsive to environmental equity issues is consideration of the history of past siting decisions and demographic characteristics of past and present host communities. Again, the text of the Florida Equity Act is particularly helpful in articulating this objective. The Act calls for historical demographic information as well as “a review of factors, including economic factors, that may have caused [hazardous waste sites] to be concentrated in low-income communities and communities of color in Florida.”\(^\text{177}\) The language

\(^{174}\) See generally Mata, supra note 122, at 172-90 (detailing a description of a proposed siting model designed to distribute hazardous waste facilities equally across population groups).

\(^{175}\) 1994 Fla. Sess. Law Serv. 1001 § 1(5)(a) (West) (emphasis added). See supra notes 112-22 and accompanying text.

\(^{176}\) 1994 Fla. Sess. Law Serv. at 1001 § 1(1).

\(^{177}\) Id. § 1(5)(c).
easily can be adapted for use as a Credo element, and can be applied to the siting of facilities.

Similarly, New York City has articulated siting guidelines for unwanted land uses to determine “whether the site . . . is in an area where facilities are already concentrated, whether the proposed facility would contribute to such a concentration, and, if so, whether such a concentration would have an adverse effect on the character of the neighborhood . . . .”178 The City identified several sources for information that could provide data needed to perform the site analysis, thus demonstrating that the objective of this proposed element is achievable.179

The proposed Credo additions would address most concerns of civil rights advocates, environmentalists, and minority and poor persons, who are convinced that hazardous waste facilities are not distributed equally across race and income groups, in several respects. First, the additional elements would demonstrate that the siting program has built-in mechanisms to account for race, ethnicity and income. Second, the factors would ensure that future siting decisions will not result in a majority of sites characterized by high numbers of low-income residents or minorities. Third, these measures would appease low-income groups and minority groups who might otherwise feel that their interests were not considered because of a lack of political or economic clout. Finally, a siting process following the revised Credo, as proposed, is guaranteed open discussions about environmental equity. Just as the Credo elements work toward promoting legitimacy, cooperation, and trust among parties of a siting process, the new elements would do the same for population groups seeking environmental equity.

C. Environmental Equity: A Goal that Benefits All

The additional environmental equity elements proposed for the Credo would serve to protect all population groups; they would not categorically call for the siting of facilities in non-minority or relatively wealthy communities. Similarly, the additional elements would not impact siting decisions unless past inequities exist or have the potential to develop.

Factoring in race, ethnicity and economic status of potential host communities would serve only to prevent the perpetuation

179. Id. at 10-11. Some sources include Atlas of City Property, Department of City Planning Residential Facility Bed Indices, and Bytes of the Big Apple (trademark) software. Current geographic information systems technologies also provide readily accessible data for analysis.
or creation of new environmental inequities. Where investigations reveal that significant numbers of facilities exist in minority and poor communities, new siting considerations would avoid areas with similar demographic characteristics. Where prospective host communities also exhibit similar demographic qualities, the search for a host would expand to include other communities without such characteristics. In the absence of any apparent environmental inequities, there would be no reason to screen out or include specific areas or communities on account of their demographic make-up. But, again, an environmentally equitable siting process would entail investigations into the existence of inequities before concluding that certain communities need to be screened out.

Furthermore, the proposed Credo elements would promote acceptance of siting outcomes because demographic factors would be considered on par with other more technical requirements, such as soil condition and transportation routes. Poor and minority communities could rest assured that they were not targeted, and other communities would not find themselves as possible victims of "reverse discrimination." The equity considerations would serve to protect all communities, even though the proposed elements pay respect to poor and minority communities. Again, as discussed above, the equity factors would not influence the outcome if no inequities exist.

Finally, the proposed equity elements pay respect to time-honored ideals of equality and evenhandedness in governmental activity. Investigating the history of past siting decisions, insofar as particular population groups were targeted, would justify making amends in future facility siting. As such, environmental risks would be dispersed across different communities with different characteristics and in different geographic areas. The effect would be more equitable siting patterns, with fewer, if any, "victims." For these reasons alone, the proposed additions to the Siting Credo are legitimate.

VI. CONCLUSION

For many years, minority groups in the United States have endured unequal treatment. Discrimination has been especially acute in areas such as housing, employment, education, criminal law, and municipal services. Only with the passage of legislation were most overt manifestations of discrimination eliminated. Still, the legacies of slavery and discrimination haunt minorities,
often in ways too subtle to be reproached by the law. In all fairness, however, minorities have made progress toward acceptance as equals in the United States.

Nevertheless, minority groups and civil rights activists are sensitive to possible unequal treatment, especially in light of their past struggles to gain equality. For this reason, such groups are understandably concerned about the implications of disparities in the distribution of environmental risks across racial, ethnic or economic lines. Their calls for fairer siting processes are due not only to evidence showing high incidence of hazardous waste facilities in poor and minority communities, but particularly to past trends of unequal treatment. Thus, even if studies show no significant disparities in the distribution of hazardous waste facilities in the United States, suspicions raised by the possibility of unequal treatment are legitimate and therefore deserve to be addressed. In short, if there is a concern among poor communities and minority communities that their neighborhoods have been used for years as dumping grounds for unwanted facilities, these communities should be afforded assurances that such practices will not happen in the future.

Reforming siting programs is one way to address the concerns of these groups. The evolution of siting programs shows that schemes have changed to ensure facility locations are selected while reducing public opposition and increasing legitimacy. Often, measures such as public participation on review boards and compensation packages are used. Improvements in siting schemes have revolved around the theme of fairness. Indeed, the Facility Siting Credo, which can be seen as the culmination of many years of siting experience, advocates for more fairness overall, and builds trust and consensus by engaging as many interested parties and their concerns as possible in the siting process.

Taking the evolution of siting schemes one step further — toward equity for all population groups — this article argues that considerations of race, ethnicity and income, weighed against the history of siting outcomes, should be part of future siting programs. Even if future studies on siting inequities report little or no disparities in the distribution of hazardous waste facilities, issues of environmental equity with respect to race and income will always arise because past injustices will not soon be forgotten, and risk assessment technologies will never completely eliminate uncertainty. Therefore, to facilitate more legitimate siting processes, an optimal siting program should institutionalize environmental equity measures as integral parts of trust and consensus building. To do otherwise would be to ignore the genuine
concerns about apparent inequities held by some communities, already suspicious of how environmental risks have been distributed in the past. Their unique concerns need to be aired as part of, and not coincidental to, any siting program.