

# The “Vanishing Farmland” Myth and the Smart-Growth Agenda

by **Samuel R. Staley**

<b>1</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>14</b>	<b>15</b>	<b>16</b>
Executive Summary	Introduction	The Politics of Farmland Preservation	Using Markets to Preserve Farmland and Open Space	Conclusion	Glossary of Terms	Endnotes

## contents

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### about the author

Samuel R. Staley, Ph.D., directs the Urban Futures Program ([www.urbanfutures.org](http://www.urbanfutures.org)) at Reason Public Policy Institute (RPPI). As an economic-development consultant, researcher, and policy analyst, he has authored more than 50 articles, studies, and reports on urban-development issues and policy, including two books. His work on urban development, land use, planning, and farmland policy has appeared in professional journals including the *Journal of the American Planning Association*, *Planning and Markets* ([www-pam.usc.edu](http://www-pam.usc.edu)), the *FORUM on Applied Research and Public Policy*, and the *Capital University Law Review*. He has authored or coauthored a number of reports, including *Urban-growth Boundaries and Housing Affordability: Lessons from Portland* (with Gerard C.S. Mildner); *A Line in the Land: Urban-growth Boundaries, Smart Growth, and Housing Affordability* (with Jefferson G. Edgens and Gerard C.S. Mildner); *The Sprawling of America: In Defense of the Dynamic City, Urban Sprawl and the Michigan Landscape* (copublished with the Mackinac Center for Public Policy in Midland, Michigan); and *Market-Oriented Planning: Principles and Tools* (with Lynn Scarlett).

## Executive Summary

Contrary to conventional wisdom, urbanization is not significantly threatening national farmland or agricultural productivity:

- Research shows that 26 percent of the decline in cropland can be attributed to urbanization. Structural changes in the agricultural industry, including declining profitability and shifting demand for agricultural products, accounts for the remainder.
- Cropland—land used to produce food—has remained stable even as the amount of land in farms has declined.
- Agricultural productivity is at all-time highs. The nation exports 46.6 percent of its domestically produced rice, 41.4 percent of its wheat, 36.5 percent of its cotton, 33.6 percent of its soybeans, and 16.3 percent of its corn for grain.
- Most farmland conversion is to nonurban uses such as forests, pasture, range land, and recreational uses.

While urbanization does not significantly threaten the nation's agricultural industry, current public policies tend to encourage the inefficient conversion of land to non-agricultural uses. Several market-oriented policy reforms can address land development issues and promote farmland preservation, including:

- Privatizing or adopting full-cost pricing for infrastructure to ensure that new development fully pays its way and is not subsidized through general revenues;
- Instituting developer provision of on-site infrastructure to ensure that new residents fully pay their way;
- Purchasing the future development rights of farmland through private land trusts and conservation easements, or using tax-credit programs to encourage retention of farmland as open space;
- Adopting cluster housing and other zoning reforms that allow for market-

determined densities, mixed uses, and preservation of open space to reduce pressures to develop farm land; and

- Using nuisance-based standards for development approval to help depoliticize the land-development process and allow for the expansion of farm operations.
- Repealing estate taxes to ease the transition of land and capital from one generation to the next.

These market-oriented strategies should strengthen the agricultural industry, help maintain productive farmland, and increase the preservation of open space while also preserving the dynamic ability of the real-estate market to determine when and how farmland should be converted to other uses.

## Introduction

Land use has emerged as a central issue in public policy debates across the nation.<sup>1</sup> More than 19 states have adopted some form of statewide growth-management law or convened task forces aimed at slowing land development. Eight states have initiated task forces to find ways to preserve farmland and protect their agricultural industry. The flash point for these efforts is often suburbanization, the steady movement of people and jobs from higher-density to lower-density cities.

Vice President Al Gore, for example, claimed suburbanization:

*can't help pushing local farmers out of business, since family farms can't pay the rising property taxes. Orchards and dairy farms go under; the commute gets even longer; and nobody wins, least of all our children. America, which is losing 50 acres of farmland to development each hour, could become the largest net importer of food, instead of the world's largest exporter by the next century.<sup>2</sup>*

As part of an Earth Day event in Utah, local members of Future Farmers of America submitted essays on open space and farmland. "The common theme," noted a newspaper, "was a fear there will be no land for them to farm in the future."<sup>3</sup>

Concern about the loss of farmland is tied, often explicitly, to agricultural production. A recent Michigan State University study warned: "[Farmland acreage trends] should assure that Michigan citizens will have sufficient land for food production to the year 2010, but future generations may not be able to produce enough food if the population continues to grow."<sup>4</sup> An impending food shortage was implied when the authors wrote: "Farm products will continue to be exported from and imported into Michigan, but other states will also experience decreases in farmland and cropland acreages and face similar challenges to provide an adequate food supply."<sup>5</sup> Growth-management laws also are sometimes explicit in their attempt to protect agriculture. South Carolina's County Planning Act lists "protecting the food supply" as one of nine justifications for comprehensive countywide planning.<sup>6</sup>

In addition, broader more secular concerns about the loss of open space are driving much of the popular resistance to development. Of the more than 240 initiatives and referenda on growth management and other "Smart Growth" issues on the November 1998 ballot, most focused on funding for parks, recreation, and open-space preservation.<sup>7</sup> More than two-thirds passed.<sup>8</sup> Many of these initiatives receive wide support among middle-income voters on the urban fringe more concerned about preserving open space and the aesthetics of a rural or semi-rural lifestyle than protecting agriculture or the agricultural industry.

These fears are becoming part of a perceived conventional wisdom about farmland, open-

space, and the pace of urbanization in the United States that is at odds with actual land-use and agricultural productivity trends. Less than 5 percent of the nation is urbanized, and most states have more than three quarters of their land devoted to rural, agricultural, and open space uses. Little evidence suggests that the nation or individual states face a farmland shortage or crisis.<sup>9</sup>

Nonetheless, general concerns about the future of the nation's agricultural industry and the loss of open space propel many top-down approaches to managing land. Farmland-preservation task forces have adopted similar policy recommendations, assuming centrally directed planning is necessary to discourage land development and encourage the adoption of agriculture-friendly zoning, tax credits, and publicly funded purchase-of-development rights programs (see Table 1). In Ohio, the governor's task force urged the adoption of a resolution making farmland preservation a basic state goal. The task force recommended, among other things, modifying county and local land-use plans to reflect the state's goal of farmland preservation. These recommendations are similar in style to growth-management laws such as those in Oregon that outline state goals and objectives and require local governments to meet them.

More market-oriented approaches offer suitable and potentially more effective approaches to open-space protection and farmland preservation than currently popular top-down planning. While claims of a farmland crisis are overblown, local public policies nevertheless often create distortions in real-estate markets that stimulate the conversion of farmland to urban uses. In addition, citizens are increasingly concerned about the loss of open space and the aesthetic aspects of their communities. Market-oriented approaches use the efficiency of the price system and pri-

## **little evidence suggests that the nation faces a farmland shortage or crisis**

vate conservation to determine land uses, enhance the quality of life for all residents, protect the investments of farmers, establish land preserves, and sustain critical elements of the nation's real-estate market.

## The Politics of Farmland Preservation

Many farmland task forces and proponents of growth management base their case for slowing development on an empirical review of farmland trends and productivity. Usually, task-force recommendations are marketed with slogans and references to the amount of farmland lost over a recent period. For example, growth-management proponents in Michigan cite farmland-loss rates of "10 acres an hour" to justify special tax treatment for farmland, publicly funded programs

to buy the future development rights for farmland (purchase-of-development rights, or PDR, programs), and special land-use categories to preserve agricultural land within local comprehensive land-use plans. In Ohio, supporters rallied around the cry of "five acres an hour" and, in Colorado, the claim was "three acres an hour." These and other claims are used to create a belief that certain states face a land crisis that warrants government intervention to preserve open space and the local agricultural industry.

Most task forces were established with an explicit advocacy mission. The Agricultural Task Force for Resource Conservation and Economic Growth in the Central Valley of California, for example, was charged with recommending "policies to conserve and protect resources vital to the longer-term economic health and productivity of agriculture in the Central Valley."<sup>10</sup> In Colorado, the governor's Task Force on Agricultural Lands

### SUMMARY OF MAJOR LAND-USE PROVISIONS OF SELECTED FARMLAND AND OPEN-SPACE TASK FORCES

State Year	CA* 1998	CO 1995	MI 1995	OH 1997	VT 1983
Agriculture zoning			✓	✓	
Directed infrastructure	✓	✓		✓	✓
Comprehensive local planning	✓			✓	
Strengthen right to farm	✓	✓	✓		
Urban growth boundaries	✓			✓	
Mandated density requirements	✓				
Agricultural security areas		✓	✓	✓	
Special tax credits & incentives	✓	✓			
Purchase of development rights	✓	✓	✓	✓	✓

\* Central Valley, California

Source: Compiled by Samuel R. Staley, Director, Urban Futures Program, Reason Public Policy Institute, Los Angeles, California, from task force reports.

table 1

was charged with making “recommendations to enhance the continued vitality of agricultural activity” and report on “incentives and other voluntary methods for maintaining land and water for agricultural production, open space, and wildlife values.”<sup>11</sup> As policy advocates for farmland and open-space preservation, the task-force reports do not necessarily provide an empirical and comprehensive assessment of the issues.

Moreover, the evidence on land-use and farmland trends suggests that conventional wisdom is misleading or inaccurate:

- Farmland loss has moderated significantly since the 1960s. Broken down by decade, the most significant farmland loss occurred in the 1960s. The nation lost 7.3 million acres of farmland per year during that decade. Annual farmland loss was cut almost in half during the 1990s, averaging just 2.6 million acres lost each year. While farmland loss is highly variable

among states, a general trend toward moderating farmland loss is evident since the 1960s (Table 2). Nationally, the amount of land in farms fell by 6.2 percent during the 1960s, then moderated to 5.8 percent in the 1970s, 5.0 percent in the 1980s, and to 2.7 percent in the 1990s.

- Cropland has remained stable for decades. Importantly, farmland loss is not the same as cropland loss. Cropland is land harvested and used to grow food. Cropland has remained stable over the past three decades. Thus, even though less land is officially categorized “in farms,” the amount of land used to harvest and grow food has remained stable.<sup>12</sup> Most of the “lost” farmland has, in fact, been converted to pasture, range, forest, and other recreational uses.
- Urbanization is not the primary cause of cropland loss. Agricultural economist Luther Tweeten examined changes in crop-

## FARMLAND LOSS RATES FOR SELECTED STATES BY DECADE

	1960s	1970s	1980s	1990s
California	5.7%	7.7%	8.9%	3.7%
Colorado	1.5%	9.3%	8.1%	2.6%
Florida	14.9%	9.5%	18.7%	7.9%
Georgia	20.9%	13.8%	16.7%	8.0%
Indiana	9.8%	4.0%	3.0%	3.5%
Maryland	17.9%	10.7%	18.2%	9.5%
Minnesota	4.6%	1.9%	1.0%	1.0%
New Jersey	27.4%	3.8%	14.7%	6.6%
North Carolina	14.6%	23.0%	17.1%	10.3%
Ohio	8.3%	8.0%	3.7%	4.6%
Pennsylvania	17.1%	11.8%	10.0%	7.1%
U.S. average	6.2%	5.8%	5.0%	2.7%

Source: Author's calculations based on data from National Agricultural Statistics Service, 1998. See Samuel R. Staley, *The Sprawling of America: In Defense of the Dynamic City*, Policy Study No. 262 (Los Angeles: Reason Public Policy Institute, January 1999), p. 20.

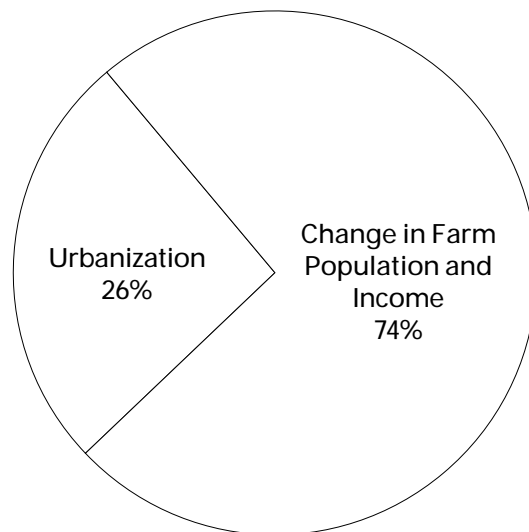
land from 1949 to 1992 and found that urbanization accounted for about 26 percent of agricultural land converted from cropland (see Figure 1).<sup>13</sup> Most farmland is converted to pasture, forest, parks, and recreational uses, not residential housing or commercial development.<sup>14</sup> In some states (e.g., California and Colorado), land devoted to cropland and pasture increased, while land was also converted to urban uses. In states where farmland declined, urbanization typically accounted for a relatively small part of the loss. In Georgia, farm-related land uses fell by 1.7 million acres while urbanization absorbed just 352,000 acres (about 20 percent of total farmland conversions).

- Urbanization is not jeopardizing prime farmland. Only about 1 percent of prime farmland—farmland with the

highest productivity potential based on soil type or irrigation—was converted to urban uses from 1982 to 1992.<sup>15</sup> “The proportion of cropland classified as ‘prime,’” notes the U.S. Department of Agriculture, “has remained remarkably stable.”<sup>16</sup> Nationally, 24 percent of rural, nonfederal land and half of all cropland are classified as prime.<sup>17</sup> About 28 percent of new urban development uses prime farmland.<sup>18</sup> One-third of converted land is nonprime forestland, and another 24 percent is nonprime farmland.<sup>19</sup>

- Agricultural productivity is becoming less dependent on land. Capital equipment and technology accounts for more than two-thirds of agriculture’s productivity.<sup>20</sup> Land accounts for about 18 percent of agricultural productivity and has been declining.<sup>21</sup>

## CAUSES OF CROPLAND LOSS: 1949 TO 1992



Source: Luther Tweeten, “Competing for Scarce Land: Food Security and Farm Preservation,” Paper presented to the American Agricultural Law Association, Minneapolis, Minnesota, October 17, 1997.

- Food production is increasing worldwide. World output for meats, rice, and fish has increased by more than one-third since 1980. The nation's farm output index rose from 73 in 1970 to 92 in 1980 to 108 in 1993,<sup>22</sup> a 17.4 percent increase over 1980 output levels and 47.9 percent increase over 1970 output levels. The United States continues to be a net exporter of agricultural products.<sup>23</sup> In fact, the United States exported 46.6 percent of its domestically produced rice, 41.4 percent of its wheat, 36.5 percent of its cotton, 33.6 percent of its soybeans, and 16.3 percent of its corn for grain in 1997.<sup>24</sup>

The U.S. Department of Agriculture's Economic Research Service concluded that "losing farmland to urban uses does not threaten total cropland or the level of agricultural production which should be sufficient to meet food and fiber demand into the next century."<sup>25</sup> Luther Tweeten found that the "lack of farm economic viability rather than urban encroachment" was the principal reason for cropland loss when he analyzed data from 1949 to 1992.<sup>26</sup>

## Using Markets to Preserve Farmland and Open Space

Despite trends toward moderating farmland loss and rising agricultural productivity, state and local governments are often driven to do something, almost anything, to limit encroachment on farmland, particularly in urbanizing areas. Often, task forces adopt unworkable and impractical policy positions and goals. The Utah Quality Growth Partnership's mission, for example, spurred on by concerns over the loss of open space and farm-

land, is to "design a strategy for how—and how much—the Salt Lake metropolitan should grow in the next 50 years."<sup>27</sup>

This mission is fraught with difficulties. Attempting to define a community vision that will last 50 years is virtually impossible and requires intimate knowledge of what existing and future residents "want" in their community and requires the ability to precisely forecast population and demographic trends. Just two decades ago, personal computers were expensive and rare, MS-DOS and compact disks did not exist, the Sony Walkman was on the cutting edge of consumer electronics, and people seriously debated whether Beta Max or VHS would survive the war over the home-video market.

Policy recommendations using a 20-, 30- or 50-year vision for a state or community typically result in use of top-down planning tools and government ownership and control of land to achieve state policy goals. Publicly funded purchase-of-development rights (PDR) programs, for example, are mechanisms that would, in effect, place future land development under the control of local governments and urban planners and circumvent real-estate markets. These strategies may well compromise quality of life for future generations since little evidence suggests government or public-land trusts are better suited than real-estate markets to provide the kinds of housing, land management, and communities that people want.<sup>28</sup>

Publicly funded PDR programs also risk locking in specific kinds of land uses (such as open space) irrespective of the social benefits of using the land for other purposes. For example, given the dramatic increases in agricultural productivity, less land is needed to grow food and more is available for alternative uses, including open space, forests, recreation, and housing. Indeed, many planners

## an alternative to the conventional top-down approach is to use real-estate markets



have acknowledged that “bad planning” (e.g., large-lot zoning) continues to be a significant contributor to the urban sprawl they now want to eliminate.

Although urbanization does not appear to be “gobbling up” land at unprecedented rates, land development is not necessarily benign. Even if farmland preservation were not an issue, concerns over the environmental impacts of development, rising desires for open space, and worries about the costs of providing services to new residential and commercial subdivisions would be important in their own right and might justify local government attention.<sup>29</sup> In addition, some communities lament the loss of rural lifestyles that may accompany conversion of farmland to other uses. While this concern is understandable, public policy is limited in its ability to prevent this gradual evolution of communities given population dynamics, the importance of maintaining a dynamic economy, and fundamental “due process” Constitutional protections.<sup>30</sup>

An alternative to the conventional top-down approach is to use real-estate markets, private nonprofit groups such as land trusts, and regulatory reform to improve the efficiency of land development and preserve open space. The key question is when farmland should be converted to other uses.<sup>31</sup> Given rapid increases in agricultural productivity, the value of farmland relative to other uses—including forest use, open space, housing, and commercial development—is falling. Public policy should support market-based mechanisms that allow for land conversions (including from one agricultural use to another) while also limiting nuisances that derive from different land uses and facilitating nonprofit and private-sector land preservation.

The real-estate market can potentially allocate land uses efficiently if signals about the value and importance of land for different uses are

communicated accurately to buyers and sellers. When families move out of higher-density cities, their behavior is a “signal” to land developers (and property owners) that families and households are searching for new homes and neighborhoods. The market price of the land (and house) is an indication of how much these families are willing to pay for a house and new neighborhood characteristics such as lower residential densities or more open space. Top-down planning strategies interfere with these signals.

Several market-oriented principles and strategies are available to state and local policymakers and citizens concerned about protecting open space and ensuring that farmland is not converted into urban uses too quickly. These strategies are less likely to distort important market signals about housing needs and land development while also strengthening agriculture and enhancing prospects for open-space protection.

#### **A. Economic-policy neutrality**

State policymakers should pursue a strategy of strict economic neutrality, avoiding the tendency and political pressure to subsidize one industry in favor of others. Despite the best intentions of policymakers, economic-development programs and strategies intended to aid one industry inevitably tilt the balance toward some industries and away from others.<sup>32</sup>

Farmland-preservation task forces recommend a number of policies designed to protect the agricultural industry from competition, including Agricultural Security Areas, specific agricultural zoning districts, preferential tax treatment, comprehensive county-wide planning, and urban-growth boundaries. While the rights of farmers to engage in economic activity must be protected, little evidence suggests that the survival of the nation’s agricultural industry is in doubt, or that the industry is particularly disadvantaged relative to others.

## **state policymakers should pursue a strategy of strict economic neutrality**

Market-oriented economic policy strategies:

- Adopt nondiscriminatory economic-development policies. Industry and site-specific tax-incentive programs that target particular industries and firms should be avoided. Often, state and local business-incentive programs, such as property-tax abatements, corporate income-tax credits, or loan guarantees, encourage firms to locate on rural land by making land development on the fringe seem cheaper than it would be without the incentives. State and local governments should focus on nondiscriminatory economic development policies that treat all industries and residents equally.
- Tax policies should be uniform so tax rates apply equally to all businesses. This approach would help prevent local economic-development policy from “tipping the scales” in favor of some industries and against others, or from steering some industries to “greenbelt” urban peripheries. Local regulations and permit issuance should be streamlined to reduce the cost of doing business locally as well as statewide. These policies should encourage wealth creation and investment in all businesses and industries, including agriculture.
- Repeal estate taxes. Estate taxes often force the sale of farmland prematurely. Estate taxes are responsible, in part, for the failure of more than two-thirds of family businesses (including farms) to pass from one generation to the next.<sup>33</sup> In Florida, 70 percent of one 17,000-acre farm was sold for development because the heirs could not afford to pay the estate taxes on the property.<sup>34</sup> Repealing the estate tax would ease the transition of land and capital from one generation to the next.

## **B. Market pricing for on-site public services**

County and local governments often inadvertently subsidize land development by adopting below-cost pricing for infrastructure such as roads, sewers, water, and other utilities. Local governments, for example, often charge only for operating costs, excluding capital, maintenance, and debt-service costs. As a result, public-service costs seem lower than they really are, encouraging land development and overuse of infrastructure. Markets can coordinate resources efficiently only if all direct infrastructure and development costs are accurately incorporated into price information.

Market-oriented infrastructure strategies:

- Privatize infrastructure. Private companies cannot afford to systematically subsidize their customers. If they did, they would go bankrupt. Privatizing water and sewer services is already well established. Nationally, private companies operate 509 publicly owned wastewater treatment facilities, and market analysts expect this market to grow 15 to 20 percent each year.<sup>35</sup> Privately owned and operated water companies serve 15 percent of the U.S. market, and 433 facilities are publicly owned and privately operated.<sup>36</sup> Commercializing roads could be accomplished by devolving responsibility for building and maintaining roads to neighborhood associations, developers, and special-taxing districts.
- Full-cost pricing for infrastructure. Full-cost pricing for infrastructure builds capital investment, debt service, maintenance, and operating costs into the price of the service provided. Newly implemented government accounting standards will require governments on all levels to adopt procedures for track-

**tax policies should be uniform so tax rates apply equally to all businesses**

ing expenses this way.<sup>37</sup> Thus, implementing full-cost accounting and pricing should become easier. Many public officials already advocate moves in this direction as a way to stop general-fund subsidization of services.<sup>38</sup>

- Tap-in fees. An alternative to full-cost pricing would be to implement a system of one-time tap-in fees. Tap-in fees, unlike impact fees, are designed to recoup the actual costs of extending specific types of infrastructure (e.g., water or sewer mains) to specific sites. User fees would then be used to cover the public service's operating costs, and future capital investments would be paid for through capital-improvement levies or bonding.
- Developer provision of infrastructure. An additional option for local governments is simply to require developers to provide roads, water, and sewer on site and avoid public provision of up-front fixed costs altogether. This approach should also be accompanied with

policies designed to give developers flexibility over the type of infrastructure and technology used to provide the service. This would allow property developers to use the most suitable technologies and encourage innovation for public services without imposing the fiscal responsibility for paying for the services on existing taxpayers.

### **C. Purchasing development rights**

Another national trend has been to use taxes and user fees to finance state and local government programs that either purchase land outright or its future development rights to prevent development. Eleven states have these PDR programs in place and have acquired the development rights to almost 350,000 acres of land.<sup>43</sup> Gov. Christie Todd Whitman sponsored and won support at the ballot box for an initiative in 1998 to raise \$1 billion in public funds to purchase the development rights of open space and farmland in New

## THE PROMISE AND PERIL OF IMPACT FEES

While impact fees—assessments on new projects and infrastructure—are sometimes used to cover the fixed costs of extending services, these fees are often abused and become another source of general revenues for local governments. On the one hand, development agreements using impact fees have helped provide the site-specific revenues necessary for improvements to sites.<sup>39</sup> On the other hand, impact fees have also been used to force new residents to subsidize existing residents by funding community-wide services and facilities. A study of the suburban Chicago housing market found that impact fees reduced housing supply while home prices sometimes increased by more than double the amount of the fee imposed.<sup>40</sup> Moreover, the fees bore little relationship to the costs of the infrastructure provided to the new homes.<sup>41</sup> Another analysis found that more than 22 categories of facilities and activities were legally categorized for impact-fee financing. Most reflected political goals—public art, low-income housing, mass transit, historical preservation, day-care facilities—rather than facilities and traditional public goods such as roads, sewers, and public schools that serve the needs of the new subdivision or project.<sup>42</sup>

Jersey, constituting about one-third of the state's remaining vacant land.<sup>44</sup> Publicly funded PDR programs, however, have several disadvantages (see box).

Market-oriented open-space preservation strategies:

- Private land trusts. An alternative approach would be to encourage private land trusts to acquire property, purchase development rights, or purchase conservation easements on property. More than 1,100 private land trusts in 48 states already control more than 15 million acres (see Table 3).<sup>45</sup> Land trusts often acquire land directly, maintaining it as open space

or leasing it out to farmers. They have more flexibility than public trusts to buy and sell land as community needs change.

- Conservation easements. Rather than buying the land, land trusts sometimes acquire easements to prevent future development of property either through purchase or donation. Easements allow current property owners to use the land for existing uses (e.g., farming) while preventing future development or changes that enhance the value of the land. Thus, land trusts hold the rights to the future development potential of the land, not its existing value. Property owners often benefit from lower taxation because the

## PUBLICLY FUNDED PURCHASES OF DEVELOPMENT RIGHTS

**D**espite their popularity, purchase-of-development rights (PDR) programs have several disadvantages. First, PDR programs are permanent. Once the development rights are sold to governments, the future development value of land is virtually eliminated because the land will be off limits for development. This hamstringing communities as well as the state. As communities evolve over time, their needs and preferences change as well. Land that was considered ideal for one use may become more suitable for another use in the future.

Take the following example. Suppose local government officials determine that 20 percent of their land should be reserved for open space and use the state's PDR program to purchase future development rights for undeveloped farmland and open space in a concentrated area of the city. Ten years later, citizens decide that the emergence of other smaller parks scattered among residential neighborhoods has more than adequately addressed the open-space needs of the community. Working with urban planners, local elected officials determine that 5 to 10 percent of the community's land devoted to parks is more than enough.<sup>46</sup> Freeing up this land would increase the quantity and quality of housing in the city, making housing more affordable. The PDR program has eliminated any flexibility the community or private developers would have over the use of land. Parkland, in essence, could not be redeveloped as affordable housing regardless of its potential benefit to the community.

PDR programs compound inefficiencies because they eliminate the most effective mechanism for ensuring that land uses adapt to new demands and perceived scarcities: the real-estate market. PDR programs effectively place land off limits as something consumers can purchase and use to fulfill their own housing and family preferences. This means future land uses will be determined by a political process rather than an economic process. Bureaucratic rules and political dynamics will determine land uses rather than the decentralized preferences of individual households and families.

land can no longer be developed at its full market potential and value (reducing the owners overall tax burden). Easements are also becoming increasingly popular because they tend to be more flexible. Rather than prescribing specific uses—such as farming—they often focus on precluding certain types of urban uses. Thus, rather than specifying that the land be used for recreational purposes, easements may prevent the subdivision and development of land for residential purposes, but also allow a wide range of nonurban uses such as recreation, farming, open space, and so on.

- Tax-credit programs. Tax-credit programs allow farmers voluntarily to withdraw their land from the real-estate market in exchange for tax benefits for fixed periods, often 10 to 90 years. This type of program is flexible since it does not per-

manently withdraw land and does not require a direct outlay of tax money to purchase future development rights. Real-estate markets will continue to allocate land to competitive uses as land is gradually removed from the program and other land is added. Forty-one percent of Michigan's farmland is already enrolled in a tax-credit program in that state, protecting a substantial portion of open space in the process.

- Cluster housing. More and more contemporary developers are putting houses on smaller lots to preserve open space using cluster-housing concepts. A comparison of a cluster-housing development with a more traditional development in Amherst, Massachusetts by the Center for Rural Massachusetts found that homes in the cluster development appreciated 12.8 percent faster than in the traditional de-

## PROPERTY RIGHTS AND REAL-ESTATE MARKETS

Real-estate markets allocate land uses efficiently if signals about the value, impacts, and importance of land for different uses are communicated accurately to buyers and sellers. For example, the average per acre value of farm real estate in the United States was \$890 in 1996.<sup>47</sup> Suppose a family of four, wanting to move out of the city, were willing to pay the farmer \$10,000<sup>48</sup> for one acre to build a modest three-bedroom ranch house. The market value of that acre would be its market price – \$10,000 (not \$890). The marketplace, through the price system, is “signaling” the farmer that someone else places a higher economic value on one acre of the farmer's land than the appraised value. The sale will only take place if: 1) the farmer believes \$10,000 is more valuable than holding on to his or her property; *and* 2) the family believes \$10,000 is less important than its desire to build a home on the property. If both are satisfied, the sale will take place. Both win; they experience “gains to trade.”

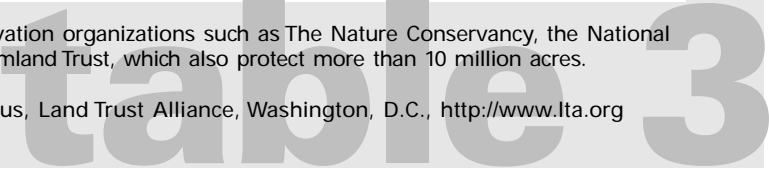
This win-win outcome, however, can only take place if property rights—the farmer's right to own and sell the land and the family's right to purchase the land—are respected and enforced. When property rights are upheld, farmers have the protected right to sell *or not sell* their property to whomever they wish—whether it is a family of four, a developer, or a land trust. The real-estate market incorporates the interests of both buyers and sellers. Other challenges to ensuring “quality of life” remain, of course. Specifically, rules to ensure that landowners do not impose “nuisances” or “harms” on others in the community must also exist.

LAND PROTECTED BY LOCAL, STATE, AND REGIONAL LANDTRUSTS: 1998

	Land Trusts	No. of Acres Protected	Acres Owned	Acres under Easement
Alabama	3	31,472	5,472	0
Alaska	4	1,312	395	917
Arizona	10	3,339	280	857
Arkansas	2	1,666	1,581	85
California	119	536,922	235,571	78,099
Colorado	29	95,593	6,124	79,783
Connecticut	113	54,094	38,694	12,946
Delaware	4	33,883	20,537	1,527
Florida	29	56,839	9,899	17,071
Georgia	23	7,646	1,457	6,189
Hawaii	4	7	2	5
Idaho	8	23,042	778	8,315
Illinois	31	43,384	8,309	3,498
Indiana	6	3,461	3,247	209
Iowa	5	39,825	5,392	3,445
Kansas	2	219	0	219
Kentucky	9	2,997	1,296	12
Louisiana	1	15,555	651	14,604
Maine	80	82,038	19,218	59,141
Maryland	41	93,114	6,938	79,342
Massachusetts	137	150,515	91,259	35,811
Michigan	38	46,929	30,338	10,648
Minnesota	2	8,450	1,250	4,855
Mississippi	1	2,973	1,098	1,875
Missouri	9	6,438	6,426	12
Montana	9	296,840	261	258,416
Nebraska	3	16,846	15,146	1,700
Nevada	4	4,843	0	118
New Hampshire	32	127,662	48,215	65,579
New Jersey	34	90,403	24,765	4,800
New Mexico	7	28,986	873	28,113
New York	68	345,034	49,855	190,924
North Carolina	22	37,741	6,259	26,564
North Dakota	1	4,834	4,154	0
Ohio	27	10,732	7,374	2,885
Oregon	13	11,711	386	2,654
Pennsylvania	75	348,239	54,014	59,774
Puerto Rico	1	2,131	1,716	0
Rhode Island	29	12,544	8,795	3,519
South Carolina	14	29,749	4,978	22,071
South Dakota	1	9,062	0	7,760
Tennessee	13	23,637	6,932	1,797
Texas	20	11,531	3,244	3,823
Utah	4	22,805	19,787	3,000
Vermont	26	193,061	41,647	138,769
Virgin Islands	1	50	50	0
Virginia	16	132,953	11,368	118,402
Washington	29	27,230	10,219	11,949
West Virginia	9	364	289	75
Wisconsin	43	15,177	9,560	5,141
Wyoming	2	37,752	1,467	7,585
Total	1213	3,183,570	827,566	138,4883

Note: This list excludes national conservation organizations such as The Nature Conservancy, the National Audubon Society, and the American Farmland Trust, which also protect more than 10 million acres.

Source: 1998 National Land Trust Census, Land Trust Alliance, Washington, D.C., <http://www.lta.org>



velopment over a 21-year period.<sup>49</sup> As local planning boards and zoning codes have become more flexible, developers, particularly in built up areas of suburbs, are beginning to incorporate more open space into their designs. This is an indication that real-estate markets are responding to consumer preferences for more open space.<sup>50</sup>

#### **D. Strengthen private property rights**

A well-defined and enforceable system of property rights is critical for the smooth functioning of real-estate markets. Real-estate markets, in which individuals buy and sell property, provide a dynamic means through which resources shift to new uses as resource scarcities change and individual needs and values evolve over time. The protection of these rights to own and exchange property is particularly important to farmers and other owners of undeveloped property. Their land's potential use is an important source of wealth. Once zoning or other politically imposed restrictions are placed on land, its value and the owner's wealth change.<sup>51</sup> While some farmers may desire this outcome because they may want to preserve farmland at any cost, this result comes at the price of restricting the rights of other farmers to determine the best use of their land. It also distorts real-estate markets and compromises social welfare by increasing the cost of housing and often forcing families to remain in lower-quality housing or with more restricted employment opportunities.

Market-oriented property-rights strategy:

- Acknowledge regulatory takings. Current law recognizes an economic taking only if government actions eliminate all economic value. Partial takings should also be recognized so that the full costs

and benefits of local regulation can be understood by citizens and landowners.

#### **E. Nuisance-based land-use regulation**

The effect of regulating land-use through zoning and comprehensive planning is to politicize land-use decisions. The farming community has experienced the effects of this politicization as new residents have used local governments to restrict farm operations. In an example increasingly common in urbanizing counties, a local government in Michigan is attempting to restrict farm operations by banning the use of farm machinery between 7:00 p.m. and dawn. This rule in effect makes farming at night illegal. In another case, a local government granted a permit to an existing hog farm to expand its operation, then rescinded the permit when political opposition from nonfarmers emerged.

Market-oriented zoning and planning strategies:

- Nuisance-based standards for development approval. A nuisance-based approach to regulating land use would allow regulatory issues to be settled through an assessment of actual harms imposed on property owners. Objections to a farm activity would be raised by those tangibly impacted by the activity. Then local courts, or even an independent mediating agency, could determine whether farm operations create a nuisance sufficient for regulation or compensation. Residents of a subdivision, for example, would not be able to show tangible harm by citing existing farm activity *per se*. Rather, the critical issue would be whether the farm activity imposes harms on neighbors, or otherwise negatively impacts property values, and whether these impacts are uncompensated. The price of the home, in fact, may

## **real-estate markets are responding to consumer preferences for more open space**

already reflect the existence of the farming activity and compensate property owners in the form of higher or lower land prices. If the farming operation is a benefit (e.g., through open space or contributing to the rural character of the neighborhood), the activity may increase home prices as the aesthetic qualities of the home are reflected in higher consumer demand.<sup>52</sup> The impacts of an expansion of existing farm activity will be determined by the effects on neighbors, not the particular use (e.g., cropland or pasture).

- Market-determined densities. Local zoning codes often limit the density of housing development, mandating large-lot development irrespective of consumer demand. While zoning boards often impose these mandates in an effort to protect the aesthetic quality of neighborhood, the result is increasing pressure to develop farmland as housing. By allowing market-determined densities in already urbanized areas, the pressure to develop land on the urban fringe will be reduced. Lower market demand will mitigate land-price inflation, reducing incentives for farmers to convert land to nonfarm uses.
- Redevelop “brownfields.” Some regulations and policies inadvertently encourage the development of vacant land by increasing development pressures on the fringe of metropolitan areas. Brownfields, for instance, are previously developed, often environmentally contaminated sites that private land developers are unwilling to redevelop because of the financial risks created by U.S. environmental law. Most brownfields are in urban areas.<sup>53</sup> Because federal law permits any potential owner of a property to be legally and financially liable for environmental cleanup, even if the owner was not responsible for creating the hazard, many developers opt for greenfields on the fringe rather than redevelop property in cities. While many states have taken the lead to mitigate

some of these risks, federal law still creates a financially risky environment for redevelopment.<sup>54</sup> Combined with high relative tax rates, burdensome regulations, and onerous permitting processes, most urban areas are less investment and business “friendly” than their suburban counterparts.

## Conclusion

State and local policymakers face a conundrum. On the one hand, citizens are concerned about the pace of modern development. Many people are concerned that continued development will erode their own quality of life, so they erect legal, political, and other barriers to prevent further land development. On the other hand, there is little objective evidence that the nation or its individual states are facing a land-use “crisis” in terms of loss of farmland.

The results of a *Deseret News* poll in Utah paint a difficult political problem for most policymakers. Eighty-three percent of Utah citizens “strongly or somewhat agree that open spaces should be set aside now for future generations.”<sup>55</sup> Yet, 88 percent also believe private-property owners should be allowed to do what they want with their own land, zoning permitted. Farmers report similar sentiments. Farm trade-association policy statements, for example, often include planks advocating the conservation of farmland as well as the need to protect the property rights of farmers.

These seemingly paradoxical views can be reconciled through a market-oriented approach to farmland preservation and open space. Using real-estate markets to determine when and how land should be converted from rural to other uses can help to ensure dynamic property development that responds to changing resource constraints and individual values without compromising the rights of farmers, the agricultural industry, and their urban and suburban neighbors. □



## Glossary of Terms

**Brownfield:** land previously developed that has some waste contamination and is now vacant or significantly underutilized.

**Cluster housing:** locating houses in a subdivision closer together, on smaller private lots, in order to preserve larger tracts of open space within the subdivision.

**Cropland:** land used to harvest or grow food, including cropland used for crops, fallow cropland, and cropland used only for pasture.

**Density:** number of people or households per acre of land.

**Farmland:** all land in farms, whether it is harvested or fallow, including cropland where a farm is defined as any place generating (or normally would generate) more than \$1,000 worth of agricultural products.

**Full-cost pricing:** incorporating all operating and capital costs (e.g., cost of buildings, equipment, machinery, and land) into the paid price of a product or service. This is also called “marginal cost” pricing.

**Growth management:** the direction, control, channeling, or guidance of commercial and residential development through public policy.

**Impact fees:** monetary payments from developers or property owners to local governments, often to compensate for the provision of public infrastructure.

**Infrastructure:** public services such as roads, sewers, water, schools., etc.

**Nuisance-based zoning:** regulating land use and land development based on the potential harm imposed on neighbors or others tangibly impacted by the project.

**Prime farmland:** farmland with the highest productivity potential based on soil type or irrigation.

**Purchase of development rights (PDR):** the sale of the future legal right to develop property to another party, often a land trust or governmental agency.

**Conservation easement:** a contract limiting the right of a property owner to use all or part of the property for a specific purpose, or to prohibit specific purposes (e.g. development).

**Land trust:** nonprofit, voluntary, conservation organizations that acquire (through purchase or donation) development rights or acquire conservation easements to protect open space or otherwise restrict the use of land for conservation purposes.

**Urbanization:** the process of converting open space and agricultural land to urban uses, usually meeting minimum density of at least 1,000 people per square mile (or 1.56 people per acre) adjacent to an urbanized area of at least 2,500 people.

- 1 See, for example, Dan Eggen, "A Growing Issue: Suburban Sprawl, Long Seen as a Local Problem, Emerges as a Hot Topic in State, National Politics," *Washington Post*, October 28, 1998, p. A3.
- 2 Speech made at the Brookings Institution.
- 3 Jerry Spangler, "Farmers and activists share fear: loss of land," *Desert News*, April 22, 1998.
- 4 "Land Resource," *Special Report 80*, Michigan Agricultural Experiment Station, Michigan State University, January 1995, p. 15.
- 5 Ibid.
- 6 S.C. Code of Laws, Chapter 27, Article 1, Section 4-27-40 of the County Planning Act.
- 7 Phyllis Myers, "Livability at the Ballot Box: State and Local Referenda on Parks, Conservation, and Smarter Growth, Election Day 1998," Discussion Paper prepared for The Brookings Institution, Center on Urban and Metropolitan Policy, January 1999.
- 8 Ibid.
- 9 See Samuel R. Staley, *The Sprawling of America: In Defense of the Dynamic City*, Policy Study No. 251 (Los Angeles: Reason Public Policy Institute January 1999); Jefferson G. Edgins and Samuel R. Staley, "The Myth of Farmland Loss," *FORUM on Applied Research and Public Policy*, vol. 14, no. 3 (Fall 1999), pp. 29-34. For an early discussion of these issues, see B. Delworth Gardner, "The Economics of Agricultural Land Preservation," *American Journal of Agricultural Economics* (December 1977), pp. 1027-1035.
- 10 *Report of the Agricultural Task Force for Resource Conservation and Economic Growth in the Central Valley*, Executive Summary, July, 1998.
- 11 *Agricultural and Growth: A Report on the Conversion of Agricultural Land in Colorado*, Colorado Department of Agriculture/Governor's Task Force on Agricultural Lands, n.d., n.p.
- 12 *Cropland Use and Urbanization*, Economic Research Service Issues Center, U.S. Department of Agriculture, October 26, 1999, <http://www.econ.ag.gov/whatsnew/issues/landuse/index.htm>.
- 13 Luther Tweeten, *Competing for Scarce Land: Food Security and Farm Preservation*, Occasional Paper ESO #2385 (Columbus, Ohio: Department of Agricultural, Environmental, and Development Economics, Ohio State University, August 1998).
- 14 In fact, 72 percent of the land converted to urban uses from 1982 to 1992, the most recent data available at the time of publication, came from pasture, range, forest, or other rural land, not cropland. See *Cropland Use and Urbanization*.
- 15 Ibid.
- 16 Ibid.
- 17 U.S. Department of Agriculture, Economic Research Service, *Agricultural Resources and Environmental Indicators: 1996-97* (July 1997), p. 43.
- 18 Ibid., p. 13.
- 19 Ibid., figure 1.1.6, p. 15. Designation as prime farmland, however, does not necessarily imply it is economically productive. Some of the nation's most productive farmland is not "prime." "Florida and Arizona," the U.S. Department of Agriculture, "have little prime farmland . . . but these areas rank among the most economically productive in the Nation" (*Ibid.*, pp. 42, 44).
- 20 Luther Tweeten, *Farm Policy Analysis* (Boulder, Colorado: Westview Press, 1989) table 1.4, p. 9.
- 21 Ibid.
- 22 *The American Almanac 1996-97* [Statistical Abstract of the United States] (Austin, Texas: Hoover, 1996), table 1098, p. 672.
- 23 U.S. Department of Agriculture, Economic Research Service, *Foreign Agricultural Trade of the United States*, January - February issues. In 1994, the nation exported \$45.7 billion worth of agricultural products, a 10.9 percent increase since 1980. The total value of U.S. exports fell from 1980 to 1986 to \$26.2 billion, then increased steadily. The value of U.S. exports surpassed 1980 levels in 1992. These data are not adjusted for inflation. Food prices increased by 71 percent from 1980 to 1995 according to the U.S. Department of Labor. In contrast, the Consumer Price Index for all items increased by 85 percent during this period. Since prices for food were not increasing as fast as other items, most notably housing and medical care, food was cheap relative to other products. In contrast, wages, salaries and benefits increased by 154 percent during this period.
- 24 Data from U.S. Department of Agriculture, Foreign Agricultural Service cited in U.S. Bureau of the Census, *Statistical Abstracts of the United States 1998*, 118th Edition (Washington, D.C.: Economics and Statistics Administration), Table 1123, p. 678.
- 25 *Agricultural Resources and Environmental Indicators, 1996-97*, p. 13.
- 26 Luther Tweeten, "Competing for Scarce Land: Food Security and Farmland Preservation," Paper presented to the American Agricultural Law Association, Minneapolis, Minnesota, October 17, 1997. In fact, federal programs may be a more important factor. Although cropland acreage has undergone little net change since 1945, whether cropland is harvested, idle, or lay fallow depends on federal programs and economic markets. Strong export markets fueled expansions of cropland in the 1970s and 1980s, but cropland fell as millions of acres were diverted into federal programs. See the discussion in Arthur B. Daugherty, *Major Uses of Land in the United States: 1992*, Agricultural Economic Report No. 723 (Washington, D.C.: U.S. Department of Agriculture, Economic Research Service, September, 1995), pp. 11-2.
- 27 Linda Fantin, "Feeling Crowded?: Coalition Tackles Wasatch Front "Sprawl"; Coalition to Get Handle on Utah Growth," *Salt Lake Tribune*, January 14, 1997, p. A1.
- 28 A more complete analysis of the limits of planning can be found in Sam Staley and Lynn Scarlett, *Market-Oriented Planning: Principles and Tools* (Los Angeles, California: Reason Public Policy Institute, November, 1998).
- 29 Open space and aesthetic issues may be the driving force behind the growing interest in urban sprawl. See the discussion in Samuel R. Staley, "The Political Economy of Land Conversion on the Urban Fringe," in *Freeing Up Agricultural Lands*, eds. Bruce Yandle and Terry Anderson (Palo Alto, California: Hoover Institution Press, in press).
- 30 In fact, growth management on the local and state levels have been unable to stem this kind of evolution. Despite strong growth management laws and practice

- in Lancaster County, Pennsylvania to protect the rural and local Amish agricultural culture, large lot suburban development continues and the Amish community continues to evolve beyond the agricultural sector. See the discussion in Samuel R. Staley, Jefferson G. Edgens, and Gerard C.S. Mildner, *A Line in the Land: Urban-growth Boundaries, Smart Growth, and Housing Affordability*, Policy Study No. 263 (Los Angeles: Reason Public Policy Institute, October 1999), pp. 30-38.
- 31 See also the discussion in Gardner, "The Economics of Agricultural Land Preservation" and Staley, *The Sprawl-ing of America*.
- 32 The number of people employed on farms and in agricultural services, in fact, is less than 3.1 percent of nation's work force of 153 million people. Manufacturing employment, in contrast, consists of 12.3 percent of the nation's work force. Total earnings from farms, agricultural services and related manufacturing – the money people take home and spend – amounts to 2.8 percent of total national earnings. Manufacturing, including food processing, has a much higher impact on the state economy. Data estimates are for 1998 and from the U.S. Department of Commerce, Bureau of Economic Analysis. <http://govinfo.library.orst.edu/cgi-bin/proj2045705-state.usa>
- 33 Edgens and Staley, "The Myth of Farmland Loss," p. 32.
- 34 Ibid.
- 35 William D. Eggers, et al. *Cutting Local Government Costs Through Competition and Privatization* (Los Angeles: Reason Public Policy Institute and others, 1997), p. 26.
- 36 Ibid., p. 32.
- 37 See the discussions in Adrian T. Moore, "Kiss your Balanced Budgets Goodbye," *Privatization Watch*, No. 271 (July 1999), p. 2 and Ian Ball, Tony Dale, William D. Eggers, and John Sacco, *Reforming Financial Management in the Public Sector: Lessons U.S. Officials Can Learn From New Zealand*, Policy Study No. 258 (Los Angeles: Reason Public Policy Institute, May 1999).
- 38 For a lengthy and practical discussion of this option, see Richard H. Carson, *Paying for Our Growth in Oregon* (Beaverton, Oregon: New Oregon Meridian Press, 1998), <http://members.aol.com/odumonarch/pogorpt.htm>.
- 39 See John J. Delaney, "Development Agreements: The Road from Prohibition to 'Let's Make a Deal!'" *The Urban Lawyer* 25, no. 1 (Winter 1993): 49-67 and Arthur C. Nelson, James E. Frank, and James C. Nicholas. "Positive Influence of Impact-Fee in Urban Planning and Development," *Journal of Urban Planning and Development* 118, No. 2 (June 1992): 59-64.
- 40 Brett M. Baden, Don L. Coursey, and Jeannine M. Kannegiesser, *Effects of Impact Fees on the Suburban Housing Market*, Policy Study No. 93 (Chicago: Heartland Institute, November 1999).
- 41 Ibid.
- 42 Dennis H. Ross and Scott Ian Thorpe. 1992. "Impact Fees: Practical Guide for Calculation and Implementation," *Journal of Urban Planning and Development* 18, No. 3 (September 1992): 106-18.
- 43 Keith Wiebe, Abebayehu Tegene and Betsy Kuhn, *Partial Interests in Land: Policy Tools for Resource Use and Conservation*. Agricultural Economic Report No. 744 (Washington, D.C.: Economic Research Service, U.S. Department of Agriculture, November, 1996), table 2, p. 12.
- 44 Jennifer Preston, "Some states tackling urban sprawl with new taxes," *New York Times*, June 9, 1998.
- 45 Tom Daniels and Deborah Bowers, *Holding Our Ground: Protecting America's Farms and Farmland* (Washington, D.C. Island Press, 1997), p. 193.
- 46 This proportion is consistent with the urban design standards established by proponents of compact development. See Peter Calthorpe, *The Next American Metropolis: Ecology, Community, and the American Dream* (Princeton, N.J.: Princeton Architectural Press, 1993), p. 91.
- 47 Average for 48 states, excludes Alaska and Hawaii. *Agricultural Resources and Environmental Indicators, 1996-97*, table 1.4.1, p. 51. The highest price was \$8,172 per acre in New Jersey, the most urbanized state in the nation. The lowest value was \$206 per acre in Wyoming.
- 48 Farmland in urbanizing areas is typically valued at significantly higher levels than farmland farther out from urban areas. This reflects the fact that land closer to jobs, friends and existing communities is more valuable for most people (hence higher demand) than land further out. Note, however, that price is not the sole determinant of value in the market. The value of the property is determined jointly by *both* the buyer and seller. The farmer, despite a significantly lower appraised value, still may believe the land is more valuable as farmland than as residential land. Thus, the price serves as a market *signal* and reflects its value only when a transaction occurs.
- 49 Jeff Lacy, "An Examination of Market Appreciation for Clustered Housing with Permanent Open Space," Center for Rural Massachusetts, Department of Landscape Architecture and Regional Planning, University of Massachusetts-Amherst, 1990. <http://www-unix.oit.umass.edu/~ruralma/LacyMarket.html>.
- 50 For a favorable review of open space zoning, see Randall Arendt, "'Open Space' Zoning: What it is & why it works," *Planning Commissioners Journal*, Issue 5 (July/August 1992), p. 4. <http://www.webcom.com/~pcj/articles/are015.html>
- 51 Importantly, the contradiction between planning restrictions on property rights and the protections against takings is not evident in the Michigan Farm Bureau's policy statement. Policy Nos. 44 and 45, for example, advocate the use of zoning and other government interventions to protect farmland against urban development. Of course, zoning is a political restriction on the property rights of land owners, often other farmers. This contradiction is also evident in the policy statements of farm bureaus in other states.
- 52 Similarly, if the effects are negative, the price of the home will be discounted through the real-estate market.
- 53 Samuel R. Staley, "Environmental Policy and Urban Revitalization: The Role of Lender Liability," *Capital University Law Review*, vol. 25, no. 1 (1996), pp. 51-75.
- 54 See the discussions in Alexander Volokh et al., *Race to the Top: The Innovative Face of State Environmental Law*, Policy Study No. 239 (Los Angeles: Reason Public Policy Institute, February 1998); J. Winston Porter, *Cleaning Up Superfund: The Case for State Environmental Leadership*, Policy Study No. 195 (Los Angeles: Reason Public Policy Institute, September 1995); Kathleen Segerson, *Redisigning CERCLA Liability: An Analysis of the Issues*, Policy Study No. 187 (Los Angeles: Reason Public Policy Institute April 1995).
- 55 "Growth here, but leadership isn't," *Deseret News*, April 4, 1998.



**Reason Public Policy Institute [RPPI]  
3415 S. Sepulveda Blvd., Suite 400 ♦ Los Angeles, CA 90034  
310-391-2245 ♦ 310-391-4395 [fax]  
[www.rppi.org](http://www.rppi.org)**