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THE VICTIMS OF NIMBY

Michael B. Gerrard[†]

I. Introduction

It is a syndrome, a pejorative, and an acronym of our times: NIMBY, or Not In My Back Yard. It has a political arm, NIMTOO (Not In My Term Of Office), an object of attack, LU-LUs (Locally Undesired Land Uses), and an extreme form, BA-NANA (Build Absolutely Nothing Anywhere Near Anyone). Acronyms aside, however, the question remains as to whether or not NIMBY has victims. Is anyone hurt by NIMBY?

Many leading voices in the environmental justice movement believe that minority communities are victims of NIMBY. For example, Professor Robert D. Bullard has written that "[t]he cumulative effect of not-in-my-backyard (NIMBY) victories by environmentalists appears to have driven the unwanted facilities toward the more vulnerable groups. Black neighborhoods are especially vulnerable to the penetration of unwanted land uses NIMBY, like white racism, creates and perpetuates privileges for whites at the expense of people of color."¹ This viewpoint has many adher-

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^{1.} ROBERT D. BULLARD, DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMEN-TAL QUALITY 46, 108 (1990); see also, Robert D. Bullard, Environmental Blackmail in Minority Communities, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE 82, 85 (BUNYAN BRYANT & Paul Mohai eds., 1992).

ents,² including the Environmental Equity Workgroup of the U.S. Environmental Protection Agency (EPA).³

In addition, some have argued that opposition to facilities, especially social service facilities, "compromise[s] the civic republican account of community services as a public commitment shared by all,"⁴ and "is a violation of the American right of life, liberty and the pursuit of happiness and of religious and moral teachings that each individual has worth and dignity. NIMBY divides our society into acceptable and 'unacceptable' groups and threatens the social unity essential to harmony and progress."⁵

NIMBY, in its various forms, has three principal types of targets. The first is waste disposal facilities, primarily landfills and incinerators.⁶ The second is low-income housing. The third is social service facilities, group homes⁷ and shelters for individuals such as the mentally ill, AIDS patients, and the homeless.⁸

3. See ENVIRONMENTAL EQUITY WORKGROUP, U.S. ENVIL. PROTECTION AGENCY, ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES 20-21 (1992) ("a result of the 'not in my backyard (NIMBY)' syndrome is that such facilities will tend to be located in communities with the least ability to mount a protest").

4. Peter Margulies, Building Communities for Virtue: Political Theory, Land Use Policy, and the 'Not in My Backyard' Syndrome, 43 SYRACUSE L. REV. 945, 947 (1992).

5. American Friends Serv. Comm., Statement of Principles on Inclusive Communities (1992).

6. Nuclear power plants were once subject to fierce local opposition, but there have been no new orders for such plants in the United States since the Three Mile Island accident in 1979. See Nicholas Lenssen & Christopher Flavin, Closing Out Nuclear Power, WORLD WATCH, Sept.-Oct. 1992, at 35.

7. Group homes are typically community-based living facilities offering a familylike environment for between four and sixteen clients. Peter W. Salsich, Jr., Group Homes, Shelters and Congregate Housing: Deinstitutionalization Policies and the NIMBY Syndrome, 21 REAL PROP. PROB. & TR. J. 413, 418 (1986).

8. Public opinion polls show that these facilities are lumped together in the public mind as highly undesirable neighbors. See Christopher J. Smith & Robert Q. Hanham, Any Place But Here! Mental Health Facilities as Noxious Neighbors, 33 PROF. GEOGRAPHER 326 (1981). Fear is a major reason for this opposition—fear of

^{2.} See, e.g., Jon C. Dubin, From Junkyards to Gentrification: Explicating a Right to Protective Zoning in Low-Income Communities of Color, 77 MINN. L. REV. 739, 765 n.113 (1993) (quoting Paul Mohai & Bunyan Bryant, Environmental Racism: Reviewing the Evidence, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS, supra note 1, at 163, 164); Anna K. Harding & George R. Holdren, Jr., Environmental Equity and the Environmental Professional, 27 ENVTL. SCI. & TECH. 1990, 1991 (1993); Harvey L. White, Hazardous Waste Incineration and Minority Communities, in RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS, supra note 1, at 126, 134; Edward Patrick Boyle, Note, It's Not Easy Bein' Green: The Psychology of Racism, Environmental Discrimination, and the Argument for Modernizing Equal Protection Analysis, 46 VAND. L. REV. 937, 978-79 (1993); Rodolfo Mata, Note, Inequitable Siting of Undesirable Facilities and the Myth of Equal Protection, 13 B.C. THIRD WORLD L.J. 233, 235 (1993).

This Article addresses the issue of the victims of NIMBY, with special reference to the effects of project opposition on racial minorities. Because the effect of facility opposition varies widely with the type of project involved, Part II arrays the types of relevant projects and shows the ways that opposition manifests itself. Part III then briefly discusses the legal techniques used by those who oppose facilities, and the counter measures used by facility proponents. Part IV examines the available evidence on who suffers as a result of the opponents' techniques. Part V looks at who benefits from opposition to siting new facilities. Part VI is devoted to some of the secondary and imponderable effects of facility opposition. Finally, Part VII draws conclusions from the preceding discussion, and shows how the costs and benefits of NIMBY are very different from those envisioned by those who either condemn or applaud facility opposition.

II. The Techniques and Law of NIMBY

A. Waste Disposal Facilities

There are about two dozen different kinds of major waste streams requiring disposal facilities and each is subject to its own regulatory schemes and siting processes.⁹ Despite this large number, though, much of the public controversy over facility siting has revolved around the following categories of waste streams.

cancer and other adverse health effects from waste disposal facilities, see Kent E. Portney, SITING HAZARDOUS WASTE TREATMENT FACILITIES: THE NIMBY SYNDROME 89, 95, 134 (1991); James L. Regens, Siting Hazardous Waste Management Facilities, in PUBLIC INVOLVEMENT AND SOCIAL IMPACT ASSESSMENT 121, 124-25 (Gregory A. Daneke et al. eds., 1983), fear of crime, see MARJORIE BEGGS, ZELLERBACH FAMILY FUND, OK IN MY BACKYARD: ISSUES AND RIGHTS IN HOUS-ING FOR THE MENTALLY ILL 13 (1993); Davan Maharaj, Center Unwanted Neighbor to Residents; Dispute: Garden Grove Homeowners Want Facility for Mentally Ill to Move, L.A. TIMES, Apr. 12, 1993, at A1, and even moral degeneration, see Michael Winerip, NIMBY Views on People With AIDS, N.Y. TIMES, Apr. 5, 1988, at B1, from the clients of social service facilities and from the residents of low-income housing units. Concern over the impact on property values has also been cited as an important factor. See ADVISORY COMM'N ON REGULATORY BARRIERS TO AFFORDABLE HOUSING, "NOT IN MY BACKYARD": REMOVING BARRIERS TO AFFORDABLE HOUSING 1-5 to 1-7 (1991) [hereinafter ADVISORY COMM'N]; BEGGS, supra, at 12.

^{9.} These kinds of waste streams, the way they are disposed and regulated, and the way siting decisions are made are discussed in detail in chapters 2-4 of a forthcoming book by the author. MICHAEL B. GERRARD, WHOSE BACKYARD, WHOSE RISK: FEAR AND FAIRNESS IN TOXIC AND NUCLEAR WASTE SITING (M.I.T. Press, forthcoming 1994) [hereinafter GERRARD, WHOSE BACKYARD, WHOSE RISK]. An abridged version of this book can be found in Michael B. Gerrard, Fear and Loathing in the Siting of Hazardous and Radioactive Waste Disposal Facilities: A Comprehensive Solution to a Misperceived Crisis, 68 TUL. L. REV. 1047 (1994).

1. Hazardous waste¹⁰

Hazardous waste is generally disposed of either at the point of generation, or at off-site facilities operated by private companies. Most states have their own siting laws,¹¹ although these laws are subject to limited federal constraints.

2. Municipal Solid Waste

Municipal solid waste ("MSW") includes both household trash and commercial refuse. Most MSW is deposited in landfills or incinerated, although nowadays an increasing percentage is recycled. Most landfills or incinerators are operated by or for municipalities and are sited in accordance with state laws. Again, the state laws are subject to minimum federal standards.¹²

3. Medical Waste

Generated primarily by hospitals and clinics, most medical waste is burned in incinerators operated by the hospitals or by consortia of hospitals. There are also commercial facilities dedicated to incineration or autoclaving of medical waste.¹³

4. High Level Radioactive Waste

High level radioactive waste is generated by nuclear power plants and by the production of nuclear weapons. The siting of storage and disposal facilities is undertaken by the U.S. Department of Energy, under the regulation of the Nuclear Regulatory Commission and the EPA, in accordance with the Nuclear Waste Policy Act.¹⁴ This material remains hazardous for tens or hundreds of thousands of years, and deep geologic disposal has become the preferred method of disposal.¹⁵

^{10. &}quot;Hazardous waste" is a defined term under the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6903(5), 6921 (1988).

^{11.} New York STATE LEGISLATIVE COMM'N ON TOXIC SUBSTANCES & HAZARD-OUS WASTES, HAZARDOUS WASTE FACILITY SITING: A NATIONAL SURVEY (June 1987) [hereinafter HAZARDOUS WASTE FACILITY SITING]; A. Dan Tarlock, Siting New or Expanded Treatment, Storage, or Disposal Facilities: The Pigs in the Parlors of the 1980s, 17 NAT. RESOURCES LAW. 429 (1984).

^{12.} William L. Kovacs, *Solid Waste*, in Environmental Law Practice Guide § 35.01[2] (Michael B. Gerrard ed., 1992 & Supp. 1993).

^{13.} AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, U.S. PUBLIC HEALTH SERV., THE PUBLIC HEALTH IMPLICATIONS OF MEDICAL WASTE: A REPORT TO CONGRESS (1990).

^{14. 42} U.S.C. § 10101 (1988).

^{15.} LUTHER J. CARTER, NUCLEAR IMPERATIVES AND PUBLIC TRUST: DEALING WITH RADIOACTIVE WASTE 33 (1987).

5. Transuranic waste

Transuranic waste is principally plutonium, from nuclear weapons production. As with high level radioactive waste, deep geologic disposal is preferred.

6. Low-level radioactive waste

This is primarily from nuclear power plants, but a portion is also from industrial, scientific, and medical uses. Federal law requires the states to site their own facilities, either alone or in conjunction with other states,¹⁶ but little progress has been made in creating new facilities.

Every one of the above facilities requires a series of environmental permits from state and/or federal regulatory agencies. These permits generally cannot be issued without public hearings and other opportunities for citizen participation. Facility opponents generally try to use the administrative and judicial processes, which are open to extensive citizen involvement, to prevent these permits from being issued.

Additionally, formal site-selection processes that are normally separate from the permitting processes have been established for most of these kinds of facilities. The siting processes also usually involve citizen participation.

Zoning restrictions are another method. However, several states have preempted the ability of municipalities to use their zoning or other powers to keep out unwanted facilities.¹⁷ Except for highlevel and transuranic radioactive waste, there is only limited federal preemption of state siting processes for waste disposal facilities.¹⁸

B. Low-income housing

Unlike waste disposal facilities, new housing units typically do not require environmental permits, other than conventional water and sewer approvals, unless the sites are in protected areas such as wetlands or the habitat of endangered species. Local opposition to low-income housing often focuses on efforts to pressure local gov-

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^{16. 42} U.S.C. §§ 2021b-2021d.

^{17.} Neil R. Shortlidge & S. Mark White, The Use of Zoning and Other Local Controls for Siting Solid and Hazardous Waste Facilities, 7 NAT. RESOURCES & ENV'T 3 (1993).

^{18.} Patrick O'Hara, Note, The N.I.M.B.Y. Syndrome Meets the Preemption Doctrine: Federal Preemption of State and Local Restrictions on the Siting of Hazardous Waste Disposal Facilities, 53 LA. L. REV. 229 (1992).

ernments to use their zoning and land use powers to exclude such units. In accommodation of such pressure, many municipalities have adopted a variety of techniques: requirements for large building lots; restrictions on the ability to subdivide property into smaller lots; restrictions on new hookups to sewers, drinking water lines, and other utilities; exactions (such as fees to reimburse the municipality for the development's impacts on parks, schools, or other public facilities); expensive construction and design standards; construction moratoria; and zoning that prohibits multi-family dwellings.¹⁹ Hundreds of local governments in every region of the country have adopted some form of growth rest rictions.²⁰

The Fair Housing Act²¹ and the Civil Rights Act²² prohibit racial discrimination in the sale and rental of housing, and in zoning.²³ All states and localities receiving federal housing assistance are required by law to submit to the U.S. Department of Housing and Urban Development (HUD) a Comprehensive Housing Affordability Strategy statement that includes a description of the community's efforts to remove or ameliorate the negative effects of regulatory barriers. However, there is no enforcement mechanism to require the lifting of such barriers.²⁴ Some state courts have declared that each municipality has a responsibility to build affordable housing for a portion of the region's low-income residents, though the enforcement mechanisms for these requirements vary widely.²⁵

C. Social service facilities

Group homes and other similar facilities are often unpopular with their immediate neighbors. This is especially so where the clientele are people the neighbors find threatening, such as drug ad-

^{19.} Advisory Comm'n, supra note 8, at 4, 6.

^{20.} Jane H. Lillydahl & Larry D. Singell, The Effects of Growth Management on the Housing Market: A Review of the Theoretical and Empirical Evidence, 9 J. URB. AFF. 63, 64 (1987).

^{21. 42} U.S.C. §§ 3601-3617 (1988 & Supp. 1993).

^{22. 42} U.S.C. § 1982 (1988).

^{23.} See Huntington Branch, NAACP v. Town of Huntington, 844 F.2d 926 (2d Cir.) (action brought against town for refusing to amend ordinance restricting private multi-family housing projects), aff d, 488 U.S. 15 (1988).

^{24. 42} U.S.C. § 12705; see Michael H. Schill, The Federal Role in Reducing Regulatory Barriers to Affordable Housing in the Suburbs, 8 J.L. & Pol. 703, 707 (1992).

^{25.} See Martha Lamar et al., Mount Laurel at Work: Affordable Housing in New Jersey, 1983-1988, 41 RUTGERS L. REV. 1197 (1989).

dicts and ex-convicts.²⁶ In order to prevent neighborhoods from blocking these facilities, many states have enacted statutes preempting local control over the facilities, and these statutes have generally been upheld by the courts.²⁷ Most courts have also been unsympathetic to efforts to block these facilities through the use of environmental impact statement laws²⁸ or (where health fears have been found to be irrational) the public health laws.²⁹ The United States Supreme Court has also looked suspiciously at municipal efforts to exclude group homes, and has subjected such efforts, when motivated by neighborhood opposition, to heightened scrutiny under the Equal Protection Clause of the U.S. Constitution.³⁰ The U.S. Department of Justice has gone so far as to bring a lawsuit under the Fair Housing Act against residents of an affluent neighborhood who were fighting an effort to establish a group home in their midst.³¹

In recent years organizations in several minority communities have attempted to challenge the siting of different types of unwanted facilities on the grounds that the selection of sites in their neighborhoods amounted to unlawful discrimination. These efforts—whether aimed at waste disposal facilities³² or at social ser-

26. Marc B. Golstein et al., Public Preferences and Site Location of Residential Treatment Facilities, 17 J. COMMUNITY PSYCHOL. 186 (1989).

27. Terry Rice, Group Homes Site Selection Arouses Opposition, N.Y. L.J., June 10, 1992, at S-1; Salsich, supra note 7, at 424-46. These statutes are comprehensively reviewed in Lester D. Steinman, The Effect of Land-Use Restrictions on the Establishment of Community Residences for the Disabled: A National Study, 19 URB. LAW. 1 (1987).

28. Ronald C. Slye, Environmental Review of Facilities for the Homeless in New York, 3 ENVTL. L. N.Y. 178 (1992); Katherine Baird Russo, Note, Neighborhood Character and SEQRA: Courts Struggle With Homeless Shelters, Prisons, and the Environment, 14 COLUM. J. ENVTL. L. 231 (1989).

29. Association of Relatives & Friends of AIDS Patients v. Regulations & Permits Admin., 740 F. Supp. 95 (D.P.R. 1990); Baxter v. City of Belleville, 720 F. Supp. 720 (S.D. Ill. 1989); see David Bernstein, From Pesthouses to AIDS Hospices: Neighbors' Irrational Fears of Treatment Facilities and Contagious Diseases, 33 COLUM. HUM. RTS. L. REV. 1 (1990).

30. City of Cleburne v. Cleburne Living Ctr., 473 U.S. 432 (1985); see Harold A. Ellis, Neighborhood Opposition and the Permissible Purposes of Zoning, 7 J. LAND USE & ENVTL. L. 275 (1992); Daniel R. Mandelker, Housing Issues, in AIDS AND THE LAW: A GUIDE FOR THE PUBLIC (Harlon L. Dalton et al. eds., 1987).

31. Andrew L. Yarrow, 'Not in My Back Yard' and Repercussions: An Effort to Keep a Woman and 10 Children Out Results in a Lawsuit, N.Y. TIMES, Oct. 4, 1992, at A42.

32. East Bibb Twiggs Neighborhood Ass'n v. Macon-Bibb County Planning & Zoning Comm'n, 896 F.2d 1264 (11th Cir. 1989); R.I.S.E., Inc. v. Kay, 768 F. Supp. 1144 (E.D. Va. 1991), aff d, 977 F.2d 573 (4th Cir. 1992); Bean v. Southwestern Waste Management Corp., 482 F. Supp. 673 (S.D. Tex. 1979), aff d, 782 F.2d 1038 (5th Cir. 1986).

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vice facilities³³—have been uniformly unsuccessful, primarily because the Supreme Court requires proof of discriminatory intent in such cases.³⁴

III. The Victims of NIMBY

A. Facility Users

1. Waste generators

It is frequently asserted that the nation has a severe shortage of waste disposal facilities and that more are badly needed. To test the validity of this claim, and therefore whether waste generators are being hurt by opposition to new facilities, the next section will examine each of the major waste streams listed above.

a. Hazardous waste

Ninety-six percent of the hazardous waste generated in the United States is disposed of at the point of generation.³⁵ The remaining four percent is sent to commercial facilities around the country. Currently, the country has 103 chemical treatment plants, 95 solvent recovery plants, 60 physical treatment plants, 30 kilns that burn hazardous waste as fuel, 24 landfills, 20 incinerators, and 8 deep injection wells.³⁶ Today, most siting controversy revolves around efforts to expand the number of landfills and incinerators; there has long been ample capacity at most other types of facilities.³⁷ In fact, during the 1980's at least four hazardous waste treatment facilities received final permits but failed to open because of insufficient markets.³⁸ In the early 1990's, various factors, particularly the economic recession, successful waste minimization efforts, and fear of liability for off-site disposal, combined to drive down the demand for new landfills and incinerators, leading to the can-

^{33.} Coalition of Bedford-Stuyvesant Block Ass'ns v. Cuomo, 651 F. Supp. 1202 (E.D.N.Y. 1987).

^{34.} Arlington Heights v. Metropolitan Hous. Dev. Corp., 429 U.S. 252 (1977).

^{35.} Office of Solid Waste and Emergency Response, U.S. Envtl. Protection Agency, Pub. No. 05-312, National Biennial RCRA Hazardous Waste Report, Based on 1989 Data (Feb. 1993).

^{36.} McCoy & Assocs., 1993 Outlook for Commercial Hazardous Waste Management Facilities: A Nationwide Perspective, HAZARDOUS WASTE CONSULTANT (Mar./ Apr. 1993).

^{37.} JAMES E. MCCARTHY & MARK E. ANTHONY REISCH, CONGRESSIONAL RE-SEARCH SERVICE, HAZARDOUS WASTE FACT BOOK 31 (1987).

^{38.} HAZARDOUS WASTE FACILITY SITING, supra note 11, at 26.

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cellation of several expansion plans.³⁹ Several trade publications and industry analysts have concluded that the country has as many hazardous waste landfills and incinerators as it needs.⁴⁰

b. Municipal solid waste

Of the approximately 180 million tons of MSW generated annually, 72.7% is landfilled, 14.2% is incinerated, and 13.1% is recycled or otherwise recovered.⁴¹ Although the number of MSW landfills declined from about 20,000 in the early 1970's to about 7,000 in 1991,⁴² the new landfills that are opening are so large that total capacity has actually increased,⁴³ and a bidding war has erupted among landfills looking for more garbage.⁴⁴ There is also a good deal of unused incinerator capacity nationwide,⁴⁵ and several municipalities are losing a great deal of money on new—but underutilized—incinerators.⁴⁶

40. See ALEX BROWN & SONS, ENVIRONMENTAL RESEARCH: CHEMICAL WASTE MANAGEMENT, INC., ROLLINS ENVIRONMENTAL SERVICES, INC. 17 (Apr. 5, 1993); Jeff Bailey, WMX Slates Big Write-Down, Job Cuts as Hazardous-Waste Industry Struggles, WALL ST. J., Oct. 1, 1993, at A3; Hazardous Waste Market Growth Fueled by Remediation, Disposal & Services Flat, ENVTL. BUS. J., June 1993, at 1; Jeffrey D. Smith, Growth Potential of the Hazardous Waste Landfill Business, EI DIGEST, Apr. 1990, at 45.

41. SOLID WASTE AND EMERGENCY RESPONSE OFFICE, U.S. ENVTL. PROTECTION AGENCY, PUB. NO. EPA/530-SW-90-042A, CHARACTERIZATION OF MUNICIPAL SOLID WASTE IN THE UNITED STATES: 1990 UPDATE, EXECUTIVE SUMMARY ES-3, ES-6 (1990).

42. NATIONAL SOLID WASTES MANAGEMENT ASS'N, LANDFILL CAPACITY IN NORTH AMERICA—1991 UPDATE (1992).

43. Id. at 4; Jeff Bailey, Space Available: Economics of Trash Shift as Cities Learn Dumps Aren't So Full, WALL ST. J., June 2, 1992, at 1; Edward W. Repa & Susan K. Sheets, Landfill Capacity in North America, WASTE AGE, May 1992, at 18.

44. Barnaby J. Feder, *The Saga of Lonetree Landfill*, N.Y. TIMES, Dec. 22, 1992, at D1.

45. E. Malone Steverson, Provoking a Firestorm: Waste Incineration, 25 ENVTL. SCIENCE TECH. 1808 (1991).

46. See Frank E. Allen, Some Incinerators Have Capacity to Burn, WALL ST. J., Oct. 2, 1991, at B1; Jeff Bailey, Up in Smoke: Fading Garbage Crisis Leaves Incinerators Competing For Trash, WALL ST. J., Aug. 11, 1993, at A1; Jonathan Rabinowitz, Costs of Long Island Incinerators Rise With Trash Shortage, N.Y. TIMES, Oct. 10, 1992, at 26.

^{39.} See Hazardous Waste: Colorado Firm Abandons Application to Build Waste Incinerator in Florida, 24 Env't Rep. (BNA) 1174 (Oct. 22, 1993); Hazardous Waste: Company Withdraws Application to Build Incinerator, Cites EPA Review of Permits, 24 Env't Rep. (BNA) 881 (Sept. 17, 1993); Hazardous Waste: Waste Company Blames North Carolina After Abandoning Bid to Build Incinerator, 24 Env't Rep. (BNA) 909 (Sept. 24, 1993); Jeff Bailey, WMX Technologies Ends Plan to Build California Incinerator; Demand Shrinks, WALL ST. J., Sept. 8, 1993, at C15; Elisabeth Kirschner, Du-Pont Drops Incineration, But Ecoservices Still Growing, CHEM. WEEK, Sept. 8, 1993, at 9.

c. Medical waste

Existing medical waste incinerators have the capacity to burn about ten times the amount of the waste that is actually generated, though most of the excess capacity is in hospital incinerators that are only used intermittently. Efforts to build new medical waste incinerators are aimed principally at achieving larger, more efficient units with better pollution controls, rather than at remedying any serious capacity shortage.⁴⁷

d. High-level Radioactive Waste

The United States has no facilities for the permanent disposal or long-term storage of high-level radioactive waste. The federal government is attempting to build a repository for this material at Yucca Mountain, Nevada, but meanwhile most such waste is stored at or near the installations where it is created.⁴⁸ Most of the highlevel radioactive waste from nuclear weapons production is stored in 177 underground tanks at the U.S. Department of Energy's ("DOE") Hanford Reservation in southern Washington State, and fifty-one tanks at DOE's Savannah River plant in South Carolina. Several of these tanks are leaking, and there is considerable fear that they may burst from the chemical and radioactive reactions that constantly occur within them.⁴⁹ Spent fuel rods from nuclear power plants are generally kept in storage pools at the plants themselves, under conditions that are generally regarded as safe for the next several decades, though operation of these pools is very expensive.50

e. Transuranic Waste

The federal government has built the Waste Isolation Pilot Project (WIPP) in an excavated salt cavern near Carlsbad, New Mexico, to dispose of transuranic waste, but it is not yet open.

^{47.} Steverson, supra note 45, at 1810-11; see also Jeff Bailey, How Two Garbage Giants Fought Over Medical Waste, WALL ST. J., Nov. 17, 1992, at B6 (discussing the overcapacity of medical waste incinerators in some markets).

^{48.} GERALD JACOB, SITE UNSEEN: THE POLITICS OF SITING A NUCLEAR WASTE REPOSITORY (1990).

^{49.} OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, PUB. NO. OTA-0-484, COMPLEX CLEANUP: THE ENVIRONMENTAL LEGACY OF NUCLEAR WEAPONS PRODUCTION (1991); Matthew L. Wald, At an Old Atomic-Waste Site, The Only Sure Thing is Peril, N.Y. TIMES, June 21, 1993, at A1.

^{50.} BOARD ON RADIOACTIVE WASTE MANAGEMENT, NATIONAL ACADEMY OF Science, Rethinking High Level Radioactive Waste Disposal (July 1990).

Meanwhile, transuranic waste is in storage, mostly in a facility in Idaho.⁵¹

f. Low-Level Radioactive Waste (LLRW)

Virtually all of the nation's commercially produced LLRW is currently landfilled at facilities in South Carolina and Washington.⁵² There has been little progress in siting new facilities, despite noisy controversies in several states. States that have not reached agreements with South Carolina or Washington are facing loss of access to those facilities, requiring planning for storage of the LLRW while new disposal facilities are sited and built.⁵³

As this survey illustrates, there is no real shortage of non-radioactive waste disposal facilities in this country. The generators of hazardous waste, municipal solid waste, and medical waste can all find available disposal facilities, though sometimes at a high price.⁵⁴ The spent fuel from nuclear power plants is stored at the plants and will be for many years until a centralized interim storage facility or a long-term disposal facility is opened. Commercial disposal capacity for low-level radioactive waste will soon be unavailable for most states, and interim storage will be necessary. The varieties of radioactive waste from nuclear weapons production are in storage around the country, often in crude and dangerous conditions, but little of this waste is still being generated, except from the cleanup of previously contaminated sites.

° 2. Residents of substandard and unaffordable homes

People who now live in substandard housing, people who do not have a place of their own at all,⁵⁵ and people who live in housing that consumes such a large portion of their income that they must

^{51.} CARTER, supra note 15, at 176; Keith Schneider, Wasting Away, N.Y. TIMES MAG., Aug. 30, 1992, at 42.

^{52.} Sarah Lyall, Failing to Build a Dump, New York Faces Shutout, N.Y. TIMES, May 21, 1993, at A1; Robert Reinhold, States, Failing to Cooperate, Face a Nuclear-Waste Crisis, N.Y. TIMES, Dec. 28, 1992, at A1.

^{53.} U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GA0/RCED-92-61, NUCLEAR WASTE: SLOW PROGRESS DEVELOPING LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITIES (1992).

^{54.} It is sometimes alleged that the unavailability or high price of waste disposal leads to widespread illegal dumping. The available information, however, shows that this allegation is without basis. See GERRARD, WHOSE BACKYARD, WHOSE RISK, supra note 9, ch. 5.

^{55.} A shortage of low-cost housing has been cited as a major reason for homelessness. See Marta Elliott & Lauren J. Krivo, Structural Determinants of Homelessness in the United States, 38 Soc. PROBLEMS 113 (1991).

do without other necessities⁵⁶ are the potential beneficiaries of new low-income housing units.

By several measures, the United States has a severe and growing shortage of affordable housing. The 1980's saw more poor people competing for less low-income housing.⁵⁷ According to a report from Harvard's Joint Center for Housing Studies, over threequarters of poor, unsubsidized tenants paid more than half of their income for housing in 1990.58 One scholar wrote that in 1991 "[n]early 29 million households in the United States-containing 85 million people, or 34 percent of the population—face so great a squeeze between inadequate incomes and high housing costs that after paying for their housing they are unable to meet their nonshelter needs at even a minimum level of adequacy."59 Though a numerical majority of these "shelter-poor" households are white, the burden is borne disproportionately by minorities; about 25% of white households, but 50% of African American and 50% of Latino households, are "shelter poor."⁶⁰ According to a 1988 survey of twenty-seven cities by the U.S. Conference of Mayors, the average waiting time between filing an application for assisted housing and receiving assistance is twenty-one months, and many cities have stopped accepting applications altogether.⁶¹ A 1985 study found there were 11.6 million households with incomes below \$10,000, but only 7.9 million rental units that these households could afford (and many of those units were either uninhabitable, or occupied by more affluent families).62

Even well above the poverty line, many families are adversely^o affected. In the words of the Advisory Commission on Regulatory Barriers to Affordable Housing, "Middle-income workers, such as police officers, firefighters, teachers, and other vital workers, often

^{56.} A standard rule of thumb is that housing is unaffordable if it consumes more than 30% of household income, see ADVISORY COMM'N, supra note 8, at 3; Schill, supra note 24, at 705 n.7, although a large family has greater cash needs for food, clothing and other necessities than a small one, and can therefore afford to spend less of its income on housing. See MICHAEL E. STONE, SHELTER POVERTY: NEW IDEAS ON HOUSING AFFORDABILITY 34-44 (1993).

^{57.} James D. Wright & Beth A. Rubin, Is Homelessness a Housing Problem?, 2 HOUS. POL'Y DEBATE 937, 951 (1991).

^{58.} Schill, supra note 24, at 705 n.7.

^{59.} STONE, supra note 56, at 32.

^{60.} Id. at 33.

^{61.} U.S. Conference of Mayors, A Status Report on Hunger and Homelessness in America's Cities: 1988; a 27-City Survey 63-64 (1989).

^{62.} PAUL A. LEONARD ET AL., A PLACE TO CALL HOME: THE CRISIS IN HOUSING FOR THE POOR 6-8 (1989).

live many miles from the communities they serve, because they cannot find affordable housing there."⁶³

There are many ways that restrictions can increase the price and reduce the supply of housing.⁶⁴ For example, restrictions can increase the price of an acre of land, allow fewer units per acre, limit the number of units that can be built, create approval delays that add to carrying costs; discourage new developers from entering the market, thereby allowing existing developers to charge higher prices; and induce developers to build for higher-income markets.65 Several attempts have been made to quantify how much local opposition and exclusionary techniques add to the cost of new housing. Housing prices in communities that make aggressive attempts to discourage the construction of affordable housing can be as much as 50% higher than for comparable units in nearby communities that do not make such attempts,⁶⁶ but more typically, the margin is between 10 and 20%⁶⁷ The magnitude of the difference will depend on several variables, such as the demographic composition of the community, the nature of the controls imposed, the growth controls of surrounding communities, and other factors affecting supply and demand in the housing market in question.⁶⁸

66. Bruce W. Hamilton, Zoning and the Exercise of Monopoly Power, 5 J. URB. ECON. 116, 125-28 (1978).

^{63.} Advisory Comm'n, supra note 8, at 3.

^{64.} IRA S. LOWRY & BRUCE W. FERGUSON, URBAN LAND INST., DEVELOPMENT REGULATION AND HOUSING AFFORDABILITY 153 (1992); Norman Karlin, Zoning and Other Land Use Controls: From the Supply Side, 12 Sw. U. L. REV. 561 (1981).

^{65.} See David E. Dowall, The Effect of Land Use and Environmental Regulations on Housing Costs, 8 POL'Y STUD. J. 277 (1979); Bernard J. Frieden, The New Regulation Comes to Suburbia, 55 PUB. INTEREST 15 (1979); Lawrence Katz & Kenneth T. Rosen, The Interjurisdictional Effects of Growth Controls on Housing Prices, 30 J. L. & ECON. 149 (1987).

^{67.} ADVISORY COMM'N, supra note 8, at 4; Lillydahl & Singell, supra note 20, at 71; see also H.E. Frech, III & Ronald N. Lafferty, The Effect of the California Coastal Commission on Housing Prices, 17 J. URB. ECON. 105 (1984); Katz & Rosen, supra note 65, at 159; Henry O. Pollakowski & Susan M. Wachter, The Effects of Land-Use Constraints on Housing Prices, 66 LAND ECON. 315 (1990); Seymour I. Schwartz et al., The Effect of Growth Control on the Production of Moderate-Priced Housing, 60 LAND ECON. 110 (1984). Some have argued, in contrast, that the effect of growth controls on the cost and supply of housing is negligible, and that national policies in the areas of credit and taxation are far more important. See JOHN K. GILDERBLOOM & RICHARD P. APPELBAUM, RETHINKING RENTAL HOUSING 123 (1988).

^{68.} See generally Robert C. Ellickson, Suburban Growth Controls: An Economic and Legal Analysis, 86 YALE L.J. 385 (1977) (using economic theory to analyze growth control controversy); GILDERBLOOM & APPELBAUM, supra note 67 (arguing that local growth and environmental controls have very little impact on housing costs, and that inflation rates and credit and taxation policies are much more important).

Restrictions on the development of new housing are, of course, only one factor in creating a shortage of affordable housing. The number of people living in poverty—and therefore the amount that people can afford for shelter—fluctuates significantly as economic conditions change.⁶⁹ For potential home buyers, the largest single factor in housing affordability in recent years has been mortgage rates; the very high interest rates in the late 1970's put houses out of reach for many households that can afford them with the low rates of the early 1990's.⁷⁰ Demographic trends, in particular the demand for housing units created by the formation and dissolution of families, are also very important factors.⁷¹ Labor and material costs, which have almost nothing to do with local opposition, account for about half of new housing costs.⁷² Additionally, the Reagan administration's massive cutbacks in federal housing subsidies drastically reduced the creation of low-income housing.⁷³

3. Social services clients

Finding sites with willing neighbors is a considerable problem for agencies, whether governmental or nonprofit, seeking to create shelters for homeless people⁷⁴ or group homes for the mentally ill, recovering addicts, AIDS patients, and others.⁷⁵ A disproportionate number of such people come from the lower socio-economic strata.⁷⁶

Community facilities such as group homes are an important part of the deinstitutionalization process. They provide an essential transition between confinement to an institution and total integration into society. They are also as close to a normal living situation as some people can ever achieve. It is difficult to find statistics quantifying the impact that NIMBY resistance has on the availabil-

73. STONE, supra note 56, at 158-62.

^{69.} Statistics on the number of people living in poverty are presented in Committee on Ways and Means, U.S. House of Representatives, 102d Cong., 2d Sess., Overview of Entitlement Programs: 1992 Green Book, at 1274 (1992).

^{70.} Advisory COMM'N, supra note 8, at 1-2.

^{71.} See Nick Ravo, After a Decade of Decline, Homeownership is Rising, N.Y. TIMES, Nov. 28, 1993, § 10, at 5.

^{72.} Lillydahl & Singell, supra note 20, at 68.

^{74.} Joseph P. Griffith, For the Homeless, 'Nimby' on the Doormat, N.Y. TIMES, Mar. 22, 1992, § 10, at 8.

^{75.} Davan Maharaj, Center Unwanted Neighbor to Residents; Dispute: Garden Grove Homeowners Want Facility for Mentally III to Move, L.A. TIMES, Apr. 12, 1993, at A1; Gayle T. Williams, Group Homes: No Open Door, REPORTER DISPATCH (White Plains, N.Y.), June 20, 1993, at 1.

^{76.} Bruce P. Dohrenwend et al., Socioeconomic Status and Psychiatric Disorders: The Causation-Selection Issue, 255 SCIENCE 946 (1992).

ity or cost of group homes and other social service facilities. A 1983 study concluded that zoning and other land-use policies in metropolitan areas generally were not major hindrances for most sponsors of group homes.⁷⁷ However, a 1985 survey of professional planners by the American Planning Association revealed a concern that "overly restrictive zoning regulations" have been a "major stumbling block to the deinstitutionalization movement."⁷⁸ The Mental Health Law Project has estimated that half the sites chosen for group homes never open because of community opposition.⁷⁹

It is similarly difficult to find clear numbers on the adequacy of existing facilities. A 1988 survey of twenty-seven cities concluded that, on average, 19% of requests by homeless people for emergency shelter went unmet.⁸⁰ It would be useful to find statistics concerning the availability of placements for patients who would benefit from placement in group homes. One examination concluded that there is a severe shortage of community mental health facilities, and many patients are still confined to institutions as a result, but that local opposition to new facilities is only one of the numerous reasons for this shortage.⁸¹

B. Indirect Beneficiaries of Facilities

The above discussion concerned the direct users of facilities whose construction is inhibited by local opposition. The facilities also have indirect beneficiaries, as discussed in the following section.

1. Residents of Areas with Substandard Waste Disposal

As stated previously, the United States has an adequate amount of disposal capacity for most kinds of hazardous municipal and medical waste. However, much of the waste is disposed in old facilities that operate under less regulation than is applicable to new

80. U.S. CONFERENCE OF MAYORS, supra note 61, at 50.

^{77.} U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO/HRD/83-14, AN ANALYSIS OF ZONING AND OTHER PROBLEMS AFFECTING THE ESTABLISHMENT OF GROUP HOMES FOR THE MENTALLY DISABLED (1983).

^{78.} Salsich, supra note 7, at 419 (citing American Planning Ass'n, Zoning News (Jan. 1986)).

^{79.} Ann Marie Rizzo et al., Strategies for Responding to Community Opposition in an Existing Group Home, 15 Psychosocial REHAB. J. 85 (1992).

^{81.} Stacy E. Seicshnaydre, Community Mental Health Treatment for the Mentally Ill-When Does Less Restrictive Treatment Become a Right?, 66 TUL. L. REV. 1971, 1972-74 (1992).

units.⁸² Because it is so difficult to site new facilities, old units continue in operation. In fact, only one of the twenty-one commercial hazardous waste landfills operating today is on a site selected since the enactment of the Resource Conservation and Recovery Act (RCRA) in 1976. EPA has concluded that about 70% of all landbased hazardous waste treatment, storage, and disposal facilities would fail EPA's current siting criteria for protecting groundwater.⁸³ One sample found potential releases of hazardous wastes from about 90% of such facilities.⁸⁴ The most pronounced example of facilities operating past retirement age is the storage of highlevel radioactive waste in large tanks at the DOE complexes in Washington and South Carolina.

There is some evidence that older facilities for hazardous waste treatment and disposal were disproportionately located in minority communities,⁸⁵ though these statistics predated the closing of large numbers of older facilities in the mid-1980s upon the expiration of the "interim status" that had allowed them to remain open.⁸⁶ An up-to-date analysis of currently operating RCRA facilities would be useful.

A disproportionate share of contaminated sites are located in minority communities.⁸⁷ There is an active debate over the origins

^{82.} Far laxer regulatory standards apply to old hazardous waste landfills than to new ones, see U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO/RCED-91-79, HAZ-ARDOUS WASTE: LIMITED PROGRESS IN CLOSING AND CLEANING UP CONTAMI-NATED FACILITIES 20 (1991); CHRISTOPHER HARRIS ET AL., HAZARDOUS WASTE: CONFRONTING THE CHALLENGE 111-13 (1987), and to old incinerators than to new ones, see U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO/RCED-92-21, HAZARD-OUS WASTE: INCINERATOR OPERATING REGULATIONS AND RELATED AIR EMISSION STANDARDS (1991).

^{83.} Guidelines for Hazardous Waste Treatment Sites: Hearings Before Subcommittee on Commerce, Transportation & Tourism of House Committee on Energy and Commerce, 99th Cong., 2d Sess., at 32, 48 (1986) (statement of Marcia E. Williams, Director, EPA Office of Solid Waste).

^{84.} U.S. Gen. Accounting Office, Pub. No. GAO/RCED-91-79, Hazardous Waste: Limited Progress in Closing and Cleaning Up Contaminated Facilities 44 (1991).

^{85.} COMMISSION FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES 13 (1987) [hereinafter UCC REPORT]; U.S. GEN. ACCOUNTING OFFICE, PUB. NO. GAO/RCED-83-168, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES (1983).

^{86.} See Alex S. Karlin, Hazardous Waste Management, in Environmental Law Practice Guide, supra note 12, § 29.09[2].

^{87.} UCC REPORT, supra note 85.

of this disparity, and whether it was deliberate or not,⁸⁸ but there is little question that it exists.

2. Product and Electricity Consumers

The chemical industry is by far the largest generator of hazardous waste, followed by primary and fabricated metals and petroleum refining.⁸⁹ The chemical industry manufactures some products that are sold directly to consumers (such as insect sprays, home cleansers, plastic bags, and batteries), but most of its output is sold to other manufacturers, which then create products throughout the economy. The same pattern follows with the other large hazardous waste generators. No systematic study has been published looking at how much hazardous waste is created in the manufacture of various consumer products, or at how disposal costs have affected the prices of various goods and services. Such a study would inform the question of how consumers are affected by a shortage or surplus of hazardous waste disposal facilities. All things being equal, additional capacity should lower the price of disposal, and hence the price of goods and services; however, this effect might be wiped out if new capacity allows for the closure of older, substandard facilities, or if market factors prevent savings from being passed along to consumers. Thus, though local opposition has undoubtedly held down the number of waste disposal facilities, the effect on consumers of waste-generating products is unknown.

As seen above, a large portion of all radioactive waste is generated in the production of electricity by nuclear power plants.⁹⁰ Disposal costs are an element of electric rates. The electric utilities (and hence their customers) now pay twice for the management of spent nuclear fuel—they pay for the development of the Yucca Mountain facility,⁹¹ and they pay for the storage of the fuel rods at the power plants while Yucca Mountain is being prepared. The

91. 42 U.S.C. § 10222 (1988).

^{88.} See Vicki Been, What's Fairness Got To Do With It? Environmental Justice and the Siting of Locally Undesirable Land Uses, 78 CORNELL L. REV. 1001 (1993) (offering alternative explanations for the disproportionate siting patterns); Richard J. Lazarus, Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection, 87 Nw. U. L. REV. 787 (1993) (exploring theoretical reasons for distributional inequities).

^{89.} OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, *supra* note 35, at 2, 226.

^{90.} Most of the rest is generated in the manufacture of nuclear weapons.

opening of the disposal facility would end this double expense.⁹² The amount of savings that would be realized by electricity consumers, however, is uncertain.

3. Residents of Areas with High Concentrations of Social Service Clients

Neighborhoods in some cities have large numbers of people who are homeless, mentally ill, or otherwise disadvantaged in a way that other residents often find unappealing or threatening.⁹³ Certain heavily-used public facilities, such as bus terminals and train stations, also attract such populations. A greater supply of homes or shelters for the homeless, and group homes or other facilities for other social service clients, might reduce the number of these people wandering the street or inhabiting public facilities. The effect would be only partial, though, because many people eligible for these services reject them.

4. Overburdened Families

Many people who might otherwise be homeless or institutionalized are kept off the street and out of institutions because of the kindness (or at least the tolerance) of friends and relatives who give them places to sleep in their own houses or apartments.⁹⁴ This often leads to cramped, tense living situations, which might be eased by a greater supply of affordable housing and of social service facilities.

C. Providers and Funders of Facilities

1. Waste Disposal Services

Private companies own and operate virtually all of the hazardous waste disposal facilities in the United States and are responsible for the construction of new ones. Municipal solid waste disposal facilities (mostly landfills and incinerators) are owned either by municipalities or by private companies, often under contract to one or more municipalities. The planned radioactive waste disposal facili-

^{92.} In 1993 the Secretary of Energy proposed to end this double payment, and to aid utilities in the cost of spent fuel shortage. Matthew L. Wald, *A New U.S. Stance on Atomic Wastes*, N.Y. TIMES, Dec. 3, 1993, at A27.

^{93.} See Susan Chira, New York's Poorest Neighborhoods Bear the Brunt of Social Programs, N.Y. TIMES, July 16, 1989, § 1, at 1; Sam Roberts, In My Backyard? Where New York City Puts Its Problems, N.Y. TIMES, Dec. 6, 1992, at 54.

^{94.} Jan E. Mutchler & Lauren J. Krovo, Availability and Affordability: Household Adaptation to a Housing Squeeze, 68 Soc. Forces 241 (1989).

ties would all be owned by the federal government, except for the commercial low-level radioactive waste facilities, which are privately owned.

Many of the companies seeking to site new waste disposal facilities have suffered large losses when their proposals were defeated by local opposition.⁹⁵ On the other hand, to the extent that these difficulties have restrained the supply of disposal capacity, the price of disposal has greatly increased, to the benefit of disposal companies. The net effect of facility opposition on a particular company depends on the individual company's success or failure in siting new facilities, and on the profitability of its existing facilities.

2. Housing Developers and Builders

The people who develop and build housing (and their suppliers and employees) are hurt if local opposition reduces (as opposed to displaces) the construction of new housing. If some of the developers are also landlords of existing housing, they enjoy an offsetting benefit if a shortage of housing allows them to charge higher rents. It does not appear that the net effect of these conflicting influences has been quantified in any published study.

3. Taxpayers

Only slight changes in personal circumstances and the availability of different kinds of facilities determine whether certain individuals reside, at any given moment, in low-income housing, homeless shelters, group homes, hospitals, or jails. For this population, all these kinds of facilities are either provided or heavily subsidized by the government, with some help (except for jails) from the charitable sector, yet even that help receives a significant tax subsidy. The cost of these facilities varies widely; hospital and jail beds, for example, are much more expensive to provide than are affordable housing units and group homes.⁹⁶ Thus, taxpayers suffer if local opposition moves more people toward more expensive rather than less expensive government-funded lodging. Whether this actually occurs, and if so to what extent, are unknown.

^{95.} Clean Harbors of Braintree, Inc., spent \$16 million on its unsuccessful effort to site a hazardous waste incinerator in Massachusetts. DENNIS J. BRION, ESSENTIAL INDUSTRY AND THE NIMBY PHENOMENON 13-14 (1991). CECOS International, Inc. spent at least \$7 million in a failed attempt to expand a hazardous waste facility in Niagara Falls, New York. Paul MacClennan, *The Stakes Are High in the CECOS Hearings*, BUFFALO NEWS, Sept. 18, 1988, at H16.

^{96.} See Mandelker, supra note 30, at 147.

D. Neighbors of Displaced Facilities

As noted at the beginning of this Essay, many commentators believe that NIMBY opposition hurts minority communities by displacing undesirable facilities (especially landfills and incinerators) from white areas, which have the resources to fight them, and moving them into minority areas, which do not.

Few concrete examples or statistics have been presented to establish that this sequence of events actually occurs. Upon closer examination, it becomes clear that it does *not* occur, at least for most types of waste streams.

1. Hazardous Waste

Only one new off-site hazardous waste landfill has opened on a new site, and remained open, since the enactment of RCRA⁹⁷ in 1976. It is in Last Chance, Colorado, an area where the population is 87% white.⁹⁸ There are a few new hazardous waste incinerators, but it is not clear that they are primarily in minority communities.

2. Municipal Solid Waste (MSW)

Many new incinerators, and several new landfills, for MSW have opened in the past two decades. Professor Bullard has demonstrated that, in Houston in the 1970s, new MSW facilities were overwhelmingly sited in minority communities.⁹⁹ Scattered litigation has suggested similar patterns in a few other cities.¹⁰⁰ No published study has examined nationwide patterns in siting MSW facilities. Regulations promulgated by EPA under RCRA in 1991,¹⁰¹ imposing strict design, construction, and siting standards on new MSW landfills, are likely to lead to the construction of

^{97. 42} U.S.C. § 6901 (1983).

^{98.} The demographic figure is from the U.S. BUREAU OF THE CENSUS, 1990 CENSUS OF POPULATION AND HOUSING. See also Hunt v. Chemical Waste Management, Inc., 584 So. 2d 1367, 1373 (Ala. 1991), rev'd 112 S. Ct. 2009 (1992); NEW YORK STATE DEP'T OF ENVTL. CONSERVATION, RECOMMENDATIONS FOR ASSISTANCE TO LOCALITIES AFFECTED BY HAZARDOUS WASTE MANAGEMENT FACILITIES 35-39 (Apr. 1988).

^{99.} BULLARD, supra note 1, at 50-54. A detailed critique of Professor Bullard's methodology is contained in Vicki Been, Locally Undesirable Land Uses in Minority Neighborhoods: Disproportionate Siting or Market Dynamics?, 103 YALE L.J. 1383 (1994).

^{100.} See supra notes 32-34 and accompanying text.

^{101. 56} Fed. Reg. 50,978 (1991).

large landfills in relatively remote areas and to less use of small landfills scattered throughout cities, as occurred in Houston.¹⁰²

3. Medical Waste

In a few well-known, highly controversial cases, new medical waste incinerators have been sited in minority communities.¹⁰³ However, no published study has looked at nationwide patterns.

4. High-level Radioactive Waste

The U.S. Department of Energy is attempting to site the nation's only repository for high-level radioactive waste in Yucca Mountain, in an uninhabited area of the Nevada desert. Its nearest neighbor is a legal brothel eighteen miles away.¹⁰⁴

5. Transuranic Waste

The nation's only repository for transuranic waste is in a relatively uninhabited area near Carlsbad, New Mexico. As noted above, this site is not yet open.

6. Low-Level Radioactive Waste

Efforts are underway in several states to site new LLRW landfills. These have focused on mostly white farming communities in New York, Connecticut, Nebraska, and Illinois, as well as in the California desert. There appear to have been no efforts to site new LLRW facilities in minority communities.¹⁰⁵ In the past decade the only successful siting of a new facility for radioactive waste—first for mill tailings, then for LLRW—was in Tooele County, Utah.¹⁰⁶ Several new hazardous waste incinerators and other similar facilities have been sited in Tooele County since the late 1980's.¹⁰⁷ The county is 91% white.¹⁰⁸

108. U.S. BUREAU OF THE CENSUS, 1990 CENSUS OF POPULATION AND HOUSING.

^{102.} See Kirsten Engel, Environmental Standards as Regulatory Common Law: Toward Consistency in Solid Waste Regulation, 21 N.M. L. REV. 13 (1990); Kathleen Farrelly, The New Federal Standards for Municipal Solid Waste Landfills: Adding Fuel to the Regulatory Fire, 3 VILL. ENVTL. L.J. 383 (1992).

^{103.} See Ian Fisher, Builders and Foes Using Bronx Incinerator as Test, N.Y. TIMES, Sept. 8, 1992, at B3; Frances F. Marcus, Medical Waste Divides Mississippi Cities, N.Y. TIMES, June 24, 1992, at A16.

^{104.} Fred C. Shapiro, Yucca Mountain, New YORKER, May 23, 1988, at 61.

^{105.} See GERRARD, WHOSE BACKYARD, WHOSE RISK, supra note 9, ch. 3.

^{106.} However, many other sites for the disposal of uranium mill tailings are located near the mines in Navajo country.

^{107.} Donovan Webster, Happiness is a Toxic Waste Zone, OUTSIDE, Sept. 1993, at 58.

In sum, for those types of waste streams for which specific information is available, there is no nationwide pattern since the enactment of RCRA in 1976 of siting new hazardous or radioactive waste disposal facilities in minority rather than white areas (largely because so few new facilities have been sited in that period). Data should be compiled to determine if any nationwide racial patterns can be discerned in the siting of MSW and medical waste facilities. Similarly, it would be useful to compile data on recent patterns and siting sequences in the location of low-income housing and social service facilities.

IV. The Beneficiaries of NIMBY

A. Owners of Existing Facilities

As noted in Part IV, owners of waste disposal facilities benefit from opposition to new facilities *if* this allows them to charge more for the services of their old facilities, or allows these old facilities to remain open longer, *and* if these owners were not themselves trying unsuccessfully at great expense to site new facilities. Both hazardous and solid waste disposal are increasingly concentrated in a small number of large nationwide companies, and thus the second prong of this requirement may well not be satisfied.

Owners of existing housing are major beneficiaries of restrictions on the construction of new housing. Housing shortages will increase the value of existing housing and, if the units are rented and there are no rent controls, will allow the owners to charge higher rents.¹⁰⁹

Few social service facilities are operated for profit (except for the occasional proprietary clinic serving affluent or amply insured patients with addictive or other mental disorders), and thus local opposition to new social service facilities will rarely increase the profits of existing facilities.

B. Municipalities With Existing Facilities

In some states, municipalities are allowed to levy a gross receipts tax or other charge on waste disposal facilities within their borders.¹¹⁰ These municipalities will benefit if those existing facilities enjoy higher revenues as a result of restrictions on the construction of competing facilities.

^{109.} See Ellickson, supra note 68.

^{110.} Sharon N. Green, Planning for Hazardous Waste Capacity: Lessons From the Northeast States 93 (1990).

As just noted, owners of existing housing benefit from growth restrictions. If that housing is in a jurisdiction neighboring the one with the restrictions, the municipality with the existing housing may well benefit from the ability to charge higher property taxes for that housing.

C. Neighbors of Blocked Facilities

Communities that successfully block the siting of facilities they do not want are, of course, the most visible beneficiaries of local opposition. In the case of waste disposal facilities, these communities have avoided the health and environmental risks, and the threatened loss in property values, tourism, and community image that can accompany a disposal facility. These benefits are more affected by distance from the facility than by municipal borders.¹¹¹

The communities that exclude low-income housing and social service facilities may preserve their property values, though the evidence seems to show that social service facilities such as group homes have little or no detrimental impact on neighboring property values.¹¹² These communities also receive psychic gratification, though sometimes based on racial animus or other impulses that society as a whole regards as repugnant.

D. The Environment

The environment often benefits, both directly and indirectly, from the successful blockage of waste disposal facilities. Sites are protected from the long term environmental impacts of the new facilities. A landfill is designed to contain waste forever, and (notwithstanding magazine advertisements showing golf courses

1994]

^{111.} See PANEL ON SOCIAL AND ECONOMIC ASPECTS OF RADIOACTIVE WASTE MANAGEMENT, NAT'L RESEARCH COUNCIL, SOCIAL AND ECONOMIC ASPECTS OF RADIOACTIVE WASTE DISPOSAL: CONSIDERATIONS FOR INSTITUTIONAL MANAGE-MENT 101-02 (1984) (discussing "distance-decay curves" in measuring the relationship between distance and perceived impacts of radioactive waste disposal facilities). The municipalities themselves also lose the compensation payments that are increasingly offered for acceptance of such facilities, but by fighting the facility the municipalities signal that freedom from a disposal facility is worth more to them than the offered payments.

^{112.} Been, supra note 88, at 1022-23 & nn.113-14; Katherine M. Boydell et al., The Effect of Group Homes for the Mentally III on Residential Property Values, 40 HOSPI-TAL & COMMUNITY PSYCH. 957 (1989). The available studies on this subject are comprehensively reviewed in COMMUNITY RESIDENCES INFORMATION SERVICES PROGRAM, "THERE GOES THE NEIGHBORHOOD . . .": A SUMMARY OF STUDIES AD-DRESSING THE MOST OFTEN EXPRESSED FEARS ABOUT THE EFFECTS OF GROUP HOMES ON NEIGHBORHOODS IN WHICH THEY ARE PLACED (Oct. 1990).

built atop closed landfills) the prospects for future beneficial uses are speculative at best. Incinerators can theoretically be dismantled and any remaining contamination cleaned up, but there is little actual experience here as well. The adverse environmental impacts of a housing development or social service facility are of an entirely different order of magnitude; they are no more harmful than any other ordinary building, and unless they are proposed for a wetland or other sensitive area, or are so large that they generate considerable traffic, the physical impacts are likely to be minimal.

The indirect environmental benefit from blocking waste disposal facilities can be even more important. Professor Robert W. Lake expressed this idea aptly:

Siting hazardous waste incinerators, for example, constitutes a locational solution to an industrial production problem (hazardous waste generation). But the incinerator siting solution is only one of a number of possible strategies for hazardous waste management. The facility siting strategy concentrates costs on host communities, as compared to the alternative strategy of restructuring production so as to produce less waste, which in the short run concentrates costs on capital. Locating homeless shelters similarly concentrates costs on host communities, relative to an alternative strategy that seeks to alleviate joblessness and reduce the incidence of poverty through capital restructuring.¹¹³

Michael R. Edelstein has gone even further:

In the absence of people having to come to grips with their own waste problems, there is little pressure for them to conserve, recycle, clean up, and reduce the waste flow. When wastes go somewhere else, there is no impetus to be responsible for the consequences of one's actions. This is a moral issue. Perhaps the fallacious concepts of 'waste disposal' and YIYBY [Yes, in Your Backyard] are really the problem, not NIMBY.¹¹⁴

Though the phenomenon of homeless persons wandering the streets has certainly increased public consciousness and increased the public's willingness to pay for shelters, there is little evidence that local opposition to homeless shelters has led to any significant

^{113.} Robert W. Lake, Rethinking NIMBY, 59 AM. PLANNING Ass'N J. 87, 88 (1993); see also Robert W. Lake & L. Disch, Structural Constraints and Pluralist Contradictions in Hazardous Waste Regulation, 24 ENV'T & PLANNING 663 (1992).

^{114.} MICHAEL R. EDELSTEIN, CONTAMINATED COMMUNITIES: THE SOCIAL AND PSYCHOLOGICAL IMPACTS OF RESIDENTIAL TOXIC EXPOSURE 187 (1988); see also, Michael Heiman, From "Not in My Backyard!" to "Not in Anybody's Backyard!": Grassroots Challenge to Hazardous Waste Facility Siting, 56 AM. PLANNING ASS'N J. 359 (1990).

changes in the social and economic conditions that create homelessness. However, there is ample evidence that opposition to the siting, expansion, or operation of waste disposal facilities has helped spur a reevaluation in the way society creates and disposes of waste. The author has been personally involved in several cases where this has occurred:

—the efforts by the City of New York to build an incinerator at the Brooklyn Navy Yard to burn municipal solid waste have led to stricter enforcement by the courts and the state environmental authorities of the City's obligations to increase its recycling program;¹¹⁵

—New York State's efforts to site a landfill for disposing of lowlevel radioactive waste led to such an uproar in the target communities (farming areas in rural Cortland and Allegeny Counties) that the State Legislature amended state law to require a reevaluation of disposal technology;¹¹⁶

—a private waste disposal company's proposal to build a mobile hazardous waste incinerator to destroy waste from an upstate Superfund site met resistance in the local community, leading the company to explore alternative destruction technologies that it ultimately found to be superior;

--restrictions on chemical discharges from a municipal wastewater treatment plant led the local industries to install more sophisticated pollution control devices, thereby reducing the chemicals they sent to the treatment plant;

—local resistance to the expansion of a hazardous waste landfill induced the state to require the landfill's operators to provide technical assistance in waste minimization to their customers.

When the disposal of waste becomes more expensive, economical alternatives are often discovered.¹¹⁷ Congress enacted the Pol-

^{115.} In re SES Brooklyn Assocs., No. 20-85-0306, Fifth Interim Dec. (N.Y. Dep't Envtl. Conservation, Sept. 9, 1993).

^{116. 1990} N.Y. Laws ch. 913. This controversy also made its way to the United States Supreme Court, which declared that the federal government, through its threatened sanctions against states that failed to build LLRW facilities, was intruding upon the states' rights under the Tenth Amendment. See New York v. United States, 112 S. Ct. 2408 (1992).

^{117.} MARK H. DORFMAN ET AL., ENVIRONMENTAL DIVIDENDS: CUTTING MORE CHEMICAL WASTES (1992); DAVID J. SAROKIN ET AL., CUTTING CHEMICAL WASTE: WHAT 29 ORGANIC CHEMICAL PLANTS ARE DOING TO REDUCE HAZARDOUS WASTES (1985); Ronald T. McHugh, *The Economics of Waste Minimization, in* HAZ-ARDOUS WASTE MINIMIZATION 127 (Harry M. Freeman ed., 1990).

lution Prevention Act of 1990 to explore more systematically the ability of industries to reduce the waste they generate, rather than simply to provide new disposal capacity.¹¹⁸

V. Secondary and Imponderable Effects

Local opposition to undesired facilities can also have effects that are so indirect and hazy that one can only guess at their direction and strength. However, since they are potentially significant, they deserve brief mention.

A. Traffic

If affordable housing cannot be built near places of employment, workers will have to commute longer distances, adding to traffic congestion, energy consumption, and air pollution, and reducing productivity. Restrictions on affordable housing in the suburbs also presumably encourage conversion of agricultural land in the exurban areas into housing.¹¹⁹

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B. Social Isolation

If members of minority groups are unable to find housing in more affluent neighborhoods in the city or in the suburbs, they may be more likely to remain in urban ghettos, where drug addiction, violence, and other social as well as environmental ills are heavily concentrated.¹²⁰

C. Community Organization

Opposition to a locally undesired facility is often a powerful impetus for neighbors to get to know each other, and to organize into a cohesive community that will be better equipped to deal with its other challenges.¹²¹

^{118. 42} U.S.C. § 13101 (1993).

^{119.} See Winston I. Smart, Economic and Financial Analysis of Alternative Uses of Agricultural Land, 24 IND. L. REV. 1567 (1991).

^{120.} For a discussion of the relationship of social conflict and environmental degradation in the urban context, see Katrin Gillwald, *Environmental Elasticity—Social* and Psychological Effects of Environmental Deterioration, in DISTRIBUTIONAL CON-FLICTS IN ENVIRONMENTAL-RESOURCE POLICY 49 (Allan Schnaiberg et al. eds., 1986).

^{121.} See Luke W. Cole, Empowerment as the Key to Equal Protection: The Need for Environmental Poverty Law, 19 ECOLOGY L.Q. 619 (1993).

D. Transaction Costs

Siting controversies can be very costly and time-consuming for all concerned. They require large amounts of energy and attention of talented professionals (such as engineers, designers, managers, and attorneys) on all sides of the battle—developers, opponents, and regulators. Time spent waging such battles cannot be spent on other, possibly more productive endeavors.

E. Opportunity Costs

Facility proponents can only concentrate on a limited number of projects at once. If they fail after a long, costly effort to build a facility in a particular location, they will often give up rather than try again in a different place. Thus successful opposition efforts often lead not to the relocation of proposed facilities, but to their cancellation.

F. Public Consciousness

Fights over the location of low-income housing and social service facilities may increase public consciousness of poverty and other social ills that have made such facilities necessary, leading to greater efforts to address the root causes of these problems. On the other hand, it is equally plausible that these battles will spur greater racial tensions and reduce rather than increase cooperative efforts. By the same token, fights over the siting of waste disposal facilities can increase public consciousness of environmental perils, but they can also spark a public backlash against environmental regulation.

VI. Conclusion

This Essay has demonstrated that local opposition has numerous and complex impacts, which vary considerably depending on the nature of the facility that is opposed. Opposition to waste disposal facilities has not generally increased the siting of new landfills and incinerators in minority communities, but it has perpetuated the existence of old, substandard disposal units in those communities. It has also spurred efforts to recycle and to reduce the creation of waste, and thus may have a long-term positive effect on the environment.

Opposition to low-income housing enriches homeowners and landlords but makes affordable dwellings accessible to fewer and fewer people. Opposition to social service facilities increases the

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cost of effectively helping people with certain physical and psychological disorders, and thus reduces society's ability to provide such help.

All forms of local opposition are often lumped together under the pejorative and trivializing label NIMBY. There is a key difference, however, between opposition to waste disposal facilities on the one hand, and to low-income housing and social service facilities11 on the other hand. Battles against waste disposal facilities often have significantly positive environmental impacts, not only for the particular sites, but for society at large, because they spur sounder, less wasteful modes of production. In contrast, opposition to housing and social-service facilities has overwhelmingly negative consequences for society. It is perhaps no accident that existing regulatory structures make it considerably easier for a community to wage a successful legal battle against a waste disposal facility than against a housing or social service facility.

This is not to say that there is no risk that minority communities will suffer from affluent communities' battles against waste disposal units. It remains possible, though unproven, that these battles could move some facilities to minority communities. The best protection against this danger is not to stop the game, but to level the playing field. Minority communities should be given the technical and legal resources they need to participate in crucial siting decisions. That way they can make informed decisions about whether they want particular waste disposal facilities in their midst, and if the answer is no, they can take concrete steps to fight back. If these battles lead the communities to become better organized, then over time local residents may also become effective players in the political as well as the legal battlefields.