FAT AND FRIED: LINKING LAND USE LAW, THE RISKS OF OBESITY, AND CLIMATE CHANGE

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> This is America. We build where we want to build. We live where we want to live. And we understand the risks. The people who live on the coast know that. The people in Kansas know that. We don't like it, but, when it happens, we deal with it and we build back.[1]
> [Director of Kansas Emergency Management speaking to a CNN reporter from Greensburg, Kansas which was 95% destroyed by a mile-wide tornado in May, 2007]

I. INTRODUCTION

Among the major immediate risks faced by the United States are the increasing rate of obesity of its population and a wide range of potential adverse climate change impacts such as the rising of sea levels, which could result in more extreme flooding and droughts.[2] This article draws from the growing interest in the law and policy of disaster response and risk response[3] generated in the wake of Hurricane Katrina. Its focus is the use of law to induce the adaptation of societal behavior to minimize the long-term costs of the two serious risks[4] rather than on post-disaster relief. Specifically, this

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1. *Anderson Cooper 360 Degrees* (CNN television broadcast May 7, 2007), *available at* http://transcripts.cnn.com/TRANSCRIPTS/0705/07/acd.01.html.

2. Michael B. Gerrard, *Introduction and Overview*, 12 A.B.A., SEC. ON ENV'T, ENERGY & RESOURCES 425-27 (2007).

3. There is a vast literature on how societies perceive different risks and how to minimize the damage from extreme events such as floods. The late geographer, Gilbert F. White, pioneered the idea that flood retention structures often increase severe flood damages but encourage people to settle in flood plains. *See generally* GEOGRAPHY, RESOURCES AND ENVIRONMENT: SELECTED WRITINGS OF GILBERT F. WHITE (Robert W. Kates & Ian Burton eds., 1986). For an excellent report applying his theories to the 1993 Mississippi River flood, *see* Sharing the Challenge: Flood Plain Management Into the 21st Century (Report of the Interagency Floodplain Management Review Committee to the Administration Floodplain Management Task Force 1994).

4. Judge and Professor Richard Posner has distinguished between mega-catastrophic risks, which

article examines how one set of policy instruments, land use planning and regulation, can help to minimize the costs of these inevitable risks. Obesity and global climate change are here, although their specific impacts are still hard to predict. The basic argument is that spatial planning may help mitigate the two risks and the costs associated with them, even though spatial planning and land use regulation are relatively limited policy instruments to deal with these maddeningly complex social and political problems for two primary reasons. First, the law faces structural barriers; in the main, land use law is designed to produce a "one-off" solution to mitigate a nuisance-like use rather than to produce long-term substantive results. Second, efforts to induce behavioral change challenge the deep-seated value of freedom to live where and how one wants as the quote from the director of disaster relief in Kansas indicates. Nonetheless, the effort is worth making as there are clear links between land use regulation and these two risks.

II. FAT, FRIGHTENED, AND FRIED: THE FIRST ORDER LAND USE LINKS

A. Obesity and Land Use Planning

The role of spatial planning in obesity reduction is the most direct land use strategy to help mitigate the public health costs associated with fat America. The growth of obesity has been linked to the sedentary lifestyle created by low density, automobile dependent suburbs and mega-metropolitan areas,[5] and the widespread availability of energy-dense foods, although genetic fate complicates the environmental explanations for the epidemic.[6] If one assumes that environment is a partial cause of the problem, the obvious land use remedy is said to be compact, mixed use, European-style development that will force people to walk more and drive less. Three normative models of the urban form have dominated United States planning discourse, the continental European city,[7] the English village, and the low-density American suburb. Others have collapsed the three models into two, "the traditional neighborhood" and "suburban sprawl."[8] Planners have long

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require radical prophylactic measures and long term ones, which permit gradual adaptation. RICHARD A. POSNER, CATASTROPHIC RISK AND RESPONSE (2004).

5. *See* Andrew J. Plantinga & Stephanie Bernell, *A Spatial Analysis of Urban Land Use and Obesity*, 45 J. REGIONAL SCIENCE 473 (2005).

6. *See* Katrina Kelner & Laura Helmuth, *Obesity-What Is To Be Done?*, 299 SCI. 845 (2003).

7. *See* STEVE BELMONT, CITIES IN FULL (2002).

8. ANDRES DUANY, ELIZABETH PLATER-ZYBERK & JEFF SPECK, SUBURBAN NATION 3 (2000).

advocated that we adopt the continental European[9] or the English village model of the city, which can roughly be defined as a centralized, dense mix of commercial and residential development, pedestrian access to vibrant shopping, effective public transportation networks, diverse and highly abundant leisure activities, cultural venues, and appropriately scaled public spaces.[10] Until the past three decades, developers, politicians, and citizens have largely rejected this model as unsuited to the American experience of endless, cheap land.[11] American cities did not grow out of the tight medieval European castle, cathedral, and market towns, and thus these urban forms and their neatly demarcated rural boundaries are not symbols of this country's soul. One could not write this statement of American cities: "[M]ost of European urban thought just assumes that the countryside is there with the characters of the medieval paintings . . . [w]ell-ordered fields like one can see in a Brueghel painting stay . . . in the back of our consciousness as some kind of reassuring landmark."[12] Wilderness and suburbs are the soul of America.

B. Spatial Planning and Global Climate Change

The link between spatial planning and global climate change is the most immediate land remedy of the three risks. Warmer temperatures will have a number of effects that will need to be addressed by local governments. These include the regulation of buildings in coastal and inland areas subject to the heightened risk of floods from severe weather events such as hurricanes and prolonged periods of rain,[13] the integration of water supply risks, especially in arid and non-arid areas into land use planning and biodiversity migration which may require new land conservation regimes as species migrate from

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9. Alain Bertaud defines a classic European city as

> a dominantly monocentric structure with a center where exceptionally rich cultural amenities and prestigious retail reinforce its monocentric character. The monocentricity is maintained by prestigious amenities in spite of many jobs moving to the suburbs. As a corollary to the strongly attractive center, an efficient radial transit network makes the center accessible even when many job commuting trips are made by individual cars from suburbs to suburbs.

Alain Bertaud, *The Spatial Structures of Central and Eastern European Cities: More European than Socialist?, International Symposium on Post-Communist Cities (June 17-19, 2004)*, *available at* http://alain-bertaud.com.

10. *See* JAMES HOWARD KUNSTLER, HOME FROM NOWHERE (1996).

11. *See* DAVID M. POTTER, PEOPLE OF PLENTY (paperback ed. 1955).

12. GUIDO MARTINOTTI, PERCEIVING, CONCEIVING, ACHIEVING: THE SUSTAINABLE CITY 41 (1997).

13. *See* LOSING GROUND: A NATION ON EDGE (John R. Nolon & Daniel B. Rodriguez eds., 2007).

south to north. As with obesity, compact, public transportation-oriented development is also advocated as a way to reduce greenhouse gas emissions.[14]

III. BARRIERS TO CHANGE

Two common themes have emerged as local governments become more sensitive to risk. The first is that the resolution of the long running debate between the compact, "European" model of land development versus the endless suburban sprawl that has always characterized urbanizing America has taken on a new urgency. The second is that risks such as global climate change provide a new rationale for challenging well-established ideas such as the continued development of sensitive lands to serve a growing population and the inevitably of population growth. Planners and others have long asserted that this preference has produced an ugly environment, which is the source of a wide variety of social costs, including the inefficient "waste" of public monies, unsustainable energy use, air and water pollution, the loss of open space, including prime agricultural land and species habitat, obesity, and the social and racial inequity that results from abandoned or "dumb bell" cities which consist of only the rich and the poor.[15] However, there are major legal or structural, as well as cultural barriers to change.

A. Structural Barriers

With the exception of flood plain zoning, climate and other environmental and public health risks have seldom been a factor in planning and regulation. The primary structural barrier of land use law is its historic emphasis of a limited, one time decision to separate land uses based either on the estimated external costs that one use can impose on another or to implement a social decision about the optimum mix of uses. The ideas of the modern city developed in the United States and Europe at roughly the same time but the two countries soon diverged. Before World War I, European influence, especially German, was at its height, and the United States enthusiastically

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14. J. Kevin Healy, *Local Incentives*, 12 A.B.A., SEC. ON ENV'T, ENERGY & RESOURCES 425-27 (2007). A study by the major energy producers asserts that increasing the fuel efficiency of cars is self-defeating because it encourages sprawl. U.S. ENERGY ASS'N, NATIONAL ENERGY SECURITY POST 9/11, at 20 (2002).

15. Cities such as Detroit, Michigan are losing so much population that there is serious discussion of promoting farming in the abandoned space. Marti Benedetti, *The Urban Prairie: Detroit Farms Connect People, Food*, CRAIN'S DETROIT BUSINESS, Aug. 11, 2008, *available at* http://www.detroitmakeithere.com/article/20080811/DM02/561420797.

adopted the grandeur of the late nineteenth century Imperial city and subsequently borrowed the German idea of use zoning. However, the City Beautiful Movement did not produce the European city, and land use controls became a tool for low density, suburban urbanization characterized by rigid economic, racial, and social segregation. Land use planning in the United States has been based on the segregation of uses by type primarily to prevent nuisance or external costs. Suburbanization has been encouraged by a variety of federal and state laws.[16] Specifically, American cities rejected public ownership of raw land, the taxation of property left undeveloped, and the national provision of basic services such as education that European nations have used to promote relative compactness.[17] Land use is a reserved Tenth Amendment power[18] that states enjoy with limited exceptions. States have further delegated the power to plan and regulate development to cities and counties. This power was used to promote suburbanization at the expense of central cities. The limited function of land use controls and its impacts manifest themselves throughout the law. Three examples follow:

1. The United States Supreme Court decision holding that comprehensive zoning was a constitutional exercise of the police power ultimately resulted in a preference for the single-family home over multi-family dwellings, which were seen as unhealthy urban tenements. Cities engage in mindless use segregation and "[a]s a result, the new American city has been likened to an unmade omelet: eggs, cheese, vegetables, a pinch of salt, but each consumed in turn, raw."[19] To continue the culinary analogy, planners describe American suburbs as afflicted with the BANANA syndrome (Build Absolutely Nothing Anywhere Near Anyone).

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16. *See* William W. Buzbee, *Urban Sprawl, Federalism and the Problem of Institutional Complexity*, 68 FORDHAM L. REV. 57 (1999).

17. These policies, many of which are highly debatable, include (1) the high cost of car ownership and operation, (2) subsidies to promote agricultural land retention, and (3) central government provision of many urban services. Pietro S. Nivola, *Are Europe's Cities Better?*, THE PUBLIC INTEREST, Fall 1999, at 73, *available at* http://www.brookings.edu/articles/1999/fall_europe_nivola.aspx; *see also* Tania L.M. Montiero, *Preserving Europe's Heritage: Biodiversity, Landscape, and Agri-cultural Policy in Confederated Europe*, 35 ENVTL. L. REP. NEWS & ANALYSIS 10065 (2005).

18. The States' Tenth Amendment power is subject to federal preemption under the Commerce Clause. Hodel v. Indiana, 452 U.S. 314 (1981). However, current Supreme Court jurisprudence holds that the states' Tenth Amendment land use authority is a basis for the narrow construction of Congressional assertions of the Commerce Power. Solid Waste Agency of N. Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (Congress did not authorize Corps of Engineers to adopt a rule that waters used by migratory birds were federal wetlands, in part, because federal regulation would interfere with the states' reserved power to regulate land use).

19. DUANY ET AL., *supra* note 8, at 10-11.

2. Raw land was treated as a commodity and low-density zoning was seen as a holding zone until a development offer was made to the city.[20] The characterization of zoning as a stable set of regulations controlled by a master plan was quickly abandoned in favor of a system that viewed zoning as a bargaining process among developers, neighbors, and the city. Negotiated change became the prevailing norm and helped to dampen any expectations of a relatively stable landscape or that land use controls would be subordinated to comprehensive planning.

3. Economic and social equity have long been subordinated to individual choice and thus "white flight" from city centers was permitted to flow unabated after World War II. United States law forbids suburbs from excluding racial minorities,[21] but the use of zoning to practice illegal racial discrimination is almost impossible to prove.[22] A few states have tried to increase the range of low and moderate-income housing choices in suburban communities. More generally, land use law proceeds on the assumption that suburbs are autonomous units that have no duty to coordinate their land use policies with their neighbors, and thus can compete among themselves for whatever housing and social mix they desire.[23] Local autonomy was sealed by the United States Supreme Court, which held that the duty to racially integrate schools was confined to a district's boundaries and thus there was no duty to integrate a metropolitan region.[24]

The limited function of land use controls and the focus on the mitigation of immediate nuisances make it difficult to factor long term risk into planning and regulatory decisions. Efforts to do so can be dismissed as too speculative

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20. In his important study of Illinois land use, the eminent United States land use scholar, Fred Bosselman, concluded that the law remains to a large extent the product of nineteenth century attitudes which "caused its residents to view land itself simply as another form of capital that could be made 'abstract, standardized and fungible' through an 'alchemy' of commodification." Fred P. Bosselman, *The Commodification of "Nature's Metropolis": The Historical Context of Illinois' Unique Zoning Standards*, 12 N. ILL. U. L. REV. 527, 531 (1992).

21. Village of Arlington Heights v. Metropolitan Housing Development Corp., 429 U.S. 252 (1977).

22. The current Supreme Court's indifference to not-so-subtle racial discrimination is illustrated by *City of Cuyahoga Falls v. Buckeye Comty. Hope Found.*, 538 U.S. 188 (2003) (city's processing of referendum which targeted a low-income housing project and was tainted by discriminatory purposes was not an unconstitutional violation of developer's rights).

23. Village of Belle Terre v. Boraas, 416 U.S. 1 (1974). The creation of independent suburbs with no duties to the larger urban region came after the Civil War. ANN DURKIN KEATING, BUILDING CHICAGO 79-118 (Univ. of Ill. Press 2002) (1988) traces the evolution of the Chicago metropolitan area, which does not differ significantly from other similar United States areas. She identifies the passage of a general incorporation law in 1872 as the major factor in substantially confining Chicago's spatial growth to its present boundaries by the end of the 19th century.

24. Milliken v. Bradley, 418 U.S. 717 (1974).

an external cost to be considered. For example, a state court rejected the argument that the potential of post-9/11 terrorist threats was a justification for a landowner refusal to connect to a public water system. The court found no such imminent risk and concluded that a city does not have a duty to guarantee that terrorists, who are private actors, will not contaminate a water system.[25] However, as evidence of the severity of each of these risks increases, the integration of risk considerations into land use planning and regulation is slowly growing. Assessments of the likely impacts of global climate change, such as sea level rise, have remained constant for at least two decades, but the urgency of the risk and the need for governments to start seriously planning for adaptive measures is increasing almost exponentially.[26] For example, a 2008 report concluded that the American West is becoming hotter and drier due to a temperature increase of 1.7 degrees in the past five years, compared to a one degree increase over the rest of the planet.[27] The Supreme Court's decision allowing states to sue the federal Environmental Protection Agency for failure to regulate automobile greenhouse gas emissions is a positive sign.[28]

B. The Culture of Suburbia

As if the structural barriers to the consideration of long-term risk were not enough, attempts to address obesity and climate change face the deeply ingrained culture of suburbanization or even more widely dispersed urban development. There is no single, simple solution because the legal and cultural support for sprawl is so deep.[29] Planners have historically tried to rein in

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25. Johnson v. Twp. of Plumcreek, 859 A.2d 7, 13 (Pa. Commw. Ct. 2004). There is a well developed law of the degree of probable injury required to have standing to challenge decisions of administrative agencies that may adversely impact the environment. Cassandra Sturkie & Nathan H. Seltzer, *Developments in the D.C. Circuit's Article III Standing Analysis: When Is an Increased Risk of Future Harm Sufficient to Cause Injury-in-Fact in Environmental Cases?*, 37 ENVTL. L. REP. NEWS & ANALYSIS 10287 (2007).

26. *See, e.g.*, COMM. ON THE SCIENTIFIC BASES OF COLO. RIVER BASIN WATER MGMT., NAT'L RESEARCH COUNCIL, COLO. RIVER BASIN WATER MGMT.: EVALUATING AND ADJUSTING TO HYDROCLIMATIC VARIABILITY (2007).

27. STEPHEN SAUNDERS ET AL., HOTTER AND DRIER: THE WEST'S CHANGED CLIMATE 2 (2008), *available at* http://rockymountainclimate.org.

28. Massachusetts v. EPA, 549 U.S. 497 (2007) (rejecting the appellate court's conclusion that the Environmental Protection Agency (EPA) could rely on the scientific uncertainty about the impacts of global climate change to refuse to regulate automobile emissions. The majority also held that the risk of sea level rise and consequent inundation of coastal property was a sufficient injury to give the state of Massachusetts standing to sue the Agency for failing to regulate carbon dioxide automobile emissions).

29. The structural reasons for sprawl are well addressed in Buzbee, *supra* note 16.

endless suburbanization, and various intellectuals have supported these efforts by propounding the wasteland theory of suburbia. Economists have tried to help this project along by quantifying the external costs. There is considerable economic evidence that supports the conclusion that low-density growth imposes higher service costs on communities and causes substantial external costs. In addition, low density, total automobile growth is not sustainable. The automobile-dependent city uses too much energy compared to alternative land use patterns and is a major source of air pollution.[30] For example, Kenneth Jackson celebrated the suburbs in his Classic, *The Crabgrass Frontier*, but he predicted that "[b]y 2025 the energy-inefficient and automobile dependent suburban system of the American Republic must give way to patterns of human activity and living structures that are energy efficient."[31] However, these efforts have not amounted to much, except in a few areas. As a country, we love sprawl,[32] and the case against sprawl is partially an aesthetic and value judgment about higher versus lower density development.

Suburbanization began before the Civil War as the wealthy moved from crowded, unplanned, and unhealthy cities. However, after World War II, affordable automobiles and federal mortgage polices enabled middle class families to flee cities en masse to escape the black migration from the rural South. Eventually, many cities became a way-station between university and family for the young, the permanent province of the very rich, and home for the very poor and marginalized groups such as homosexuals.[33]

There are a few hopeful signs, which are discussed more extensively at the end of this article. Alternatively, more efficient sustainable land use patterns exist.[34] The historic distaste and fear of city life are now abating; cities are increasingly perceived as "the" place to live as more Americans, young and old, display a taste for urban life. In many suburbs, one can find

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30. Judy S. Davis & Samuel Seskin, *Impact of Urban Form on Travel Behavior*, 29 URB. LAW. 215 (1997).

31. KENNETH T. JACKSON, THE CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES 304 (1985). For a more recent articulation of this position see Edward H. Ziegler, *American Cities, Urban Collapse, and Environmental Doom*, 60 PLAN. & ENVTL. L. 7 (2008).

32. There has been a spate of recent "revisionist" scholarship, which takes a much more favorable view of the suburban experience compared to most land use planners and urban historians. For a critical review of this literature, *see* Nicole Stelle Garnett, *Save the Cities, Stop the Suburbs?*, 116 YALE L.J. 598 (2006).

33. An urban historian has criticized the model of the city adopted by new urbanists as "a kind of 'City Lite' that celebrates consumerism at the expense of citizenship." Thomas Bender, *Toward a New Metropolitanism and a Pluralized Public?* (2000), http://www2.rz.hu-berlin.de/amerika/ projects/ newurbanism/ nu_pt_bender_a.html.

34. *See* MOSHE SAFDIE & WENDY KOHN, THE CITY AFTER THE AUTOMOBILE (1997).

"revitalized," "European-style" areas with dense concentrations of residences in close proximity to stores, restaurants, and public transit.[35] Richard Florida's book, *The Rise of the Creative Class: And How It's Transforming Work*, posits that cities with "indigenous street-level culture" and a high degree of tolerance for social diversity are the economic engines of the future. Urban planners have enthusiastically embraced this idea and are seeking regulatory strategies to replicate these organic street environments more quickly.[36]

IV. FORCING THE EUROPEAN CITY

A. Street Life is Hip

There are important counter-trends to suburban sprawl that are occurring in inner-city neighborhoods, older "first-ring" suburbs, and farther out on the urban fringe in "new urbanism" communities. In brief, new and old urban areas are becoming more like European cities, compact and pedestrian. This trend is not currently driven by the mitigation of the risks of obesity and climate change, but the results can promote more walking and less energy use. The story starts in 1961, when the late Jane Jacobs published her influential book, *The Death and Life of Great American Cities*.[37] She extolled dense, urban mixed use neighborhoods as safe and vibrant. Beginning in the 1960s, a few cities began to reject classic or Euclidean zoning's insistence of a sharp hierarchy of uses, segregated from each other.[38] In the past twenty years, mixed use, pedestrian friendly urban areas have become a planning mantra in the United States and throughout the world. Concern over energy consumption has tied the mixed use movement to public transportation access.

Cities have the broad discretion to adopt a variety of zoning techniques to promote new neighborhoods both in older urban areas and in new suburban developments. After World War II, American courts expanded the Supreme Court's rationale for zoning from nuisance prevention to the promotion of the general welfare which includes the character of the area, granting cities great discretion to decide the mix of uses and the city's design footprint as long as the classification is not arbitrary or a "taking." It is not clear that land use controls alone can create vibrant, diverse, architecturally interesting

35. *See* BELMONT, *supra* note 7.

36. For a critique of "play and plug" cities *see, e.g.*, Steven Malanga, *The Curse of the Creative Class*, CITY J., Winter 2004, *available at* http://www.city-journal.org/html/14_1_the_curse.html.

37. JANE JACOBS, THE DEATH AND LIFE OF GREAT AMERICAN CITIES (Vintage Books 1992) (1961).

38. *See* DONALD L. ELLIOT, A BETTER WAY TO ZONE 41, 70 (2008).

neighborhoods, but they can create a regulatory environment in which they might emerge.

B. Legal Techniques to Make Cities Hip

The most popular zoning techniques to "Europeanize" cities are mixed use overlay districts and design review ordinances. These ordinances are often influenced by the trendy "new urbanism," that requires a specific relationship between building placement and streets. Overlay districts superimpose a second zoning ordinance over a prior, usually simple one and give cities more control over development. Overlay zones are used to achieve objectives such as mixed use, transit-oriented developments. These zones can both control the footprint of an area and prohibit potentially alien uses such as "big box" stores, liquor stores, phone stores and fast food restaurants. Washington, D.C. recently enacted a series of ordinances to promote a more vibrant retail district. One ordinance permits merchants to fill in open arcades—recessed areas between the sidewalk and ground floor—with commercial developments in an attempt to correct a prior planning mistake. Open arcades were originally part of an incentive strategy to provide pedestrian shade but the uniform corner to corner arcade did not happen. However, under the city's density bonus system, if a developer built in the arcade, the building would exceed the allowable density. The new ordinance removes this disincentive and promotes more street level commercial activity to counter the sterile corporate office buildings that have proliferated in the city.[39]

The ultimate objective of these techniques is to achieve a denser, urban texture. One can identify the following elements of a law of urban texture.

1. Respect for Scale

Lively neighborhoods need a mix of densities that are not overwhelmed by large buildings.[40] United States land use law often works against this

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39. These experiments must be carefully planned and monitored. As Professor Martin Jaffe, of the University of Illinois, has observed, the deliberate emulation of "organic development by excluding single-use districts . . . can be disaster if carried out within a post-industrial framework and a land development scheme promoting commodification, e.g., Houston [Texas] or Shanghai [PRC]." Personal Communication with Martin Jaffe, Professor, Univ. of Illinois School of Planning (May 11, 2005).

40. Consider the clash between Greenwich Village residents who want to preserve the scale of a landmarked city block and St. Vincent Hospital, which wants to construct a new hospital with a Level I trauma center and a twenty-one story medical condo. Glenn Collins, *Beloved Hospital's Plans Cause Furor in the Village*, N.Y. TIMES, Apr. 1, 2008, at B1, *available at* 2008 WLNR 6115191.

objective because zoning classifications can be highly unstable, especially in areas facing market pressures for change because land is viewed as a commodity, and thus the expectation is to constantly change to increase the development of individual tracts with little attention being paid to the connectivity among parcels of land. The major device used to control change is the doctrine of spot zoning, which advocates the insertion[41] and the subordination of zoning to planning. Occasionally, courts have allowed cities to use a natural amenity as a baseline to retard change. For example, in upholding an ordinance to limit the height of building in Denver, Colorado to preserve views of the Front Range of the Rocky Mountains, the court noted that the city's "civic identity is associated with its connection with the mountains,"[42] but the idea that the existing scale and "fabric" of an area should be a baseline, against which change is measured, is contingent at best.

One can find occasional precedents which recognize the need to maintain a relatively stable density gradient that is correlated to existing density clusters in larger urban areas.[43] A 2004 Illinois case illustrates the potential to incorporate scale and context into decisions. In brief, the city of Chicago down-zoned a prime piece of Lake Michigan view property from a classification, that had initially permitted a forty-story apartment house to a zone that permitted only an eight-story one. Illinois zoning law has long allowed courts to substitute their judgment for that of elected officials by making an independent evaluation of dominant land use patterns in the area. However, in this case the court upheld the down zoning and endorsed the

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41. A rezoning which creates an isolated island in a sea of uniform uses raises a presumption of invalid spot zoning because (1) neighbors have a right to the status quo, (2) spot zoning might be evidence of corruption, or (3) a failure to plan. Fritts v. City of Ashland, 348 S.W.2d 712 (Ky. 1961). *Cf.* Rye Citizens Comm. v. Bd. of Trustees, 671 N.Y.S.2d 528 (N.Y. App. Div. 1998) (rezoning for a 1000,000 square foot Home Depot on 8.3 acres is not spot zoning because it was part of comprehensive plan); Boyles v. Town Bd. of Bethlehem, 718 N.Y.S.2d 430 (N.Y. App. Div. 2000) (rezoning for senior assisted living facility is not spot zoning because area one of mixed uses, small percentage, was residential and changes made in design to minimize harm to surrounding property). Small zoning is associated with small parcel rezoning, but large rezonings have also been found to be spot zoning. Chrobuck v. Snohomish County, 480 P.2d 489 (Wash. 1971); Good Neighbors of S. Davidson v. Town of Denton, 559 S.E.2d 768, 789 (N.C. 2002); Greater Yellowstone Coal., Inc. v. Bd. of County Comm'rs of Gallatin County, 25 P.3d 168 (Mont. 2001); Yellow Lantern Kampground v. Cortlandville, 716 N.Y.S.2d 786 (N.Y. App. Div. 2000).

42. Landmark Land Co., Inc. v. City and County of Denver, 728 P.2d 1281 (Colo. 1986). However, a Pennsylvania court recently invalidated a variance that would have increased the floor area ratio of a proposed fifty story mixed use development across from Philadelphia City Hall by 300 percent. The court noted that it might ring the area with giant buildings, which would ruin the "cherished" view of the Victorian pile, and the iconic statue of William Penn, which crowns the building. One Meridian Partners, LLP v. Zoning Bd. of Adjustment of Philadelphia, 867 A.2d 706 (Pa. Commw. Ct. 2005).

43. *See* BELMONT, *supra* note 7, at 424-25.

lower court's decision to define the relevant area as the surrounding elite "Gold Coast neighborhood, which [can be] characterized as containing a mixture of single-family homes and row houses which have a distinctive scale and character."[44]

2. Aesthetic Enhancement

New architecture in many urban and suburban areas is depressingly derivative, bland or just plain ugly, and this is unfortunate because design is an important component of viability. Architectural innovation, variety, and decorative elements encourage walking, shopping and "hanging out" generally. It is hard to create the buildings of the past because of modern materials and the loss of crafts such as stone carving. However, cities have several means to control the aesthetic texture of an area. These include the creation of historic preservation districts that prohibit exterior alteration of a building without municipal approval, design review ordinances, and sign control. The problem is that aesthetic regulation has often been reactive; it attempts to preserve the status quo or prevent uses such as billboards that are widely perceived as ugly or unsightly.

The evolution of sign control ordinances illustrates the limited incorporation of aesthetic texture considerations into the law. The promotion of aesthetic interests is now widely accepted as a legitimate basis for the exercise of the police power, and courts allow cities to review building and sign design so long as the ordinance contains sufficient standards to cabin the exercise of discretion.[45] Signage regulation distinguishes between on- and off-premise signs, and municipal efforts have focused on the control of large, off-premise billboards. Billboard regulation does comparatively little to improve the look of a neighborhood or urban center, and more is needed. Signs are an

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44. 1350 Lake Shore Assoc. v. Casalino, 816 N.E.2d 675, 686 (Ill. App. Ct. 2004). The decision is especially important because it reached the opposite result from a widely reported Chicago trial court decision, Hanna v. City of Chicago, No. 98 CH 1219 (Cook County Cir. Ct. 2001), which invalidated the downtown zoning of an area of an elite lakefront neighborhood from R5 to R4 to eliminate a spate of midrise dwellings in "a severe and functional architectural style vaguely reminiscent of worker's housing found in the urban fringes of communist Eastern Europe." Martin Jaffe, *Zoning, Chicago-Style:* Hanna v. City of Chicago, 53 LAND USE LAW & ZONING DIGEST 6, 7 (2001). The court found no justification for the decrease in density as well as the lack of a comprehensive plan for the area.

45. *E.g.*, Café Erotica of Florida, Inc. v. St. Johns County, 360 F.3d 1274 (11th Cir. 2004). The court held that a sign ordinance, which limited the size of political signs to a smaller size than to commercial signs and billboards, was unconstitutional when applied to an adult entertainment business that had included banners on its on- and off-premises signs criticizing the county officials who issued the ordinance violation citations. *See also* Fulton County v. Galberaith, 647 S.E.2d 24 (Ga. 2007).

essential component of commercial enterprises, but uncoordinated "excess" signage can detract from the attractiveness of an area. On-premise signs cannot be prohibited, but they can be stringently regulated so long as the regulation is limited to the form rather than content of the message. For example, more progressive cities have adopted street graphics ordinances that limit the size and informational content of on-premise signs to make them more attractive and to give the area a more harmonious character.[46] An increasing number of cities now utilize non-sign design review, but the results are more problematic because cities face more legal constraints in trying to encourage "good" design. Courts have more trouble with the promotion of taste than the suppression of the "obviously" ugly because it raises all the subjectivity issues that plagued early sign regulation efforts.[47] Thus, the primary objective of design view ordinances remains compatibility with existing structures and the prevention of cheap, garish construction.[48]

3. Maintaining "the Old" Neighborhood

There is much romanticization of a neighborhood of small establishments that promote social interaction. These neighborhoods exist, but it is hard to sustain them because they often attract new, more affluent residents who are charmed by a mix of owner-operated stores and restaurants which give an area a "neighborhood" feel. However, the influx of new residents attracts chain stores, which are seen by many as a loss of neighborhood. An episode of the program *Sex and the City* featured Samantha walking through her "edgy" New York City neighborhood, bemoaning its moral decline because of the arrival of a Pottery Barn. Residents have limited choices to protect their neighborhood from market-driven change short of political action. For example, a chic, edgy neighborhood in Chicago tried to block or retard the

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46. DANIEL MANDELKER, ANDREW BERTUCCI & WILLIAM EWALD, AM. PLANNING ASS'N, ADVISORY REPORT NO. 527, STREET GRAPHICS AND THE LAW (2004). *See* Nat'l Adver. Co. v. City of Bridgeton, 626 F. Supp. 837 (E.D. Mo. 1985); *cf.* Riel v. City of Bradford, 485 F.3d 736 (3d Cir. 2007) (regulating size, materials and compatibility with historic district content neutral).

47. Anderson v. City of Issaquah, 851 P.2d 744 (Wash. Ct. App. 1993) (city's denial of commercial building with floor to ceiling windows invalidated because design control ordinance intended to maintain unique character of town's "signature street" was too vague).

48. Many indices of texture such as materials, workmanship and feeling are associated only with the preservation of historic structures not the design of usually new Bauhaus-inspired design. *E.g.*, 20 ILL. COMP. STAT. 3410/6 (considering materials, workmanship and texture elements in designation of individual buildings as historic).

entry of chain stores by forming a historic district, but the effort failed.[49] This reflects the fact that zoning, with some exceptions, has never tried to impose quota systems on the entry of commercial uses, although there are indirect ways to accomplish this objective through traditional zoning. However, the more explicit a city becomes in pursing this objective, the greater the risk it faces that a court will apply the dormant Commerce Clause to invalidate the regulation.[50]

4. Social Texture With a Bit of Edge

Neighborhood vibrancy depends on a certain level of public order, which requires a level of social cohesion. But, it also depends on a certain amount of "rough edge." Law can contribute to this balance by limiting the mix to an acceptable number of uses that engender widespread dislike. Both the idea of social cohesion and a "rough edge" are delicate subjects in the United States because of our long tradition—reinforced by strong formal anti-discrimination laws—that racial, ethnic and religious tolerance is a national policy. Thus, compared to Europe, the United States is prepared to accept a larger neighborhood social mix. In general, cities rely on the market to filter out the disruptive.

Adult entertainment is an exception. These venues have a constitutional right to exist but the law is biased in favor of their virtual exclusion. Cities can regulate the location of adult entertainment venues.[51] The United States Supreme Court has held that sexually explicit materials are speech and, thus, entitled to First Amendment Protections. However, they are entitled to a lesser level of protection.[52] Supreme Court and lower court precedents allow cities to adopt, in effect, a quota system for these uses. Cities may seek to prohibit their location in residential areas, prevent their concentration in commercial

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49. Sandra Jones, *Bucktown's Chain Reaction*, CRAIN'S DETROIT BUSINESS, Apr. 18, 2005, at 3, *available at* http://findarticles.com/p/articles/mi_hb5253/is_/ai_n20212175.

50. Island Silver & Spice, Inc. v. Islamorada, Village of Islands, 486 F. Supp. 2d 1347 (S.D. Fla. 2007) (city on Florida Keys could not bar large formula retail stores to preserve distinctive character of business district because found that it had no historic character and thus elimination of such stores based on size served no legitimate purpose and discriminated against interstate commerce).

51. These are two different businesses, but with limited exceptions courts allow cities to regulate both arcades and retail only outlets. World Wide Video of Wash., Inc. v. City of Spokane, 368 F.3d 1186 (9th Cir. 2004). *See generally* Eric Damian Kelly, *Current and Critical Legal Issues in Regulating Sexually Oriented Businesses*, 56 PLAN. & ENVT'L L. 3 (2004).

52. Young v. American Mini Theaters, Inc., 427 U.S. 50 (1976).

areas,[53] through aggressive spacing requirements, and relegate them to industrial areas.[54]

Social texture issues also arise with religious land uses. Under the First Amendment to the United States Constitution and federal legislation,[55] religious land uses enjoy a preferred position. Cities must meet a higher burden of justification to exclude religious worship than they do with non-preferred land uses.[56] Courts have upheld the power of a city to deny the expansion of a student religious center because it was inconsistent with the historic scale of a historic district.[57] One texture issue has been the proliferation of store front churches in urban areas. Cities often oppose them because they can accelerate existing blight or foreclose more desired uses. Chicago has excluded them from commercial areas in gentrifying areas, which are designated as planned.

V. THREE NEEDED LEGAL REFORMS

A. Reducing the Moral Hazard Incentive in Takings Law

The effort to create a built landscape that is better adapted to mitigate the damages caused by natural disasters must confront the fundamental problem that United States land use law creates with too many incentives to assume bad, predictable risks and very few incentives to avoid the consequences of the risk. Efforts to design more environmentally sustainable landscapes seek to do no less than to impose the economic doctrine of "moral hazard" on public and private land use decisions.[58] The legal and political challenges to

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53. Adult entertainment venues cause "secondary effects" upon the cities in which they are located. The Supreme Court has held that cities do not need to make a study of the secondary effects in the host city and can locate them in difficult-to-find and access areas. City of Renton v. Playtime Theaters, 475 U.S. 41 (1986). However, a city must recite the studies on which it relies in enacting an ordinance. White River Amusement Pub, Inc. v. Town of Hartford, 481 F.3d 163 (2d Cir. 2007).

54. Tollis, Inc. v. County of San Diego, 505 F.3d 935 (9th Cir. 2007).

55. The Religious Land Use and Institutionalized Persons Act (RLUPIA), 42 U.S.C.A. § 2000cc(b), requires that religious land uses be treated equally with other similar uses. RLUPIA also requires that those land-use regulations which impose a substantial burden on religious exercise be justified by a compelling governmental interest and illustrate the least restrictive means of furthering that compelling governmental interest.

56. *E.g.*, Daytona Grand, Inc. v. City of Daytona Beach, Fla., 490 F.3d 860 (11th Cir. 2007) (scientific studies or other empirical evidence to justify adult use ordinance which allowed erotic dancers with pasties and g-strings to perform in licensed adult theaters which had to be located 500 feet from bars because it was reasonable for city to assume a link between crime and adult entertainment).

57. Episcopal Student Found. v. City of Ann Arbor, 341 F. Supp. 2d 691 (E.D. Mich. 2004).

58. RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 237-38 (7th ed. 2007).

reverse the incentives to construct a landscape that can adapt to natural disasters, especially those that may be enhanced by global climate change, are formidable and are supported by United States "takings" law.

The root of the problem lies in the economic concept of "moral hazard." Economists and students of natural disasters, such as Gilbert White, have long argued that it is economically irrational to encourage people to locate in the face of danger, such as flood planes or vulnerable hurricane zones, and then begrudge them when they demand to be compensated after damage occurs. However, both law and a long history of charity toward the victims of fate have created the expectation that the inefficient assumption of risk will not be penalized, but instead rewarded. Economists call this the moral hazard problem. The United States continues to develop flood plains even in the face of very high probability flood risks.

This reckless development is encouraged by the Supreme Court's regulatory taking jurisprudence. The Court announced the doctrine in 1922 and then remained silent for almost five decades until it re-engaged local zoning decisions under the First and Fifth Amendments.[59] Forests have been cut down to support the commentary on the Court's new taking jurisprudence because *Lucas v. South Carolina Coastal Council*[60] threatened to introduce a new "Lochner Era" of selective judicial invalidation of a wide range of local land use regulations.

The incentive to assume risk starts with the Fifth Amendment to the Federal Constitution and continues through the well-justified expectation that the federal government will compensate a wide range of natural disasters. In between is the long history of the construction of flood control projects and a federal flood insurance program that still encourages building in high-risk areas. The problem is not with the basic idea of helping victims of natural disasters, but in our inability to distinguish between deserving victims and subsidized risk takers. In a recent article, *Can We Save New Orleans?*,[61] a leading environmental law scholar and long time resident of New Orleans envisions a future for southern Louisiana built around the decreased

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59. The Supreme Court announced the regulatory taking doctrine in *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922), *reaffirmed in Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926), but did not decide a true zoning case between 1928 and 1974. *Village of Belle Terre v. Borass*, 416 U.S. 1 (1974) rejected a number of constitutional challenges, including freedom of association, to an ordinance which limited single family occupancy to two persons not related by blood, marriage, or adoption. The Court returned to the regulatory doctrine in *Penn Central Transportation Co. v. City of New York*, 438 U.S. 104 (1978) (landmark preservation ordinance).

60. Lucas v. S.C. Coastal Council, 505 U.S. 1003 (1992).

61. Oliver Houck, *Can We Save New Orleans?*, 19 TUL. ENVT'L L.J. 1 (2006).

retardation of natural water flow and withdrawal of human population from high risk areas. However, as he observes, "it will be nearly insane in a region that equates planning with socialism and has always looked on the [Army] Corps [of Engineers] for a bigger fix."[62]

The political process is, of course, endlessly open to blunt efforts to create incentives to minimize the damages caused by extreme natural events in advance of their occurrence.[63] However, the idea that landowners have no responsibility to avoid moral hazards is built into the constitutional conception of property recognized in *Lucas v. South Carolina Coastal Council*[64] and subsequent cases. *Lucas* held that a complete elimination of the value of property for development can be a categorical taking and applied this to a state beachfront set back statute. It recognized that there is a limited class of common background exceptions to title.[65] The Court noted exceptions such as the duty not to use one's property to cause a nuisance, but it refused to accept the state's rationale that the regulation prevented the destruction of other property during hurricanes. Most of the critical environmental commentary has focused on the Court's hostility to the idea of environmental regulation unaccompanied with full compensation. However, the plurality's rejection of the state's damage prevention argument illustrates that the modern notion of property remains rooted in the notion of exclusive dominion subject only to the duty not to cause a nuisance. The view also lies behind the Supreme Court's dismissal of the argument that the purchaser of highly regulated property assumes the risk of development denial with the quip "[t]he state may not put so potent a Hobbesian stick into the Lockean bundle."[66] Locke himself might be surprised that his labor theory has now incorporated the Roman law right of *ius abutendi*, the right to destroy property. This said, there is no reason

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62. *Id.* at 61.

63. *See, e.g.*, Vicki Been, Lucas v. The Green Machine, *in* PROPERTY STORIES 221 (Gerald Korngold & Andrew P. Morriss eds., 2004) (detailing how efforts to protect South Carolina's fragile beaches were rolled back after *Lucas*, contrary to the theory that takings law promotes the adoption of efficient regulatory programs).

64. *See Lucas*, 505 U.S. 1003 (1992).

65. *See* Michael C. Blumm & Lucus Ritchie, *Lucas's Unlikely Legacy: The Rise of Background Principles As Categorical Takings Defenses*, 29 HARV. ENVTL. L. REV. 321 (2005) (surveying the post-*Lucas* cases and finding that the background limitation defense is growing—many of the examples of the defense involve resources, such as water, fishing quotas and public land mining, where the expectation of exclusive dominion has always been lower than it has for land).

66. Palazzolo v. Rhode Island, 533 U.S. 606, 627 (2001). *See generally* Michael C. Blumm & Sherry L. Bosse, *Justice Kennedy and the Environment: Property, States' Rights, and a Persistent Search for Nexus*, 82 WASH. L. REV. 667 (2007).

why the courts, as some have begun to do, cannot incorporate a measure of risk assumption into takings law.[67]

Although subsequent Supreme Court opinions have narrowed and isolated *Lucas*,[68] the Court's takings jurisprudence still exerts a chilling effect on environmental regulation and encourages reckless behavior for three reasons. First, stringent regulations may trigger either the *Lucas* per se rule or be found a taking under the *Penn Central* balancing test.[69] Second, the Court still remains hostile to the very foundation of environmentalism: the idea that the fundamental unit to be protected is the ecosystem rather than the arbitrary parcel and political boundaries into which we have carved the surface of the planet. This perspective can lead to a more expansive view of the damage from activities on parcels that adversely impact either the functioning of the ecosystem or the services that it provides. Finally, the Court has either expressly or impliedly shifted much of the burden of justification for land use regulations, especially exactions, to local governments. The presumption of validity on which pre-Rehnquist Court land use law was based continues to be invoked but it is increasingly being weakened by courts. Substantive due process review of land use decisions is effectively dead at the federal level but not in the states.

B. Real Planning

The United States has too much land use regulation and not enough land use planning. Zoning was never developed as a tool to regulate non-urban landscapes on a comprehensive scale. Zoning and subdivision controls have evolved considerably, but cities still are limited to tinkering with the pace and density of individual developments and to "taxing" them within the limits of Nollan-Dolan legal exactions. Zoning was born in the major metropolitan areas and reflected the untested idea that a well-planned built environment would make people's lives better.[70] Specifically, it was built on two ideas both

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67. *See* Holly Doremus, *Takings and Transitions*, 19 J. LAND USE & ENVTL. L. 1 (2003) (addressing the incorporation of risk assumption into takings law and suggesting guidelines for legitimately refusing to compensate, or limiting the amount of compensation, to property owners caught in foreseeable transitions).

68. *See, e.g.*, Tahoe Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302 (2002) (reasonable moratoria not a taking); Lingle v. Cherron U.S.A. Inc., 544 U.S. 528 (2005) (substantially advancing that legitimate state interest is a due process and not a takings inquiry).

69. Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 123-24 (1978); Lucas v. S.C. Coastal Council, 505 U.S. 1003 (1992).

70. JOHN D. FAIRFIELD, THE MYSTERIES OF THE GREAT CITY (1993), demonstrates that zoning

of which are ultimately grounded in the common law of nuisance, the protection of the single family neighborhood from inferior uses (and people) and the protection of superior real estate from inferior parasitic uses. Much urban and suburban zoning still revolves around these issues, although the underlying progressive rationale has long since vanished. In fact, the whole idea of the need for rigid use segregation has long been discredited.

For decades, planners have argued that regulation should be subordinated to planning. The idea has borne some fruit. Legislation and judicial decisions mandate both plans, and some degree of consistency between plans and regulatory decisions.[71] There are also many large-scale planned communities being built in growing areas, but most regulatory decisions are still relatively small-scale, individual adjustments. Regulation can prevent the undesirable side-effects of certain uses much better than it can create a sustainable built urban environment or conserve a rural one. The story of Florida's much heralded Growth Management Act is illustrative. The act has contributed to the continued sprawl of the state by strengthening local land use regulations at the expense of state planning and by discouraging the construction of the infrastructure necessary to support growth.[72] Nothing short of binding regional spatial plans, based on an explicit urban concentration policy, following the Dutch model,[73] will address the land use dimensions of obesity and global climate change.

Land use regulations are so diverse and weak in part because of the limited role that the federal government has played. During the formative period of environmental law in the 1960s, the expectation was that land would be subjected to comprehensive environmental regulation along with air and water. Early laws such as the National Environmental Protection Act had deep roots in scientific rationalism, which flowered during the administrations of John F. Kennedy and pre-Vietnam War administration of Lyndon B. Johnson. Land use was an integral part of early environmentalism. Secretary of Interior Stewart Udall (1960-1968) set out to revive and adapt the public land-focused conservation tradition that flourished during the Progressive Era. He tried to

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represented the partial triumph of the progressive ideal that expert government intervention is necessary to temper the operation of the market and that rational, scientifically-based planning and intervention can improve people's lives.

71. *E.g.*, Pinecrest Lakes, Inc. v. Schidel, 795 So. 2d 191 (Fla. Dist. Ct. App. 2001) (ordering demolition of multifamily project because it violated comprehensive plan).

72. Tom Pelham, David L. Powell & Nancy E. Stroud, *Twenty Years Later: Three Perspectives on the Evolution of Florida's 1985 Growth Management Act*, 58 PLAN. & ENVTL. L. 3 (2006).

73. DUTCH MINISTRY OF VROM, NATIONAL SPATIAL PLANNING STRATEGY (2006), *available at* http://www.vrom.nl/pagina.html?id=37412.

adapt the insights of Rachael Carson's *Silent Spring*[74] and Aldo Leopold's *Land Ethic* to public land management and the use of privately held land.[75] Senator Henry Jackson of Washington State carried forward Udall's thinking. Under his chairmanship, the Senate Committee on Interior and Insular Affairs issued a report in 1972 which criticized the delegation of state planning and regulatory power to local governments,[76] and a year later, the Committee reported out S. 268, the National Land Use Policy and Planning Assistance Act. The Act provided grants to states to develop state planning and regulatory processes that included the control of "areas of critical environmental concern."[77] Sadly, the bill suffered the fate of almost all post-New Deal efforts to bring ecological and hydrological principles to irrational political boundaries, intense local and state opposition. It was narrowly defeated in 1974 and any effort for general federal land use planning disappeared from the political dialogue never to reappear.

A few states including Hawaii, Oregon and Vermont, scaled back their Tenth Amendment powers and enacted statewide planning. The American Law Association adopted a Model Land Development Code in 1976,[78] however, its influence was uneven at best. In the main, state and local land use laws were left in place. Federal involvement in land use planning increased, but on an ad hoc, problem-by-problem basis. Congress selectively superimposed federal regulatory programs over local codes. The most well-known example of this selective superimposition is the Coastal Zone Management Act of 1972.[79] In return for adopting plans for coastal areas,

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74. STEWART L. UDALL, THE QUIET CRISIS AND THE NEXT GENERATION 195, 202-03 (Smith Books 1988) (1963). [Author's text:]

> We must begin to work with, not against, the laws of the planet on which we live, rejecting once and for all the false notion that man can impose his will on nature. This requires that we begin to obey the dictates of ecology, giving this master science a new and central place in the Federal scientific establishment.

Hearing Before the Committee on Interior and Insular Affairs United States Senate and Committee on Science and Astronautics U.S. House of Representative, 90th. Cong. 2d Sess. 17 (1968) (statement of Stewart L. Udall, Secretary, Department of the Interior).

75. ALDO LEOPOLD, A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE (paperback ed. 1972).

76. Comm. on Interior and Insular Affairs, 92d Cong., Background Papers on Past and Pending Legislation and the Roles of the Executive Branch, Congress and the States in Land Use Planning and Policy 98-99 (1972) (Comm. Print 1950).

77. National Land Use Policy and Planning Assistance Act of 1973. S. 268, 93d Cong. § 302(a)(8) (1973).

78. MODEL LAND DEV. CODE (1976). *See* JULIAN CONRAD JUERGENSMEYER & THOMAS E. ROBERTS, LAND USE PLANNING AND DEVELOPMENT REGULATION LAW § 3.24 (2d ed. 2007).

79. Coastal Zone Management Act of 1972, 16. U.S.C.A. §§ 1451-1464 (West 2000 & Supp. 2008).

states can deny development authority to federal activities and licenses that are inconsistent with the state's program. There is an incomplete federal program of "sensitive land" protection. Activities such as the filling of a wetland[80] or the development of the habitat of a listed Endangered Species require a federal permit in addition to compliance with all state and local regulations. These activities can trigger innovative land use regulatory programs. For example, Section 9 of the Endangered Species Act prohibits the taking of a listed species, which can include any habitat modification that puts a species at risk.[81] In a few states such as California and Texas, the fear that Section 9 would stop all land development has led to federal-state-local habitat conservation plans. Global climate change has produced a new federal planning initiative, but it is too early to tell whether it will produce anything more than dusty, soon forgotten reports. The Energy Independence and Security Act of 2007 requires that the Secretary of Energy prepare a national assessment of the capability of natural and managed ecosystems to sequester greenhouse gases.

C. Mandated Risk Assessment

United States law is increasingly forcing cities to consider the longer term risks of future, unconstrained growth, especially in areas likely to be stressed by global climate change. The increasing linkage between water supply and land use planning illustrates new risk assessment duties being imposed on cities. American cities have always assumed that water necessary to support growth would always be available and that carry-over storage, often constructed by the federal government, would immunize them from droughts. Thus, risks of water availability were seldom an element of land use planning and regulation except in rare cases where cities did not want to bear the expense of extending service.[82] The disconnect between water and land use planning first surfaced in California and Arizona, but the risks of diminished supplies due to global climate change are possible in both dry and wet areas. Thus, water availability is increasingly a factor in local land use plans. For example, Santa Fe, New Mexico is coming close to making water availability

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80. The criteria include a showing of no practical alternatives and this may require an inquiry into the availability of alternative locations under local land use plans and regulations for the activity.

81. 16 U.S.C. § 1538(a)(2)(B) (2006).

82. *Cf.* A. Dan Tarlock & Sarah Van de Wetering, *Western Growth and Sustainable Water Use: If There Are No "Natural Limits," Should We Worry About Water Supplies?*, 27 PUB. LAND & RESOURCES L. REV. 33, 56 (2006).

the primary determinant of growth.[83] The city first restricted new water connections outside city limits unless the customer had a valid, preexisting agreement for water service. Next, the city's Water Budget Administrative Ordinance, enacted in 2003, required all new projects within the city to offset a project's water budget by retrofitting existing toilets with high-efficiency units.[84] The 2005 Water Rights Transfer Ordinance requires new, large construction projects to transfer water rights to the city prior to issuance of building permits.[85] These increased planning duties will not deter urban growth, but they create some additional pressure to concentrate it.

Arizona and California have gone the furthest in mandating risk-based water planning. In these states, the existence of an adequate, long-term, drought-proof supply of water is viewed as an urban consumer entitlement. This entitlement is still unconnected to any idea of water as a limit on urban growth, as the Arizona experience illustrates. As the price for construction of the federally funded Central Arizona Project (CAP), Arizona had to agree to stop mining its aquifers to support urban growth; accordingly, in 1980, the state adopted the 1980 Groundwater Management Act,[86] which was designed to stop groundwater mining. Despite intense opposition, the state ultimately adopted rules, mandated by the Act, which impose a duty on all new developments in the four groundwater basins included within the designated Active Management Areas, and thus on their municipal suppliers, to establish "a sufficient supply of water which will be physically available to satisfy the applicant's one hundred year projected water demand." The rules are structured to eliminate reliance on continued groundwater mining to establish an assured water supply, although this objective has yet to be achieved.

California's approach shifts more responsibility directly to developers to find adequate supplies. After a previous ineffective law, the state legislature adopted a 2001 act which prohibited approval of tentative subdivision maps,

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83. *See* Kyle Harwood, *The Evolution of Wet Growth Regulations: City of Santa Fe*, 7 WATER RESOURCES IMPACT 5 (2005). Santa Fe County faces a dilemma of inadequate supplies to meet projected demands, leading officials to consider whether to continue supplying water on a first-come, first-served basis or to pursue a more comprehensive approach to link water supply to comprehensive plan priorities. *See also* Julie Ann Grimm, *County Wades Into Long-Range Planning for Water Allocation*, SANTA FE NEW MEXICAN, Mar. 1, 2006, at A1, *available at* 2006 WLNR 3483805. In March 2008, the first draft of a water plan was formally presented to the county commissioners. It proposes several small new sources of supply and for developing additional ground water supplies in such a way to reduce overall pumping from local aquifers. *See also* Dan Boyd, *Water Plan Calls for Backups, County Commission Considering New Management Guidelines*, ALBUQUERQUE J., Mar. 20, 2008, at 4, *available at* 2008 WLNR 5406752.

84. Harwood, *supra* note 83, at 6.

85. *Id.*

86. ARIZ. REV. STAT. ANN. § 45-401 (2008)

parcel maps, or development agreements for subdivisions of more than 500 units unless there is a "sufficient water supply."[87] Sufficient supply is defined as the total supply available during a "normal single-dry, and multiple dry years within a 20-year projection."[88] To calculate this, the supplier must include a number of contingencies such as the availability of water from water supply projects, "federal, state, and local water initiatives such as CALFED" and water conservation.[89] Enforcement is tied to the duty of water suppliers to prepare urban water management plans.[90] Water supply assessments must either be consistent with these plans or meet the available water supply criteria. Assessments may trigger a duty to acquire additional water supplies.[91]

These duties will be enforced primarily under the California Environmental Quality Act (CEQA).[92] The process will allow objectors to probe the underlying assumptions and reliability of the data on which the assessments are made. This could be a serious impediment to business as usual, as evidenced by recent CEQA litigation on the subject. In 2000, an intermediate appellate court invalidated the environmental impact report (EIR) prepared in connection with the renewal of the California State Water Project contracts and the subsequent Monterey Water Users Agreement.[93] The court determined that the state drought delivery projections were "paper" water, and that reliance on this phantom entitlement could seduce local jurisdictions to approve developments in excess of the actual guaranteed supply. In 2003, to settle the suit, the state agreed, *inter alia*, to drop the word "entitlement" from state contracts and to prepare more accurate supply and delivery forecasts.[94] Similarly, an intermediate court of appeals invalidated an EIR for a 2,555-unit housing and mixed-use project in the Santa Clarita Valley north of Los Angeles.[95] The court found that the EIR was not sufficiently detailed because it did not include a discussion of the serious risks of reliance on less-than-

87. CAL. GOV'T. CODE § 66473.7(b)(1) (West 2005). *See also id.* § 66473.7(b)(1) (stating that if the supplier has less than 5,000 connections, the supply requirement applies to any subdivision that will amount to a ten percent increase in service connections).

88. *Id.* § 66473.7(a)(2).

89. *Id.* § 66473.7(a)(2)(D).

90. CAL. PUB. RES. CODE § 21000 (2005).

91. CAL. WATER CODE § 10910(c) (2005).

92. CAL. PUB. RES. CODE §§ 21000 *et seq.* (2005).

93. Planning & Conservation League v. Dept. of Water Res., 83 Cal. App. 4th 892, 926 (Cal. Ct. App. 2000).

94. Settlement Agreement (May 5, 2003), http://www.des.water.ca.gov/mitigation_restoration_branch/ rpmi_section/projects/docs/ Monterey%20settlement%20agreement%20.pdf.

95. Santa Clarita Org. for Planning the Env't v. County of Los Angeles, 106 Cal. App. 4th 715, 724 (Cal. Ct. App. 2003) (certified for partial publication).

projected State Water Project supplies. In 2007, the California Supreme Court substantially increased the disclosure requirements for municipal water supply plans. The plan must explain how the city's long term water needs will be met, the uncertainties, such as global climate change, involved in the calculations and their likely impacts and how the impacts will be mitigated.[96]

A recent lawsuit in California illustrates another use of the state's version of NEPA to directly incorporate climate change factors into land use planning and regulation. In 2006, the California Legislature enacted AB 32, which seeks a 25% reduction in greenhouse gases by 2020.[97] In November 2006, an NGO filed a lawsuit against a city in the rapidly growing San Bernadino valley east of Los Angeles, to overturn the approval of a 1500 home development. The suit alleged that the project would result in large emissions of carbon dioxide, a greenhouse gas, because it would increase vehicle trips. The plaintiffs claimed the EIR prepared for the project was deficient because it failed to analyze those emissions or associated global warming impacts. On April 11, 2007, the NGO filed another suit challenging San Bernadino County's new General Plan. The county updated its General Plan to accommodate a projected twenty-five percent increase in the county's population by the year 2030. The state Attorney General, who joined the suit, and contended that "despite the enactment of AB 32, the FEIR (Final Environmental Impact Report) on the General Plan update . . . makes no attempt to analyze the effects of those [greenhouse gas emission] increases on global warming or the greenhouse gas emissions reductions required by AB 32 . . . ." In August 2007, Attorney General Jerry Brown and the City of San Bernardino settled the lawsuit; the city agreed to develop a greenhouse gas emissions reduction plan including the use its discretionary land use authority to achieve reductions.[98] This county got off easily because it can push the problem of climate change adaptation into the future. However, the lawsuit

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96. Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova, 150 P.3d 709 (Cal. 2007); Chris McChesney, *The Evolving Scope of Significant Effects on the Environment: The National Environmental Policy Act*, 7 SUSTAINABLE DEV. L. & POL'Y 30 (2007) (surveys federal NEPA global climate litigation).

97. On October 1, 2008 California's new governor, Arnold Schwarzenegger, signed SB 375, which links land use planning and the state's ambitious greenhouse reduction targets established in 2006. Assemb. B. 32, 2006 Leg. (Cal. 2006). The new legislation will require that local land use plans be consistent with regional greenhouse gas reduction targets. It is deigned to force growth inward rather than outward to reduce total transportation use and commute times.

98. The settlement is available at http://ag.ca.gov/cms_pdfs/press/2007-08-21_San_Bernardino_settlement_agreement.pdf.

and other similar law suits have opened the door to forcing cities to question the deeply held assumption that low density suburban growth is inevitable.

VI. CONCLUSION

Addressing the serious environmental and public health risks of obesity and climate change through land use planning and regulation could easily be dismissed as too marginal to justify the effort given their magnitude and complexity. The legal and cultural barriers to change sketched in this article reinforce this conclusion by suggesting the use of land use law to address these risks will fail. Nonetheless, there are two answers to this pessimism. First, there is the usual answer to costly efforts to either mitigate or adapt to risks such as global climate change; many of the strategies have benefits that are independent of these three risks. Second, and more importantly, the complexity of the risks means that there will never be a simple, unitary solution. Effective responses require multiple approaches. Thus, it is worth pushing the land use regulation envelope to move it beyond nuisance prevention and revenue raising to contribute to the larger project of serious risk reduction and adaptation.