Environmental Regulation and Housing Affordability

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Abstract

This article surveys environmental regulations affecting housing development and operation and analyzes the ways in which they have enhanced housing and community design through more rigorous planning techniques. At the same time, environmental regulations may have raised the cost of housing in certain regions of the country through the effects of intergovernmental finance. This article shows that the impact of housing costs can be reduced by streamlining review procedures, limiting the scope of review to matters affecting the physical environment, and considering more carefully the fiscal effects of environmental policies.

The conservation and housing reform movements were political siblings, born during the late 19th century in reaction to an unbridled industrialization that trampled the natural endowment and generated unhealthful urban squalor. One was dedicated to protecting the Nation's natural environment, the other to improving its built environment. For much of the following century, the two movements evolved along parallel lines, with little conflict and frequent cooperation,[1] but as the conservation movement evolved into environmentalism and developed a more complete understanding of society's ecological impact, environmentalists and housing professionals found themselves increasingly at odds.

During the past quarter-century, the environmental movement has infused virtually every aspect of housing development and management. That infusion has benefitted both the environment and housing, resulting in improved planning techniques, ecologically sounder development patterns, and advancements in housing quality and safety. Yet housing professionals increasingly believe that environmental regulation has become too bureaucratic and complex, too prone to political manipulation, and somewhat insensitive to broader social considerations. Friction between the housing and environmental communities has been exacerbated by social and economic factors that have rendered adequate housing less affordable to many Americans. Advocates of affordable housing and environmental protection have also found government to be less willing or able to underwrite necessary initiatives. Consequently, the two groups have clashed more frequently on the allocation of financial responsibility.

Has Housing Become Less Affordable?

That housing has become less affordable to many Americans seems self-evident. The homeless appear to be ubiquitous on city streets, and the frustrations of young families unable to purchase their first home are legion. But do these impressions conform to the reality? Has housing truly become less affordable, or do we misperceive the forces at play?

Aggregate measures do show a decline in housing affordability in recent years. Median monthly homeownership costs for households with a mortgage increased from 19.2 percent of household income in 1979 to 21.0 percent in 1989, and median gross rents rose from 25.0 to 26.4 percent of the household income of renters during the same period. Relative to income, housing costs to homeowners with a mortgage increased in 37 States, and costs rose in 40 States for renters (Bureau of the Census, U.S. Department of Commerce, 1983, 1993a).

More dramatic were changes in the rate of homeownership. Between 1980 and 1990, the homeownership rate among householders 25 to 34 years old dropped from 51.6 to 45.3 percent, and among householders 35 to 44 years old it fell from 71.2 to 66.2 percent (Bureau of the Census, U.S. Department of Commerce, 1983, 1993a). Although these trends have received some attention in the national press, their long-term significance has not been fully appreciated. Falling homeownership rates, combined with such factors as an aging population, inevitable reductions in Social Security benefits, and instability in the private pension system, portend increasing economic distress among the elderly in coming decades. As the current generation of elderly has demonstrated, the greatest source of economic security in old age is a home owned free and clear.

Affordability is, of course, a function of both housing cost and income, and a long-term stagnation in household income has left little leeway for the absorption of increases in the cost of housing. The median real income for families in the United States has changed little over the past two decades. The 1990 figure was actually below that of 1973, and a polarization of the income distribution amplifies the effects of that stagnation (U.S. Department of Commerce, 1990). The relative cost of housing rose during this period. Between 1973 and 1993, the Consumer Price Index (CPI) for Shelter rose at an annual rate of 7.0 percent, compared with a 6.1 percent increase for all CPI items (Bureau of Labor Statistics, 1974–1994). This seemingly small disparity, compounded over a period of 20 years, produced an increase of nearly 14 percent in the relative price of shelter.

Overall housing costs comprise several important items, including the actual cost of building a house or apartment building, the carrying costs of long-term financing, and ongoing operating costs. Environmental regulation affects primarily the first and third of these cost components.

Housing Development Costs

Housing development costs are best measured by sales prices of new single-family houses. Since single-family detached homes are the dominant housing form in the United States, their data are the most detailed and most comparable over time. Between 1963 and 1993, the median sales price of new homes rose sevenfold, from $18,000 to $126,500 (U.S. Department of Commerce, 1974–1994a). That increase was due to general price inflation, improvements in house size and quality, and an increase in the real price of new housing. Rental prices for new apartments tend to track closely the sales prices of new homes.

By deflating the quality adjusted price index for new homes by the CPI, it is possible to abstract from both size and quality improvements and general price inflation (see table 1). The procedure reveals that real home prices increased fairly steadily from 1963 through 1979, reaching a peak relative value of 125 percent (using 1963 as a base). Prices then began an equally steady descent, and by 1993 were only 7 percent above the 1963 base value.

Table 1

Index of the Real Price of New Homes, 1963 to 1993 (1963=100)

Region	1973	1983	1993
United States	107.6	114.0	106.7
Northeast	120.4	116.1	127.7
Midwest	106.5	104.4	101.1
South	105.4	111.1	97.9
West	105.4	126.8	118.2

Source: *U.S. Department of Commerce, Bureau of Labor Statistics*

The aggregate data mask significant variations in regional trends. Over the entire 30-year period, real home prices rose by only 1 percent in the Midwest, and they actually fell by 2 percent in the South. However, home prices rose by 18 percent in the West and by 28 percent in the Northeast. In 1963 the median price of a new home in the Northeast was 26 percent higher than its counterpart in the South. By 1993 that gap had increased to 41 percent (U.S. Department of Commerce, 1974–1994a).

At present, the perceived housing affordability crisis is primarily a regional phenomenon affecting the Northeast and the West, especially the Pacific Coast. There is wide variation in housing costs among the western States—average home values in California are about three times those of Texas, Utah, and New Mexico (Bureau of the Census, U.S. Department of Commerce, 1983, 1993). Between 1980 and 1990, the median cost of homeownership in California soared from 20 to 25 percent of household income—the largest increase in the Nation. Housing costs are 95 percent above the national average in San Diego and 28 percent above in Eugene, Oregon. In Phoenix, Arizona, and Amarillo, Texas, housing costs are 8 percent and 26 percent, respectively, below the national average. Because wage rates do not vary nearly as much as housing costs among these regions, and construction material prices vary even less, it is apparent that variations in housing costs are related to the cost of land and the ease with which housing can be developed.

Financing Costs

The second major component of housing costs is financing. Although interest rate levels somewhat affect housing development costs, they have a more dramatic effect on long-term carrying costs, which are reflected in home buyers' mortgage payments or in tenants' monthly rents. On a $125,000 home financed with a 30-year, self-amortizing mortgage at an 80 percent loan-to-value ratio, each 1-percent increase in the interest rate means an increase of approximately $75 in the monthly carrying cost. If landlords wish to cover their expenses, the interest rate will have a similar effect on apartment rents. Historic trends in mortgage interest rates are familiar. They rose throughout the 1960s and 1970s,

reached a peak of 16.52 percent for a 30-year, fixed-rate mortgage in 1981, and generally declined during the 1980s (Board of Governors of the Federal Reserve System, 1970–1994). Housing finance costs generally paralleled the real price of new housing, thus amplifying the impact on affordability.

Operating Expenses

Operating expenses, the third major component of housing costs, include heating, lighting, water and sewer service, refuse removal, and property taxes. These costs have played a large role in reducing housing affordability during the past 2 decades (see table 2). In the 1970s, heating fuel and electricity were significant factors in housing cost inflation, although they have moderated substantially over the past decade. Water and sewer service, refuse removal, and property taxes, on the other hand, have of late begun to play a more significant role in the operating costs of housing. Since 1982 the CPI for Fuels and Other Utilities has increased at an annual rate of less than 2 percent, while the cost of water and sewerage maintenance has risen at a 6.1 percent rate and refuse collection at an 8.4 percent rate (Bureau of Labor Statistics, 1974–1994). Housing maintenance and repair costs have risen modestly, but the profound impact of environmental health considerations on the cost of operating the Nation's older rental stock is not captured fully by the CPI.

Table 2

Changes in Consumer Housing Costs, 1982 to 1993

Expenditure Category	Percent of Change
All consumer items	3.80
All housing	3.52
Shelter	4.54
Residential rent	4.09
Homeowners' costs	4.45
Maintenance and repairs	2.94
Fuels	1.14
Electricity	2.68
Water and sewerage maintenance	6.10
Refuse collection	8.39

Source: *Bureau of Labor Statistics, Consumer Price Index*

Innovations and Frustrations

Changes to the income side of the affordability equation are matters of national economic policy over which the housing community has little say. Housing professionals have consequently focussed on the cost side of the equation, and have made many important innovations in the past 25 years. Builders have emphasized cost-effective construction techniques and materials, and important financing mechanisms have been introduced in the public and private sectors. Furthermore, between 1963 and 1993 prices for basic and intermediate construction materials increased only three-quarters as rapidly as new home prices (Bureau of Labor Statistics, 1964–1994b) while the real average hourly earnings of construction workers fell substantially (Bureau of Labor Statistics, 1964–1994a). But the proliferation of environmental requirements may have partially offset those factors, a cause of concern for housing professionals.

Members of the housing community recognize the need for environmental safeguards and support the objectives of environmental policy. All Americans have a stake in the protection of the natural environment—to ensure that the air is safe to breathe and the water to drink, that the land and oceans remain productive, that environmental hazards do not pollute our homes and yards, and that our neighborhoods are developed in esthetic harmony with nature. However, housing professionals know firsthand the frustrations of elaborate regulatory reviews, the unnecessary costs associated with frivolous litigation, and the exclusionary effects of selectively expressed environmental concerns. They also question the allocation of environmental costs, which too often seem to be passed on to those whose political voices are most diffused.

Environmental requirements affect housing affordability in three principal areas. Environmental reviews affect the "soft" costs of housing development, including technical and legal expenses and short-term financing charges, while substantive environmental standards tend to raise both the "hard" costs of development and the operating costs of housing.

Environmental Reviews and the "Soft" Costs of Housing Development

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) is the centerpiece of Federal environmental review. It requires Federal agencies to prepare a detailed statement of the probable environmental effects of each major Federal action significantly affecting the quality of the human environment and to identify alternatives to those actions. Through regulations promulgated by the Council on Environmental Quality (CEQ) and individual agencies, an elaborate system of procedures has been established to ensure that there are uniform standards for the consideration of environmental effects. NEPA serves as the model for similar legislation at the State level. A majority of States have enacted "little NEPA" statutes, applying environmental review requirements to actions of State and local governments.

NEPA affects housing development primarily through the programs of the U.S. Department of Housing and Urban Development (HUD), although environmental evaluations made by other Federal agencies, such as the U.S. Department of Transportation (DOT) and the Environmental Protection Agency (EPA), can also affect housing development plans. Because the Federal Government engages in little direct housing production, responsibility for environmental review is often delegated to State or local agencies that receive Federal housing or community development funds. Pursuant to CEQ guidelines, HUD's regulations governing environmental review for its programs identify three types of projects:

- Those categorically excluded from environmental review.
- Those requiring an environmental assessment.
- Those automatically requiring an environmental impact statement (EIS).

Most housing rehabilitation falls into the first category, while the majority of new housing construction falls into the second. Environmental assessments are preliminary analyses conducted to determine whether a "full-blown" EIS is necessary.

NEPA has proved to be a successful piece of environmental legislation. It has generally fulfilled its intention of forcing Federal agencies to consider environmental effects when planning programs or projects and, over the years, it has prevented or modified hundreds

of environmentally damaging actions. Environmental review has also had a salutary effect on the housing development community by bringing more scientific rigor to the planning process, improving the livability of housing developments, and stimulating innovation in housing and community design.

Environmental protection has come at some cost, however, especially with respect to State environmental review requirements that typically cover a broad range of State and local decisions affecting housing development. At the State and local levels, environmental review extends beyond government sponsorship or financing of projects to primarily private actions that require, for example, agency grants of zoning variances or approval of subdivision plans.

Endemic to any system of regulatory review are the costs associated with project development lead times. It is difficult to generalize about these costs, because review periods differ with the complexity of the application and the reviewing agency's workload and organizational structure. When a private development entity seeks permits or approval from a local government agency, it is natural that the reviewing body will attach less urgency to the application than does the applicant. If the length of the review period can be predicted with some degree of certainty, adverse financial impacts can be minimized (for example, work crews and equipment can be scheduled efficiently), although some may be inevitable (for example, carrying costs accrue on land awaiting development). However, when the length of the review period is variable and uncertain, scheduling difficulties may be created and significant risks may be introduced (for example, market conditions or financing terms may change). One way to minimize such risks is to establish regulatory timetables that must be observed.

Government agency as housing developer. When the development entity is itself a government agency, the situation is more complicated. In the NEPA model, the sponsoring agency is required to consult with other agencies that are involved in the action or have particular technical expertise, or whose legal mandates are affected under such laws as the Fish and Wildlife Coordination Act or the National Historic Preservation Act. But the sponsoring agency does not need to gain "certification" of its environmental review. The theory is that agencies must incorporate environmental considerations into all of their planning activities, which is less likely to happen if environmental review occurs in an adversarial, interagency context. Most "little NEPA" statutes follow the same approach.

New York City's experience is instructive. Although New York's State Environmental Quality Review Act (SEQRA) designates the sponsoring agency as the "lead agency" for environmental review purposes, New York City's implementing regulations once designated its Departments of City Planning and Environmental Protection as joint lead agencies for environmental review of all municipal actions. Consequently, virtually all government-assisted housing, as well as private housing involving discretionary government approval, required environmental certification from both agencies, which did not necessarily assign the same priority to housing development. This situation created notorious delays in the housing development process, especially during times of heavy activity, with certification sometimes taking as long as 2 years from the time of completion of the environmental assessment. Eventually, the courts ordered the city to make its procedures consistent with the State statute.[2] The changes in procedures, which were accomplished during Mayor David Dinkins' tenure, resulted in a significantly streamlined process. Delays were cut dramatically, and the local housing agency is now better able to prioritize and coordinate its development activities.

NEPA and the courts. The expense of preparing environmental reviews is a direct cost of housing development. The evolution of those costs is intertwined with the legal history of NEPA and its State-level progeny. Key questions relate to the obligations of agencies to mitigate environmental impacts and to the standards of judicial review that should be applied to agency environmental determinations.

The U.S. Supreme Court has held that NEPA is a procedural law that does not mandate particular results or impose a substantive requirement that adverse environmental effects be mitigated.[3] The law's purpose is to ensure that adverse environmental effects of proposed government actions are adequately identified; agencies may decide that other values outweigh the environmental costs and undertake the actions nonetheless. The general test for whether an agency has fulfilled its legal obligation to evaluate environmental effects was articulated by the Court in *Citizens to Preserve Overton Park* v. *Volpe*.[4] This case actually dealt with agency responsibilities under the Federal Administrative Procedures Act but has been applied to a broad range of government administrative actions, including NEPA. In *Overton Park* the Court ruled that an agency's decision must be allowed to stand, providing that it was not "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." When determining whether an agency's decision is arbitrary or capricious, courts must examine the "full administrative record" of the determination. If the record does not disclose all of the factors considered, the reviewing court may require that the decision be reconsidered. The legal necessity of leaving a "paper trail" is thus the reason for many regulatory documentation requirements—such as HUD's Environmental Review Record—and the trail may raise the cost of performing a basic environmental review. More importantly, the need to defend against possible litigation is a major source of inflation in the scope of environmental impact statements.

When litigants use NEPA to force agencies to reconsider alternatives to projects potentially damaging to the environment (see table 3), the law is fulfilling its purpose. However, housing development often stirs opposition based on a desire to preserve the ethnic or economic homogeneity of a community or its general ambiance. Opponents to projects intended to house low-income or African-American families recognized early on that environmental laws could be used to obstruct unwanted developments by delaying them and raising their cost.[5] During the first 6 years of NEPA's existence, 120 NEPA lawsuits were brought against HUD, the third highest number of lawsuits brought against any Federal agency (Council on Environmental Quality, 1972).

Table 3

NEPA Litigation Completed, 1970 to 1976

Department/Agency	Cases	Dismissed	Injunction (No EIS)	Injunction (Inadequate EIS)
Transportation	117	42	14	9
HUD	70	27	9	1
Defense	66	15	8	12
Interior	55	8	6	4
Agriculture	43	15	8	3
Environmental Protection	34	14	15	4

Source: *Council on Environmental Quality*

While court rulings eventually led to a more settled legal environment and the number of lawsuits brought against HUD has declined, similar litigation continues unabated in State courts (Council on Environmental Quality, various editions). Varying standards of judicial review are applicable to the environmental policy acts of the States. Michigan and Minnesota statutes place explicit substantive obligations on agencies, and courts may exercise independent judgment in remanding agency determinations for reconsideration. New York and California statutes are more ambiguous, and different standards are applied. Although courts generally defer to agency determinations for fear of becoming arenas for administrative decisionmaking, statutes that permit independent judicial judgment are more likely to encourage litigation and to impose additional costs on projects (Perlstein, 1981).

State and local development entities have learned that the most reliable defense against obstructionist litigation is to conduct environmental reviews that are as inclusive as possible. Public participation in the EIS scoping process is encouraged, both to identify legitimate environmental concerns and to head off obstructionist litigation.[6] In response, project opponents continually expand their concept of the appropriate scope of environmental review, propelling EISs to increasingly unwieldy lengths. Preparation of an EIS seldom costs less than $30,000 and may exceed $1 million. Indeed, derailing a project by raising its costs through encyclopedic environmental reviews, procedural delays, and litigation is often a conscious strategy of opponents to development (Perlstein, 1981).

One of the most important environmental cases in New York State in recent years, *Chinese Staff and Workers Association* v. *City of New York*,[7] dramatically demonstrates the expanding reach of environmental review. A development group sought to build a market-rate condominium on a vacant lot in lower Manhattan. After completing what the New York Court of Appeals later termed "a thorough environmental review of the effects of the project on the physical environment," the group was awarded a special zoning permit. A suit brought under the city's implementing regulations of the State's SEQRA law charged that the city had failed to consider the environmental effects on the district's neighborhood character that might result from the secondary displacement of low-income residents. The court ruled that the statute's language, which defines environment to include "existing community or neighborhood character," applies even if the effects do not have a physical impact on the environment, and the zoning permit was annulled.

In addition to reflecting the plaintiffs' misguided development ideology, *Chinese Workers* demonstrates how environmental review can sometimes be stretched to cover virtually any social or economic condition, no matter how distant from concerns about the natural environment. Environmental review thus becomes a tool for litigating purely political matters.

Wetlands Regulation

NEPA and its State counterparts represent only one of the forms of environmental review that have proliferated at the Federal and State levels. Another form that has grown in importance is wetlands regulation, under the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). Although environmental scientists have gradually established that wetlands—once viewed as disease-breeding wastelands—are among the most ecologically productive and valuable features of the natural environment, the United States

has lost more than half of its original wetland acreage to drainage and filling. Because 54 percent of the American population lives in coastal counties (U.S. Department of Commerce, 1993) and many cities are situated near inland waterways, wetland controls have a major impact on land viable for residential development.

A constant fluctuation in regulatory standards has exacerbated tension between environmentalists and housing developers concerning wetlands regulation. This tension was caused partly by the vagueness of Section 404 of FWPCA, which gave the U.S. Army Corps of Engineers regulatory responsibility over the "discharge of dredged or fill material into the navigable waters at specified disposal sites." Section 404 also involved EPA in the formulation of permit guidelines and has given it veto power over decisions made by the Corps of Engineers. A subsequent series of regulatory determinations and court cases led to a definition of "navigable waters" that now encompasses virtually all wetlands, including isolated freshwater wetlands that are wholly within the borders of an individual State. Furthermore, standards for identifying wetlands have also been in flux and are subject to intense controversy.[8]

Initially, the Corps of Engineers was lax in exerting control over wetlands development, partly because its legislative mandate was unclear. Despite subsequent legislation and court decisions that clarified and expanded its obligation, confusion prevailed. At least 25 Federal statutes regulate or protect wetlands, with 4 Federal agencies (the Corps of Engineers, EPA, the Fish and Wildlife Service, and the Soil Conservation Service) sharing regulatory responsibility. A number of States have their own wetlands laws (U.S. General Accounting Office, November 1991). Until 1989 each Federal agency had its own standards for wetlands delineation, as did the States. The Federal Government adopted an interagency manual for use in identifying and delineating wetlands according to strict standards. However, proposed 1991 revisions stirred intense criticism from environmental groups, which claimed the revisions would remove half of all wetland areas in the continental United States from Federal regulatory protection (Henry, 1992). Federal agencies were subsequently ordered to follow a 1987 Corps of Engineers delineation manual while a National Academy of Sciences task force devises a new set of standardized criteria.

The Corps of Engineers' permitting process, which also has been the subject of controversy, satisfies neither environmentalists nor the development community.[9] Housing developers argue, for instance, that imposing expensive mitigation requirements on heavily developed areas where the ecological productivity of wetlands will be limited makes little sense. They suggest that offsite mitigation measures should be permitted, allowing for the more cost-effective and ecologically beneficial restoration of former wetlands in agricultural areas (Henry, 1992).

While the controversy surrounding wetlands regulation raises familiar questions about the balancing of environmental and economic considerations, it also underscores the importance of establishing clear regulatory goals and procedures. Although wetlands regulation inherently involves delays and imposes other costs (for example, delineation studies must be performed by specialized environmental consultants), developers can adapt and economize when they are presented with consistent regulatory requirements.[10] Perpetual regulatory confusion, on the other hand, results in unnecessary costs and risks that serve neither environmental nor housing development objectives.

Coastal Zone Management

Layers of environmental regulation frequently overlap, increasing their complexity and raising the cost of housing development. For example, under the Coastal Zone Management Act of 1972 (CZMA), administered by the National Oceanic and Atmospheric Administration (NOAA), States are encouraged to establish programs for managing their coastal zones. Of the 35 eligible States and territories, 32 have established NOAA-approved programs or are in the process of adopting them (New York City Housing Partnership, 1992).

CZMA is a voluntary program that does not mandate specific environmental or land use standards. The major incentives for States to participate are Federal grants-in-aid and the Act's requirement that Federal agencies undertake only those actions that are consistent with coastal management programs. In most participating States, the coastal program consists of general policies and processes to guide implementation of local coastal development programs, and there are no significant regulatory burdens on housing developers. Several States, however, have created powerful regulatory entities that impose significant constraints on coastal development.

New Jersey, for example, linked its CZMA program to its Coastal Area Facility Review Act (CAFRA), which gives its environmental protection department strong regulatory powers over a coastal zone encompassing 17 percent of the State's land area and most of its urban population. The program subjects all housing developments of 25 or more units to special design and mitigation standards and all planned unit developments to full planning reviews by the State agency. California, similarly, linked its CZMA plan to the California Coastal Zone Conservation Act, placing virtually all development in a zone that reaches as far as 5 miles inland for the length of the coast under the jurisdiction of the California Coastal Commission. Nearly all construction in the zone requires a permit from the Commission and is reviewed for consistency with the California Coastal Plan. The plan has been vigorously attacked by economists and others for its alleged exclusionary intent and its adverse effect on housing costs and economic development (Institute for Contemporary Studies, 1976). The Commission was the defendant in one of the U.S. Supreme Court's most important property rights rulings of recent years.[11]

Disputes regarding land regulation in coastal zones are often associated with luxury or vacation homes and seem to bear little relevance to affordable housing, but with more than one-half of the Nation's population residing in coastal counties, moderate-income neighborhoods subject to these regulations can be identified in every coastal State. Nevertheless, States have important ecological, esthetic, and economic reasons for regulating coastal development. With a few exceptions, coastal zone regulations are neither extensive nor onerous. As with pine barrens protection or floodplain restrictions, however, these regulations are representative of the way environmental restrictions can overlap, making the housing development process more complex and uncertain.

Environmental Standards and the "Hard" Costs of Housing Development

Environmental review procedures may sometimes lead to the termination of a housing project because its adverse impacts are judged to be too severe. More often, project approval is conditioned upon the developer's willingness to implement mitigation measures identified through the review process. Such requirements can raise the cost of housing

development by introducing design complexities, by mandating the provision of public parks or other onsite public facilities, or by requiring upgrades of related public infrastructure. Initially borne by the developer, these costs are usually passed on to the homebuyer or renter.

Clean Air and Water

In an urban context, mitigation expenses arising from general environmental concerns are often minor. The Clean Air Act of 1970 (CAA), for example, requires specific mitigation measures for industry but not for housing, and the incremental automobile travel generated by modest infill housing is usually insignificant relative to a city's total traffic volume. Only when major urban redevelopment projects are contemplated or subdivisions of substantial size are planned for low-density areas do air pollution concerns involve major mitigation expenses.

Nevertheless, some environmental mitigation requirements can add significantly to the construction costs of housing. For example, water quality concerns have resulted in a potentially serious new burden on housing construction. In cities where storm sewers are integrated with municipal waste treatment works, storm water surges can overload treatment plants and cause untreated effluent to be discharged into waterways. Those discharges have long been regulated under FWPCA. New York City, for example, has attempted to address its sewer overflow problem by proposing a series of massive surface and underground holding ponds. Frustrated by engineering complexities and community opposition to that strategy, the city has looked toward onsite methods of controlling runoff. Based on that approach, the developer of a federally assisted elderly housing project in the Bronx was required to provide an 800-cubic-yard underground holding tank as a condition for obtaining a sewer connection permit. The cost of creating the holding tank, which required excavation in igneous bedrock, added about $4,500 to the cost of each of the project's 75 dwelling units. Similar mitigation costs may soon be imposed on housing in cities with separate storm water and sewage treatment systems. Because storm water runoff picks up various toxic substances and pollutants in developed areas before being discharged, EPA has stepped up its efforts to regulate such discharges (Crawford, 1991).

Site Contamination

Another environmental statute that has a universal effect on hard development costs is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the funding arm of which is called *Superfund*. Because of the potentially staggering cleanup liabilities that may be assessed against owners—even "innocent landowners"—of sites contaminated by toxic wastes under CERCLA (Smith, 1993), an entirely new consideration has been added to the development process.

Although lenders are not generally held liable for cleanup costs of contaminated sites, they risk liability if they foreclose on a project (Harvard Law Review, 1991; Kass and Gerrard, 1991, 1993). Furthermore, unforeseen cleanup costs can destroy prospects for a successful project, thus imperiling loans. Consequently, lenders now require due diligence procedures for detecting toxic waste problems as a condition for granting loans. Environmental site assessments typically involve a two-phase process. In Phase I, a search of public and private documents is performed to ascertain whether a site has had any history of uses that may have resulted in toxic contamination. These searches usually

cost about $2,000, which does not add significantly to the cost of a dwelling unit in an apartment building or planned development. However, if the Phase I search indicates potential problems, a Phase II test involving chemical testing of soil and groundwater is necessary. Phase II tests often cost up to $30,000, adding materially to development costs even if the results indicate no toxic contamination. If serious site contamination is found, the cost of remediation can range from a few thousand dollars to tens of millions of dollars, depending on the nature and extent of the contamination. Obviously, remediation costs will determine whether development is more expensive than initially anticipated, and the project may be abandoned altogether.

The need to address potentially hazardous site conditions presents difficult problems for urban redevelopment. CERCLA has stimulated private environmental site assessments that protect the safety of future residents and protect developers and lenders from potentially disastrous investments. However, Superfund provides Federal funding for cleanup of only the approximately 1,200 highly toxic sites on the National Priorities List, a small portion of the 300,000 contaminated sites believed to exist. In urban areas in particular, many former industrial sites are not severely contaminated and could be used for affordable housing or economic development projects if properly treated. If they are to be redeveloped, either the residents must pay higher purchase prices or rents or the local government must assume the cost of cleaning up the sites. In many cases, in fact, the municipal government owns the site as a result of abandonment, tax delinquency, or condemnation (Steinzor, 1990). Theoretically, the local government could sue under CERCLA to recover remediation costs from the responsible parties, but a lawsuit is an expensive and time-consuming approach and, in many cases, the responsible parties no longer exist. Because an effective funding mechanism for cleanup is lacking, sites otherwise viable for redevelopment lie fallow, and community revitalization goes unrealized.

Radon

Not all hazardous site conditions are the result of human activities. During the 1970s and 1980s, it became apparent that naturally occurring radon gas poses a health threat to residents of homes subject to indoor buildup of the gas. Radon gas is produced by the decay of radium-226, a radioactive element found in many types of soil and rock. Such soil and rock are found most often in Florida[12] and throughout a geologic formation that stretches through Pennsylvania, New Jersey, and New York, although they also occur in isolated contexts throughout the Nation. EPA estimates that from 7,000 to 30,000 lung cancer deaths a year are attributable to radon exposure,[13] although these estimates have been contested by some radiation health specialists (Schneider, 1993). EPA has established an action level for indoor radon exposure of 4 picocuries per liter and estimates that 6 million American homes have average levels exceeding that limit.

The Federal Government first became involved in the issue of radon gas contamination through the 1986 amendments to CERCLA. Title IV of the act directed EPA to establish a program of research on radon gas and indoor air quality and directed EPA and HUD cooperatively to develop methods of assessing potential radon contamination in new construction and to devise measures to avoid indoor air pollution. The Act authorized $5 million for each of the subsequent 3 fiscal years to implement the program. In 1988 the Indoor Radon Abatement Act (IRAA, Title III of the Toxic Substances Control Act) expanded Federal involvement by directing EPA to: establish a voluntary proficiency program for rating testing methods, devices, and contractors; develop model construction standards and techniques for controlling radon levels; and provide technical assistance and grants to States with radon mitigation programs. The Act authorized grants totalling

$10 million for each of the ensuing 3 fiscal years, with State matching requirements of 25, 40, and 50 percent, respectively. Prior to the Federal grant program, only four States—Florida, New Jersey, New York, and Pennsylvania—had what EPA termed extensive radon programs, and only New Jersey provided financial assistance for radon mitigation (U.S. Environmental Protection Agency, 1989). By 1993 all 50 States had some type of radon mitigation.

In 1988 an amendment to the Stewart B. McKinney Homeless Assistance Act required that HUD develop and recommend to Congress a policy for dealing with radon contamination in HUD-held housing; public and Indian housing; and housing assisted through the Section 8, Section 236, and Section 221(d)(3) programs. The amendment directed HUD to submit a report describing its recommended policy 1 year after the law took effect. That report ultimately became a source of friction between HUD, EPA, and Congress. When HUD submitted the report in mid-1991, it recommended an additional 4 years of research and evaluation of radon risks and mitigation measures for row houses and for low-rise and high-rise apartment buildings—housing forms that compose the majority of the 2.9 million units subject to the requirements of the McKinney Act amendment. HUD's position was that virtually all scientific knowledge up to that point pertained to single-family detached housing and that it would be imprudent to base a radon program for other housing forms on that knowledge. EPA disputed HUD's assessment of the availability of radon gas testing and mitigation measures, and a U.S. General Accounting Office report prepared at the request of the Senate Committee on Environment and Public Works concluded that HUD's proposed policy did not meet the requirements of the McKinney Act amendment. HUD subsequently conducted a series of demonstration projects to identify the most appropriate testing and mitigation measures, but no comprehensive policy was recommended.

As required by IRAA, EPA issued model construction standards for radon-resistant new residential construction in 1993. Developed in conjunction with the National Association of Home Builders and other private groups and State agencies, the model standards emphasize preventing radon entry by using less-porous foundation construction materials, improving sealing, and diverting radon entry with sub-slab ventilation systems U.S. Environmental Protection Agency, 1994). Similar codes have been adopted by the States of Washington and New Jersey for new construction in high-risk areas.

During the past several years, Congress has tried unsuccessfully to reauthorize and expand IRAA. Several bills have included provisions to require radon testing of all homes in radon priority areas that will be sold with Federal assistance (Federal Housing Administration, Veterans Administration, and Rural Housing Service), and a provision that all federally assisted housing built in radon priority areas be built to EPA Model Construction Standards. Home builder and Realtor groups opposed those provisions, arguing that short-term tests made prior to sale can be scientifically misleading, that radon standards for new construction are better left to State and local authorities, and that legislative definitions of "radon priority areas" would establish exposure triggers at levels well below those scientifically justifiable at present.[14]

Efforts to develop a national radon testing and mitigation policy have foundered on the familiar problems of incomplete scientific evidence and cost allocation. Mitigation measures are believed to be fairly effective at costs ranging from $500 to $2,500 per dwelling, depending on the type of construction (new or retrofit) and the type of structure. However, the testing of every home—as EPA recommends—and mitigation in about 1 in 15 homes, are multibillion-dollar endeavors. HUD appears to have been reluctant to embark on a major radon mitigation program without complete scientific evaluation of health

risks and alternative remediation techniques, and Congress has shied away from any suggestion of new Federal financing for mitigation programs. IRAA specifically precluded States from using Federal grants for mitigation assistance.

Asbestos

Asbestos, a fibrous mineral widely used in construction materials because of its flame-resistant properties, is another source of indoor air pollution that has had a profound impact on housing, particularly on rehabilitation practices. Since the early 1900s, chronic exposure has been a known cause of asbestosis (a form of pneumoconiosis) in asbestos miners, and during the 1950s and 1960s the mineral was linked to a variety of other lung diseases, including cancer. Although medical opinion of the effects of exposure to various types of asbestos in nonoccupational settings is still divided,[15] a flood of personal liability suits against asbestos manufacturers and others during the 1960s precipitated a panic among property managers whose buildings contained asbestos. Many of them hastily removed asbestos-containing materials (ACMs) to protect the health of tenants, to avoid future liability suits, or in anticipation of regulations that were expected to increase the cost of removal. Research results now show that intact ACMs are generally better left in place and that careless removal can increase health risks for building occupants.

Two Federal agencies—EPA and the Occupational Safety and Health Administration (OSHA)—are heavily involved in asbestos regulation. EPA's regulatory powers stem from CAA. Asbestos regulations were initially promulgated in 1971 as part of the National Emission Standard for Hazardous Air Pollutants (NESHAP). Those regulations required building owners to: notify EPA before demolishing or renovating a building if a given amount of asbestos would be disturbed; comply with a "no visible emissions" standard during alterations; and dispose of the materials in landfills meeting certain standards. In 1990 EPA revised and strengthened its asbestos regulations,[16] providing greater specificity of emission control techniques and adding new requirements for predemolition surveys, worker training, and supervision. Pursuant to its authority under the Toxic Substances Control Act, EPA also instituted a phased ban on the manufacture and import of virtually all ACMs in 1989, but a U.S. Court of Appeals decision overturned the ban in 1991.

ACMs are subject to even more rigorous regulation by OSHA. Although OSHA has regulated worker exposure to asbestos since 1971, the agency did not promulgate separate standards applicable to the construction industry until 1986. Those rules were challenged by both labor unions and industry, and a lengthy period of litigation and rulemaking followed. In 1994 OSHA issued final rules governing occupational exposure to asbestos in construction and general industry.[17] The final rules define four classes of activities that trigger specific worker safety provisions. The most stringent safeguards apply to Class I activities, which include the removal of sprayed-on or trowelled surfacing materials or the removal of thermal-system insulation, such as that commonly applied to pipes, boilers, tanks, and ducts. Class II activities involve removal of other ACMs, such as floor or ceiling tiles, siding, and roofing. Class III activities involve the incidental cutting away of small amounts of ACMs, while Class IV activities relate to maintenance and custodial activities, such as polishing floors containing asbestos or changing light bulbs in fixtures attached to ACMs. The regulations prescribe a complex matrix of compliance measures for activities in each category—including the use of high-efficiency particulate air (HEPA) vacuums and ventilation systems, respirators, protective clothing, and isolation methods—and set standards for worker training and supervision.

While regulation by EPA, OSHA, and similar State and local agencies has had some effect on the cost of new construction, the impact is far greater on the cost of renovating and rehabilitating older buildings. In the low-rise apartment buildings often found in older metropolitan areas, ACMs are usually found in insulation for boiler and steam pipes or in roofing materials. The cost of removing these materials according to regulatory standards usually ranges from $10,000 to $20,000. If the structure contains 10 or more dwelling units, the cost is substantial but not prohibitive. However, asbestos removal can be a significant obstacle to the rehabilitation of smaller buildings, which must have the removal costs spread among fewer units. Housing renovators also believe that the cost will escalate as buildings constructed during the 1960s and 1970s require rehabilitation, since ACMs are more pervasive in those buildings.

Historic Preservation

In older inner cities, historic preservation requirements can also complicate efforts to develop or restore affordable housing. Motivated by a desire to preserve the best aspects of the built environment, historic preservation requirements can have a number of positive effects. Preserving architecturally or historically distinctive neighborhoods in declining cities can protect urban assets that will be instrumental in promoting revitalization. Preservation can also help to retain a nucleus of upper- and middle-income residents, to the benefit of the city's tax base and socioeconomic health.

Nonetheless, historic preservation does present certain problems for urban redevelopment. In cities with large or numerous historic districts, housing providers are subject to an additional layer of regulation that can be quite rigid and adds to the administrative costs of developing or rehabilitating housing. Moreover, historic preservation requirements can add significantly to the hard costs of housing maintenance and rehabilitation (Wylde, 1992). For example, standards for historic rehabilitation issued by the Secretary of the Interior in conjunction with the Historic Preservation Tax Credit encourage repair rather than replacement of a structure's original components and fidelity to the original materials and craftsmanship—practices that inevitably add to the cost of the project. Those standards are widely followed by State and local preservation offices, even when tax credits are not involved.

The additional cost associated with historic preservation makes it more difficult for housing rehabilitators in historic districts to conform to cost limitations in housing assistance programs, with the perverse result that historic buildings are usually the last, rather than the first, structures to be rehabilitated in redeveloping neighborhoods.[18] Fortunately, a number of States and municipalities have begun to implement programs to help defray preservation costs, usually through the use of tax incentives.

Environmental Standards and the Cost of Operating Housing

Through elaborate review procedures, excessive litigation, land use restrictions, and contaminant screening and remediation, environmental regulation can raise the cost and decrease the supply of new housing. Furthermore, environmental impacts on housing do not end there. The housing community is becoming alarmed increasingly by the burden environmental regulation places on housing management. This burden not only adds to the carrying costs of new housing but often falls disproportionately on the older, most vulnerable elements of the housing stock.

Unfunded Mandates

The environmental movement's achievements of the 1970s—CAA, the Water Pollution Control Act Amendments, the Toxic Substances Control Act, the Resource Recovery and Conservation Act of 1976 (RCRA), and Superfund—helped to arrest a centuries-long process of environmental degradation. While imposing new standards and practices, those laws were often accompanied by massive commitments of Federal funds to assist States and localities in implementing programs. During the 1980s and 1990s, however, the Federal Government continued to impose environmental mandates while reducing its financial assistance.

It is an aspect of American federalism that the burden of fulfilling those "unfunded mandates" falls disproportionately upon the Nation's housing stock. Although the Federal Government has an array of funding options that are broadly based and neutral among sectors of the economy, State and local governments (particularly the latter) must operate within a more constrained fiscal environment. Few local governments have the legal authority to levy personal or corporate income taxes and are precluded by State law or State revenue priority from raising significant revenues from sales and excise taxes. They are also inhibited by interjurisdictional competitive pressures; raising sales taxes or imposing fees on polluting activities, for example, may simply divert jobs and tax revenue to neighboring jurisdictions. Consequently, localities are forced to finance unfunded mandates through their traditional "captive" sources—property taxes and user fees. By their very nature, these sources are essentially *housing* taxes that raise the cost of shelter relative to the cost of other goods and services.

Table 4

Growth in Local Government Revenue, 1983–1993

Annual Percentage Change	
Total Revenue: All sources	7.5
Federal Government	–0.5
Property taxes	8.0
Water supply fees	8.1
Sewerage fees	11.3
Solid waste fees	15.6

Source: *Bureau of the Census, U.S. Department of Commerce*

The case of water pollution is instructive. The Nation's fundamental policy on water quality was set by the Water Pollution Control Act Amendments of 1972 and 1977, which set ambitious goals for water quality and established mechanisms for Federal regulation of pollution discharge from municipal sewerage facilities. The 1972 legislation, however, authorized more than $20 billion in Federal construction grants for treatment works over the following 3 years. State and, particularly, local spending on sewerage systems, exclusive of Federal spending, rose from $17.5 billion between 1962 and 1971 to $40 billion during the 1972–81 period (Bureau of the Census, various editions). Federal spending for pollution control (mainly in the form of planning and construction grants to localities) increased from $2 billion to $34 billion during these same periods (U.S Office of Management and Budget, 1993), soaring from 12 percent of State and local sewerage expenses to 47 percent. In the 1982–91 period, the situation reversed dramatically: State and local spending grew to $106 billion while Federal spending decreased in real terms, falling to

30 percent of the total. In 1990 EPA projected that local government spending on water quality would increase by 70 percent in real dollars during the ensuing decade (U.S. Environmental Protection Agency, May 1990).

A similar situation prevails with regard to public water supply systems. The Safe Water Drinking Act of 1974, its 1986 amendments, and its implementing regulations established national standards for drinking water contaminants, requirements for monitoring drinking water quality, and criteria for determining which of the systems that rely on surface water must filter their supplies. As a result, local spending on water supply systems has been growing at a real annual rate of better than 3 percent, and that is expected to accelerate (U.S. EPA, May 1990). Although EPA is authorized to pay up to 75 percent of the cost of administering State programs, its actual contribution has been much less (U.S. General Accounting Office, May 1994), and there is no capital assistance program specifically for local water supplies.

These mandates have put great stress on integrated municipal water supply and sewerage systems and the housing stock that pays for them. Most systems are financed through user fees (Federal capital assistance requires dedicated revenue sources), from which local collections grew at an annual rate of 9.3 percent from 1983 to 1993—well above the 7.5 percent annual increase in all local government revenue (U.S. Environmental Protection Agency, May 1990). While the costs have placed a particularly heavy burden on small communities that lack economies of scale and technical expertise, they also affect large cities with many poor households concentrated in economically marginal multifamily housing. Apartment buildings that house low-income households are particularly vulnerable, because there is no technically feasible way to submeter water in order to encourage conservation, and little money is available to repair inefficient plumbing systems. In New York City, low-income buildings that have been metered have incurred annual water and sewer charges of up to $800 per apartment. Rising water fees are believed to be a major factor behind a recent upsurge in tax arrears and foreclosures (Citizens Housing and Planning Council, 1993).

Local governments also face a growing solid waste management problem. Because of increased waste generation, growing opposition from potential host communities limiting the siting of new landfills and incinerators, and capital costs rising as a result of safeguards mandated by RCRA, municipal solid waste expenditures have been rising more than 10 percent a year (Bureau of the Census, various editions). Whether financed through user fees or property taxes, solid waste costs billed to residences have been one of the fastest-growing components of shelter costs. Although recycling programs offer the promise of revenue offsets, the fiscal benefits of recycling have thus far been unrealized.

User fees and property taxes that finance municipal water supply, waste water treatment, and solid waste disposal operations are levied primarily on the housing stock. In the case of rental housing, all of the fees and taxes are reflected in monthly rents. For homeowners, whether they pay property taxes and other fees directly or through their mortgage payments, the costs must be factored in as part of the carrying costs of housing. In either case, the incidence of these environmental costs raises the price of housing relative to other goods and services, making housing less affordable.

Lead Paint

Recent concern with the environmental safety of housing has created serious new problems for housing providers. As discussed above, resident exposure to radon in some areas of the country has generated health fears and necessitated expensive retrofitting of existing housing.

Likewise, recognition of the health dangers of asbestos has led to Federal, State, and local regulations governing its removal and has raised substantially the cost of performing some types of housing renovation. But growing concern about household exposure to lead poses perhaps the greatest danger for the Nation's affordable housing stock.

Ingestion of lead is known to cause severe, irreversible neurological damage to young children that results in learning disabilities, behavioral problems, and other serious health conditions. The most severe instances of childhood lead poisoning occur when children chew or swallow chips of lead-based paint. For both economic and health reasons, the paint industry gradually reduced the lead content of its products between 1940 and 1960, and the interstate shipment of lead-based paint was eventually banned by the Consumer Products Safety Commission. The Lead-Based Paint Poisoning Act of 1971 (LBPPA) prohibited the use of lead-based paint in federally assisted housing, provided money for educational and screening programs, and authorized the use of Federal funds for research and development programs. The Act also authorized Federal grants for abatement of lead hazards in privately owned housing, but appropriations were never made and the provision was repealed in 1982. Most States and municipalities also have enacted laws regulating the use of lead-based paint and the abatement of hazardous conditions. As early as the 1950s, Baltimore and New York City adopted local laws empowering their health departments to order the removal of lead-based paint from homes.[19]

A persistent issue in addressing the lead poisoning problem has been determining the level of remediation required. LBPPA was amended in 1973 to require HUD to establish procedures for eliminating lead-based paint hazards from existing housing covered by an application for Federal mortgage insurance or housing assistance payments. In 1983 LBPPA implementing regulations that limited the definition of hazardous conditions to paint that is peeling, scaling, or chipping were found by a Federal court to be inconsistent with congressional intent, and the Department was ordered to redraft the regulations to a higher standard.[20] Similar legal conflicts have occurred at State and local levels.

Central to the dispute about abatement practices has been the issue of cost. Housing providers have maintained that complete removal of lead-based paint from structures is prohibitively expensive; they urge less costly remediation measures, including repairing damaged walls and friction surfaces, repainting, and dust vacuuming, with efforts concentrated on high-risk housing. That position has been vindicated by the recognition that certain remediation techniques, such as scraping painted surfaces, may create more hazards than they cure, necessitating much more elaborate and expensive abatement practices (U.S. General Accounting Office, 1994).

Inhalation of lead dust created by routine friction on painted surfaces and ingestion of lead-contaminated soil are now believed to play a role in lead poisoning. These new fears about even low-level lead exposure have caused another flurry of legislative and regulatory activity. The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of the Housing and Community Development Act of 1992) reflects this concern. Title X directs EPA to define hazardous levels of lead in paint, household dust, and soil; to promulgate standards for performing inspection and abatement activities; and to design guidelines for avoiding lead-based paint hazards in performing renovation and remodeling activities. EPA missed its legislatively mandated deadlines for setting the standards, but the general direction of both Federal and State efforts appears to be toward the use of rigorous safety precautions when performing lead hazard abatement. Thus previous estimates of the cost of complete lead-based paint removal now appear conservative.

New York City's housing agency has found that complete removal of lead-based paint—which usually involves replacing all sheetrock, cabinets, windows, and doors, as well as resurfacing floors—costs between $15,000 and $25,000 per dwelling unit. This amount is consistent with the costs incurred by other cities. Title X authorized appropriations of $375 million over 2 fiscal years for grants to identify and abate lead hazards in assisted and private housing; $140 million was appropriated in fiscal year 1994. Philadelphia, using Title X and CDBG funds, is implementing a program to address lead problems in approximately 400 owner-occupied homes in which resident children have been poisoned by lead-based paint. The cost is about $19,000 per home (*Journal of Housing*, March/April, 1994). Baltimore has undertaken a similar effort at a cost of about $15,000 per dwelling (Goldreich, 1994). Given such costs, the total Title X authorization could fully remove lead-based paint from approximately 35,000 of the Nation's 50 million dwellings built before 1960.

Because the cost of full lead-based paint removal may exceed the value of many properties that house low-income residents, requiring full removal could trigger a new wave of inner-city housing abandonment like that experienced during the 1970s. Complicating matters are the mounting number of lead-poisoning liability claims and the resulting unwillingness of insurers to issue liability policies for low-income housing that may contain lead-based paint. Caught between the public's concern about lead-poisoning risks and the economic realities of operating low- and moderate-income housing, many in the housing community feel that they are holding a ticking time bomb.

Conclusion: Cooperation for Progress

The environmental regulations discussed in this article grew out of important—even urgent—ecological and health concerns. Individually, few of the regulations place an undue burden on housing providers,[21] but cumulatively they have had a profound effect on the development, management, and, ultimately, the cost of housing. To the degree that sounder development patterns and practices have evolved and safer housing has been built, those effects are to be welcomed. But if the associated costs inhibit the regeneration of inner-city communities or prevent working families from attaining the economic security of homeownership, the regulations are a cause for concern.

It is sometimes easy to underestimate the impact of costs that are not readily quantifiable. Part of the problem in assessing the economic impact of environmental regulation on housing is that rarely, if ever, do all environmental considerations converge at a single point; they may be negligible in some cases and prohibitive in others. It is impossible to quantify the impact of environmental regulations on the cost of building 2 million housing units in 50 States with thousands of regulatory, geographical, and market variables. Similarly, the effect of environmental regulation on the operation of 100 million existing housing units defies quantification. Nevertheless, the aggregate data are suggestive. From 1963 to 1993, a period spanning the growth of modern environmental regulation, the *relative* price of shelter increased by 26 percent while the *relative* price of energy decreased by 1 percent, transportation by 11 percent, and all commodities by 18 percent.[22] Such figures do not prove cause and effect, but they certainly indicate a need for further inquiry.

The housing community, like any other industry, must shoulder its fair share of the cost of protecting the natural environment. Housing development that directly causes environmental degradation, such as the filling of valuable wetlands, should be prevented or made to absorb the necessary mitigation costs. However, requiring the housing sector to finance a disproportionate share of society's general environmental expense is not

justified. Imposing the costs of drinking water filtration, sewage treatment facilities, or solid waste disposal upon housing through property taxes, user fees, or impact fees, is purely a result of intergovernmental politics. Likewise, there is no legitimate reason to allow environmental review procedures to become unnecessarily complex or confusing, or to let them become mechanisms for litigating grievances that are unrelated to authentic environmental concerns.

Ironically, some environmental policies affecting housing encourage degradation rather than protection of the environment. It has been widely noted, for instance, that local growth controls can promote suburban sprawl, generating an increased amount of traffic congestion and air pollution. Likewise, other environmental policies may discourage high-density housing and more efficient urban lifestyles. Imposing user fees for water, sewer services, or solid waste disposal on homeowners can encourage conservation and may be economically neutral. However, because no practical way has been devised to charge individual residents of multifamily housing for these services, there are no incentives for conservation. The charges simply raise the cost of operating high-density housing and impede the revitalization of inner cities.

Environmentalists and affordable housing providers sense that they are entering a difficult era. The halcyon days of the 1960s and early 1970s, when Congress readily enacted landmark environmental legislation, embarked on the War on Poverty, envisioned model cities, and provided funding for all of the programs, have ended. If further progress is to be made in protecting the environment and improving housing conditions, professionals in both fields must work to restore the spirit of cooperation that prevailed in earlier years. They must identify ways to administer environmental regulations more effectively, to share environmental costs more appropriately, and to locate legislative opportunities that will advance mutual interests.

Streamlining Administration

There are several areas in which housing providers and environmentalists might cooperate in promoting more effective and expeditious regulation. One obvious area is the need for adequate staffing of environmental review offices. In periods of fiscal stringency, government agencies tend to cut back on the least-visible services. Such cutbacks often translate into a shortage of professional staff trained to perform environmental reviews and a resulting backlog of permit applications. When economic conditions improve, increased staffing often lags behind new building activity, costing developers critical months in the business cycle and increasing political pressure on review officials to perform hasty environmental analyses. Likewise, there are numerous opportunities at the State and local levels for overlapping regulatory responsibilities to be consolidated so that environmental determinations can be made in a more definitive and timely manner.

Environmentalists and housing providers also have a mutual interest in working toward early and definitive clarification of regulatory processes and intent. Regulatory confusion, such as has prevailed regarding wetlands regulation, frustrates environmental and development objectives and unnecessarily increases discord. Most responsible developers will adapt to clear and consistent regulatory constraints. Frictions are most likely to arise when the ground rules change in midstream. Because establishing clear and appropriate regulatory parameters often depends on accurate scientific information, environmental and housing professionals also need to cooperate in supporting funding for adequate environmental and medical research. Environmentalists will recognize that unnecessarily strict regulatory standards can squander valuable political capital and misallocate organizational

resources, while housing professionals have learned that standards that are too lax invariably result in more onerous expenses at a later time. Better and earlier research can help all interests coalesce around reasonable standards and mitigation measures.

The environmental and housing communities should seek to focus environmental laws and regulations more directly on matters affecting the natural environment or individual safety. A gradual expansion of the scope of environmental regulation and increasingly frequent use of environmental laws to litigate broad political grievances will ultimately undermine the legitimacy of statutes protective of the natural environment. Moreover, as case law evolves further from the original intent of environmental statutes and as the composition of courts changes, the laws' efficacy in fulfilling their original purposes becomes less certain.

Allocation of Costs

Many housing and community development professionals are uncomfortable with current congressional efforts to impose legislative restrictions on "unfunded mandates," recognizing that many of those mandates have served to advance important social goals. However, these professionals are also increasingly frustrated that they must devote so much of their time and resources to fulfilling those mandates rather than carrying out their primary missions. Their frustrations are heightened when the mandates appear to be of a "one-size-fits-all" design that requires expenditures seemingly unrelated to local conditions. The movement of some national urban coalitions from strong support of environmental legislation to outspoken backing of limitations on unfunded mandates should be taken as a signal that a threshold has been crossed.

If environmental, housing, and community development interests are to renew the partnership that once existed, there must be greater sensitivity to local differences and greater awareness of the ultimate fiscal impact of Federal mandates. It must be recognized that no mandates are truly unfunded—the funding source is simply implicit, and the incidence is usually quite predictable. It is entirely appropriate that local officials resist Federal mandates that will inevitably exacerbate their fiscal problems, and that they be joined by housing providers and homeowners who ultimately finance the services through user fees and property taxes.

More attention must also be paid to the equity of cost allocation among private interests. Powerful and cohesive institutional interests will be able to mobilize quickly to shift cost burdens onto the less well organized, but there is also power in numbers. Environmental organizations must include fiscal information in their public education campaigns so that voters are made more aware of who will bear environmental costs. The housing and development community can assist, particularly in the early stages of the legislative process, by ensuring that industries or activities responsible for environmental degradation are held accountable. For example, the cost of municipal solid waste disposal—and the resulting taxes and fees on housing—is soaring, largely because we have been politically unwilling to assess the contents of packaging materials, junk mail, and other items that fill municipal landfills and recover the true environmental costs from the manufacturers. Consumers must be taught to recognize that their property taxes pay for the proliferation of such waste.

Finally, there must be recognition of the fact that unfunded environmental requirements may be meaningless, or even counterproductive. For example, forcing older, economically marginal housing to bear the full cost of lead paint remediation will eliminate the hazard only by eliminating the housing, resulting in a much higher cost to society. Effective environmental

legislation must incorporate funding mechanisms consistent with its regulatory objectives, and housing constituencies need to be enlisted in efforts to achieve this goal.

Legislative Collaboration

Many of the environmental costs borne by today's housing industry are the result of past environmental ignorance or dereliction. Dangerous substances such as lead and asbestos were originally used in homes to increase quality and safety, not to harm residents. Likewise, toxic site conditions are a significant concern for housing providers today because environmental controls were lacking in the past. It would seem that the environmental and housing communities often share interests that are compatible over the long term. Efforts to prevent industrial pollution before it becomes a land-use obstacle and to test materials rigorously for their environmental safety before they are widely installed in housing can help prevent a repetition of past errors.

Environmental and housing professionals should seek opportunities to pursue mutual legislative goals, a number of which are readily identifiable. For example, laws requiring that certain products contain specific percentages of recycled materials can support markets for recovered materials and help offset municipal solid waste expenses. Likewise, stricter standards or higher excise taxes on automotive fluids can reduce the toxicity of municipal storm water runoff or help defray the cost of treatment. As housing providers and other urban interests become more concerned about the cost of fulfilling environmental requirements, they will grow more receptive to participation in legislative efforts aimed at a more equitable distribution of those costs.

Finally, there is a need for reaffirmation at high political levels of the essential compatibility between environmental and urban redevelopment goals. High housing costs in urbanized areas are a prime stimulus for the exurban expansion that contributes to environmentally destructive land use and transportation patterns. Policies that enhance the economic attractiveness of urban life will, in the long run, further environmental objectives.

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Notes

1. For a discussion of the role of urban interests in the formulation of environmental policy, see *Protecting the Environment: Politics, Pollution, and Federal Policy*, Advisory Commission on Intergovernmental Relations, 1981.

2. See *Coca-Cola Bottling Company of New York* v. *the Board of Estimates*, 536 N.Y.S. 2d, 33 (Ct.App. 1988).

3. See *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council,* 435 U.S. 519, 558 (1978) and *Robertson* v. *Methow Valley Citizens Council,* 490 U.S. 332 (1988).

4. See *Citizens to Preserve Overton Park* v. *Volpe,* 401 U.S. 402 (1971).

5. For a discussion of the early HUD/NEPA litigation, see Mary E. Brooks, *Housing Equity and Environmental Protection: The Needless Conflict,* American Institute of Planners, 1976.

6. New York's State Environmental Quality Review Act does not require public scoping sessions but its Department of Environmental Conservation is developing regulatory incentives to encourage them; New York City recently adopted regulations making public scoping mandatory.

7. See *Chinese Staff and Workers Association* v. *City of New York,* N.Y. Ct. App. 11–18–86, No. 318.

8. For a history of wetlands regulation and litigation, see E. Manning Seltzer and Robert E. Steinberg, "Wetlands and Private Development," *Columbia Journal of Environmental Law,* Vol. 12:159, 1987.

9. See Heidi Wendel, "Bersani *v.* EPA: Toward a Plausible Interpretation of the 404(b)(1) Guidelines for Evaluating Permit Applications for Wetland Development," *Columbia Journal of Environmental Law,* Vol. 15:99, 1990. A thorough guide to the permit process can be found in New York City Housing Partnership, *Resource Guide to the Land Use and Development Approval Process in New York.*

10. For example, the cost of wetlands delineation studies can be reduced by combining them with other environmental site assessments, such as those needed to guard against Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability.

11. *Nollan* v. *California Coastal Commission,* 483 U.S. 825 (1987).

12. The highest levels in Florida are found in reclaimed phosphate mines from which radium-226 had not been. Extraction from these mines is now mandated.

13. See Hearing before the Subcommittee on Clean Air and Nuclear Regulation of the Committee on Environment and Public Works, U.S. Senate, May 25, 1993.

14. See Hearings Before the Subcommittee on Clean Air and Nuclear Regulation of the Committee on Environment and Public Works, 1993.

15. See American Association for the Advancement of Science, *Science,* January–June, 1990.

16. 55 Fed. Reg. 48406.

17. 59 Fed. Reg. 40964.

18. For a detailed analysis of the interaction between historic preservation regulations and affordable housing development, see Citizens Housing and Planning Council, *An Affirmative Approach Toward Historic Preservation in New York City*, 1995.

19. A history of lead-based paint regulation and litigation can be found in Michele Gilligan and Deborah Ann Ford, "Investor Response to Lead-Based Paint Abatement Laws: Legal and Economic Considerations," *Columbia Journal of Environmental Law*, Vol.12:243, 1987.

20. *Ashton* v. *Pierce*, 716 F.2d 56 (DC Cir. 1983).

21. The exceptions are soaring water and sewer fees and lead-based paint remediation costs, which may cause the loss of thousands of units of older inner-city housing.

22. Relative to the CPI for All Items. See Bureau of Labor Statistics, 1974–1994.

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