"Hybrid" Farmland Protection Programs: A New Paradigm for Growth Management

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Growth management has once again become a cause celebre. And, more than ever, one of the central challenges of growth management is to protect vital natural resources from development. Chief among these vital resources are the nation’s farmlands. They supply our food; provide environmental amenities like scenic open space, wildlife habitat and unpaved watersheds; and demand few public services. If securely protected, a perimeter of farmland can function as a “frame” for community growth, deterring sprawl and encouraging efficient use of suburban land and the revitalization of urban neighborhoods.

Securely protecting farmland—putting it legally out of the reach of development for the foreseeable future—requires that we go beyond land use regulations that are subject to political winds of change. It demands that we confront the market economy and the issue of private property rights to accommodate the interest of landowners in protecting the equity in their real estate. The nation’s most effective farmland protection programs do this by marrying compensation and regulation—“carrots” and “sticks”—in ways that enable the advantages of each to offset the drawbacks of the other.
This article will begin in Part I by describing the traditional all-or-nothing approach to farmland protection and the conflict that it has engendered. Part II will then delve into the structure and function of one of the most successful of the new hybrid programs, that of Montgomery County, Maryland. Part III will put the Montgomery County approach into the context of a new paradigm, not only for growth management, but also for other environmental challenges facing our society. Part IV will discuss the potential impact of the Takings Clause on this new paradigm. Finally, Part V will conclude that the hybrid approach is really a compromise between landowners and the general public, and consequently is the most effective way to achieve farmland protection and other important land use objectives.

I. INTRODUCTION

A. Land as Property and a Resource

A fundamental tension confronts the management of growth and development of land. Land is simultaneously a commodity that enjoys legal privileges as private property, and a natural resource that is the repository of public values. Attempts by government to limit the use of private land for the public good cause these two principles to collide and almost inevitably result in dissention, and often failure. When private property confronts resource protection, the core issue being contested is who gains and who loses. Although the clash of individual freedom and community values may also be implicated, it is hard economics rather than fuzzy principles that most often seems to animate opponents in the debate over the legitimacy of government regulation of land. When land use is restricted, it imposes opportunity costs—and sometimes genuine hardship—on private landowners. Is this fair, if the public as a whole benefits? More and more landowners disagree, insisting on just compensation from the public treasury as a right

5 U.S. CONST. amend. V.
7 See, e.g., Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1016 (1992) ("The Fifth Amendment is violated when land-use regulation does not substantially advance legitimate state interests or denies an owner economically viable use of his land").
guaranteed by the Constitution. If compensation is paid for such "takings," as the courts increasingly require, the taxpaying public must bear the cost of resource protection—or of its abuse. But, leaving aside the question of entitlement, can the public afford compensation and, if not, does it mean that the quality of the environment and our communities must inevitably decline as private wealth is aggrandized?

B. Polarization and Stalemate in Policymaking

These questions have come to preoccupy the legal and political debate over growth management and resource protection generally. A polarized "us versus them" mentality pervades. Environmentalists and government regulators are aligned against those with a commercial interest in land, with each side championing its own all-or-nothing approach: regulation or compensation. There is little or no middle ground.

The judicial system has reinforced this tendency with its emphasis on adversarial proceedings and, in Takings Clause cases, with the notion of a definitive, albeit indeterminate, threshold beyond which regulation gives rise to a right of compensation. This polarity has spilled over into

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8 "Nor shall private property be taken for public use without payment of just compensation." U.S. CONST. amend. V. For a discussion of landowners' opinions regarding compensation for takings, see infra notes 86-106 and accompanying text.

9 See generally, e.g., Lucas (requiring reimbursement of an owner for a "total taking" of his land); First English Evangelical Lutheran Church of Glendale v. Los Angeles County, Cal., 482 U.S. 304 (1987) (holding that government action denying an owner all beneficial use of his property was unconstitutional); Nollan v. California Coastal Comm'n, 483 U.S. 825 (1987) (requiring a nexus between the purpose of the regulation and the required exaction for a regulation to be constitutional); Dolan v. City of Tigard, 512 U.S. 374 (1994) (enunciating test of "rough proportionality" between the burden on the land and the public benefits anticipated).

10 Cf., e.g., The National Wildlife Federation, Takings: Where the NWF stands on the 105th Congress (visited Oct. 16, 1999) <http://www.nwf.org/nwf/lands/takings/tak105.html> (arguing that regulation is needed to prevent industry from externalizing costs to neighboring property, and analyzing how the 105th Congress voted on these issues); Defenders of Property Rights, Protecting Your Rights in the Legislative Forum (visited Oct. 16, 1999) <http://www.defendersproprights.org/legis.htm> (arguing that regulations create government takings of private property rights, and analyzing how the 105th Congress voted on these issues).

11 "[T]his Court, quite simply, has been unable to develop any 'set formula' for determining when 'justice and fairness' require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons." Penn Cent. Transp. Co. v. City of New York, 438 U.S.
the political arena as the same advocates confront each other in the lobbies of Congress, state legislatures, and county seats. The upshot has been policy stalemate in the face of increasingly intense competition for, and transformation of, the land.\textsuperscript{12} As the need for solutions becomes more desperate, they seem farther out of reach.

C. \textit{Farmland Protection Programs: A New Paradigm?}

A number of pioneering local jurisdictions have found an escape from this dilemma by employing a mix of public policies that accommodate property rights while securely protecting farmland.\textsuperscript{13} These communities have rejected an all-or-nothing approach to growth management, opting instead to combine regulation and compensation.\textsuperscript{14} As with any true hybrid, the respective strengths of each component tend to neutralize the weaknesses of the other. Therein lies the success of this approach.

\textbf{Figure 1. Strengths and Weaknesses of Farmland Protection Methods and Policies}

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Figure 1 illustrates the two basic methods used by these jurisdictions to protect farmland, the respective strengths and weakness of

\textsuperscript{104, 124, quoted in Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1015 (1992).}

\textsuperscript{12} See Echevarria, supra note 6.

\textsuperscript{13} To see how different policies can be combined in varying degrees for different outcomes see infra p.848, fig.4.

\textsuperscript{14} See FREEDGOOD ET AL., \textit{SAVING AMERICAN FARMLAND: WHAT WORKS} 227, 257 (1997).
these methods, and specific policy examples of each.\textsuperscript{15} Incentives or "carrots" generally involve payments, subsidies or preferences given to landowners in exchange for voluntary compliance with rules limiting the use of land.\textsuperscript{16} Regulations or "sticks" are government mandates that restrict land use without any monetary compensation of landowners.\textsuperscript{17} The examples of each will be explained in the discussion of Montgomery County in Part II. In either case, where the objective is to protect farmland, the principal limitation or restriction must be on nonagricultural development. Notice how each of the strengths of incentives and weaknesses of regulations (shaded) are opposites, so that the former may counteract the latter. Likewise, the strengths of regulations and weaknesses of incentives (unshaded) are offsetting.\textsuperscript{18} The case of the Montgomery County, Maryland farmland protection program serves as an excellent illustration of how the principles embodied in this model can be successfully applied in practice.

\section*{II. MONTGOMERY COUNTY: A MODEL OF THE NEW PARADIGM}

Montgomery County, Maryland, has received more than its share of notoriety for its transfer of development rights (TDR) program.\textsuperscript{19} This attention has obscured the fact that TDR is but one of many methods the county has combined to protect farmland.\textsuperscript{20} No jurisdiction better illustrates how carrots and sticks can be hybridized to securely protect land as a resource while also accommodating private property rights.

Situated immediately northwest of Washington, D.C., Montgomery County is a largely suburban community encompassing 496 square miles

\textsuperscript{15} These same basic approaches also apply to broader growth management strategies and almost every other environmental challenge that requires limitations on land use.
\textsuperscript{16} See FREEDGOOD, supra note 14, at 34.
\textsuperscript{17} See id. at 17. Landowners do share the benefits that conscientious land use regulations secure, including, \textit{inter alia}, lower public service costs and property taxes, and protection of their ability to conduct agricultural operations without liability resulting from conflicts with residential neighbors.
\textsuperscript{18} \textit{Italics} in Figure 1 indicate characteristics that are generally of concern to public officials, while CAPITALIZATION indicates those of most concern to private landowners.
\textsuperscript{19} See Stephen C. Fehr, \textit{Montgomery's Line of Defense Against the Suburban Invasion}, \textit{Washington Post}, March 25, 1997, at A1. See also STANLEY SCHIFF, \textit{Real World Experience with TDRs-AN Update} 3 (discussing the Montgomery County, Maryland program as a template for future farmland preservation programs).
\textsuperscript{20} See FREEDGOOD, supra note 14, at 259.
It consistently ranks among the nation's most affluent and well-educated jurisdictions, with little poverty, an excellent school system and an economy grounded in biomedical, computer and communications technology. From approximately 510,000 in 1970, its population grew to approximately 580,000 in 1980, when its farmland protection program was inaugurated, and—far from being slowed by growth management—reached 757,000 in 1990. During roughly the same period, annual agricultural production in the county, dominated by nursery crops and feed grains, grew from $10 million to $28 million, while the number of farms decreased from 650 to 560. It is not an agricultural powerhouse, but neither is its farm industry inconsequential. Though it is demographically atypical, the land use challenges that have confronted Montgomery County are proportionate to the advantages it enjoys, making it a worthy model for other jurisdictions to examine.

A. The Use of "Sticks" in Montgomery County

The foundation of the Montgomery County model is an Agricultural Reserve comprised of 90,000 acres of rural land where agriculture is the preferred—not just permissible—use of land and residential development is limited to a density of one dwelling per twenty-five acres. Established pursuant to a 1980 master plan revision, this Reserve and its

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21 See MONTGOMERY COUNTY OFFICE OF ECONOMIC DEVELOPMENT, WHERE BUSINESSES Go To GROW 4-5 (1998).
22 See id. at 9-13.
24 See id.
29 See MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION, PRESERVATION OF AGRICULTURAL AND RURAL OPEN SPACE, MONTGOMERY COUNTY, FUNCTIONAL MASTER PLAN (1980) [hereinafter FUNCTIONAL MASTER PLAN]. It is worth noting that the rationale for creating the Reserve was not only to protect agriculture and open space, but also to concentrate development within an area where it would be
accompanying zoning were necessary to prevent further suburban encroachment into the county’s agricultural area, where agricultural use value tax assessment and five-acre large-lot zoning had both failed to curb sprawl. The boundaries of the Reserve, essentially an urban limit line, were carefully chosen, tending to follow natural features like stream valleys where “greenway” parks were eventually acquired to separate developed and agricultural areas. Where no natural features exist, developable land immediately outside the Reserve is zoned for low-density rural residential use as a buffer.

Remarkably, almost no farmland in the Reserve has been rezoned from agricultural to other uses in the two decades since the Reserve was established. One reason is that, to accommodate future growth, the Reserve originally excluded about 30,000 acres of rural land, of which 22,000 still remain undeveloped. Thus, there has been little justification for rezoning and county officials have been steadfast in refusing it. Another is that state law, which is generally very supportive of county land use authority, provides that the zoning on land annexed by municipalities may not be changed for five years. This, coupled with the fact that there are only a few, small incorporated towns in the Reserve, appears to have helped curb speculation. Finally, county infrastructure accessible to public transit and could be inexpensively serviced. See id. at 29. The Montgomery County plan, thus, applied the tenets of what is now called “smart growth.”

Use value assessment, one of the “carrots” listed in Figure 1, is in common use throughout the U.S. See FREEDGOOD, supra note 14, at 145. To prevent a heavy property tax burden from forcing or encouraging farmers to sell land for development, it bases their ad valorem taxes on the value of land for agricultural production rather than its “highest and best use.” In rapidly growing areas, the latter can be many times greater, explaining why, in the absence of other incentives or regulations, use value assessment usually forestalls development only as long as farmers want to keep farming.

Montgomery County’s government includes an elected executive and nine-member county council with broad legislative powers. See MD. ANN. CODE art. 25 § 1. Incorporated municipalities have home rule and annexation powers under Maryland law. See id. art. 25 §§ 9-19. Local officials in Maryland, however, do not play as important a role in land use as they do in the Northeastern and Great Lakes states.
policy discourages subdivision on a scale that would interfere with agriculture. No public water and sewer services have been extended, nor are they planned in the Reserve; and Montgomery’s regulation of new wells and septic systems tends to be more stringent than in neighboring jurisdictions. These policies have also minimized the land price inflation that typically occurs when public investments in infrastructure are capitalized into land values; this has important implications for the ultimate cost of farmland protection.

Figure 2. Map of Montgomery County Showing Farmland Protected

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38 See Cuñha Banach Interview, supra note 33.
The foregoing package of regulations illustrates the strengths and weaknesses of the "sticks" in our farmland protection policy model. The restrictive zoning was quickly established with the stroke of a legislative pen over a large expanse of land, providing comprehensive protection against development that could supplant or conflict with agriculture. This protection cost the public almost nothing. On the other hand, it cost owners of farmland in the Reserve plenty, as the development potential of their land was reduced by as much as eighty percent by eliminating four out of five potential building lots.\(^{42}\) Moreover, this arguably confiscatory result was compelled by the government against the wishes of landowners.

These drawbacks of Montgomery County's regulation of farmland caused many landowners to oppose it,\(^{43}\) just as today some oppose virtually any kind of land use regulation as a "taking" of property rights.\(^{44}\) Another weakness of agricultural zoning, and of almost all other kinds of regulation, is that it can be changed or repealed just as easily as it was adopted. The temporary nature of regulation to protect agriculture is especially problematic because the enterprise of farming is uncertain enough without the constant risk that changes in surrounding land use could render ordinary agricultural practices nuisance-like.\(^{45}\) Indeed, the term "impermanence syndrome"\(^{46}\) aptly describes the myriad, mutually reinforcing problems associated with farming in the shadow of suburbs that can sprawl without end: development of nearby farms, increased vandalism of crops and equipment, greater threat of liability, higher insurance premiums, more downtime, higher production costs, lower crop yields, higher stress levels, lower net farm income, failure to invest in

\(^{42}\) This theoretical reduction probably exaggerates the actual impact, since the development potential of much of the rural land in Montgomery County is limited by poor septic suitability and steep slopes. See Functional Master Plan, \(supra\) note 29, at 18.


\(^{44}\) See, e.g., Defenders of Property Rights, About Us (visited Oct. 16, 1999) <http://www.defendersproprights.org/inf-about.htm> ("In too many cases, over-zealous bureaucrats join with well-funded extreme environmentalists to extend the reach of laws and regulations to take away the productive use of a piece of property—without any just compensation for the property owner. Too often, the Courts have allowed this to happen, or even broadened the authority of government.").


\(^{46}\) Freedgood, \(supra\) note 14, at 13.
farm upkeep and improvements, increased pressure to sell farms for development, and so on.\textsuperscript{47}

B. Montgomery County’s “Carrots”

At the time Montgomery County created its Agricultural Reserve, it also took a bold step to ameliorate the foregoing weaknesses of a strictly-regulatory approach to farmland protection: it established a transfer of development rights (“TDR”) program.\textsuperscript{48} Landowners in the Reserve, termed the “TDR sending area,” were awarded one “development right” for each five-acre building lot they could have developed under the old zoning rules.\textsuperscript{49} These development rights can be applied to land in the Reserve to allow residential development at the new permitted density of one unit per twenty-five acres, or they can be sold and transferred to designated parcels of land within the county’s development envelope, called the “TDR receiving area.”\textsuperscript{50} If transferred, TDRs entitle the purchaser to increase the number of houses that may be built on residually zoned land, subject to county planning commission approval of specific receiving parcels and the increased lot yield.\textsuperscript{51}


\textsuperscript{48} See \textit{MONTGOMERY COUNTY, MD. CODE §§ 59-C-9.6 to .8; FUNCTIONAL MASTER PLAN, supra note 29, at 41. This “carrot” helped sell at least some landowners on the “stick” of regulation, enlarging the constituency for its adoption—an important lesson for those contemplating such programs. See Tustian, supra note 43, at 63.}

\textsuperscript{49} See \textit{MONTGOMERY COUNTY, MD. CODE § 59-C-9.6. An example of how Montgomery County attempted to accommodate rural landowners that were disappointed by downzoning is that TDRs were allocated without regard to physical limitations of the land that could have prevented its development. See id.}

\textsuperscript{50} See id. § 59-A-6.1. When any of the development rights associated with a sending parcel are sold, a perpetual conservation easement is recorded on that land, limiting its development to one dwelling for each TDR retained by the landowner, not to exceed the maximum permissible density of one unit per twenty-five acres. See id. at § 59-A-6.1(j).

\textsuperscript{51} See id. at § 59-A-6.1(h). Typically, county planners approve only marginal increases in lot yield, e.g., five or six single family detached dwellings per acre where four would have been permitted without TDR transfer, or 18 townhouse units where 15 were formerly allowed. See Cuñha Banach Interview, supra note 33. In fact, TDR transfers have not substantially increased the residential density of any of the county’s 20 local planning areas. See id. Nonetheless, opposition from neighbors of potential receiving areas to increased density has been one of the principal obstacles faced by Montgomery officials as they implement the TDR program. At one point, a NIMBY lawsuit halted the TDR program on a technicality, necessitating that the county council reauthorize it. See West Montgomery County Citizens Assn. v. Maryland-National Capital Park and Planning Comm., No. 124 (Md. Apr. 1, 1987).
The TDR program provided significant compensation to landowners whose property was reduced in value by downzoning within the Reserve. Initially, TDRs sold for about $3,500 apiece or, at five acres per TDR, about $700 per acre. The market price of TDRs increased to a peak of $11,000 in 1996 but has declined to about $8,000 in 1999. The increase in the market value of TDRs is attributable partly to a decrease in the supply of available TDRs relative to demand—the price is strictly a market function, not unlike that of securities—and partly to the fact that the county began a purchase of development rights ("PDR") program in 1987 that offers landowners a competing method of receiving compensation that put a floor under TDR prices. Under Montgomery County's PDR program, participating landowners must sell all their development rights for a price determined by a formula and a competitive bidding system in which landowners may improve their chances of selling

program has survived other legal challenges as well. See, e.g., Dufour v. Montgomery County Council, Law No. 56964 (Circuit Court for Montgomery County, Md. Jan. 20, 1983) (seeking to strike the program as a government taking).

This price was well below the former development value of Reserve land, causing some landowners to complain, but several nuances of the TDR scheme increase the actual return to landowners. First, TDR prices do not depend on the quality of the land from which they are transferred. Thus, land that has little or no development value because it is too steep, rocky, wet or flood-prone to develop, or has other disabilities like overhead power lines, receives a windfall from the sale of TDRs. Second, every fifth TDR—which most landowners retain so they have the option of developing their land at one unit per 25 acres, and which is far more valuable than the other four—determines the market price when sold by landowners. Today, a 25-acre farm parcel with one TDR attached, allowing a new house to be built, sells for around $300,000 or $12,000 per acre, while a similar parcel without any development potential might go for around $35,000 or $1,500 per acre. See Telephone Interview with Franklin Jamison, Representative of Charles H. Jamison Realty Co. (October 10, 1999). The "fifth TDR" is therefore worth about $10,600 per acre! This also explains why Montgomery County is now experiencing an increase in "farmette" development in the Reserve.

In fact, the average price of TDRs doubled within three years of the inauguration of Montgomery's PDR program. The formula used to determine PDR prices, as laid out in Montgomery County, Md. Exec. Reg. 66-91, effectively raised the minimum price at which farmers were willing to sell TDRs because owners of almost any land in the TDR sending area could now sell development rights to the county as well as developers. The PDR program originally did not allow the rights purchased by the county to be transferred, because that would have detracted from the goal of increasing TDR prices—which was an explicit purpose of the new PDR program—by diluting the effect that removing TDRs from the market had on their price. After TDR prices rose, the county changed its law in 1992 to bank the rights acquired by PDR. See Montgomery County, Md. Exec. Reg. 66-91. This preserved the option to sell them to raise additional money for the program. Opposition of farmers, however, was still strong enough to defer a decision to allow their actual-sale and transfer.
by reducing their asking price. The current price ranges from about $1,500 to $4,500 per acre.\textsuperscript{55} As with the sale of TDRs, a perpetual conservation easement is recorded over the property, restricting nonagricultural uses.\textsuperscript{56} A combination of real estate transfer tax proceeds and annual county appropriations has generated about $18 million to fund the PDR program.\textsuperscript{57}

Together, the Montgomery TDR and PDR programs, along with a similar state PDR program,\textsuperscript{58} have encouraged landowners to place

\textsuperscript{55}See Criss Interview, \textit{supra} note 35. The formula results in payment of higher prices to protect those farms that the county deems of greatest importance in terms of agricultural production and growth management objectives. See Montgomery County, Md. Exec. Reg. 66-91. Thus large tracts with highly fertile soils close to the urban limit line, owned by long-tenured commercial farmers, receive a preference over small hobby farms with poor soils remote from development pressure. See Criss Interview, \textit{supra} note 35. Montgomery County was the first jurisdiction to substitute a formula for the more traditional real estate appraisal method of valuing conservation easements. See \textit{id}. In contrast to appraisals, the formula approach is quicker and less expensive for both purchaser and seller, and it allows the county to target highly desirable farms in a way that appraisals simply cannot. See \textit{id}. Indeed, appraisals using the “before and after” method of determining easement value typically award higher prices to smaller parcels with low agricultural productivity than to larger, more productive farms. See \textit{id}. To assure that average easement prices do not exceed market value, the county does use appraisals to benchmark its formula. See \textit{id}. Landowners may, at their own expense, rely on an appraisal to determine an offering price for their easements, but the county will not pay more than 25% above the formula value. See \textit{id}.

\textsuperscript{56}See \textit{MONTGOMERY COUNTY, MD. CODE} § 59-C-2.442 (1997). The terms of PDR easements, modeled after a similar Maryland State program, discussed infra, note 58, allow them to be extinguished after a 25-year period if a landowner can demonstrate that the conservation purpose of the easement is no longer served and if the current market value of the development rights is repaid. Montgomery County’s easement also allows sellers to create one building lot for each of their children, subject to the 25-acre minimum density requirement and to county approval of lot size and location, based on criteria intended to minimize the conversion of farmland and interference with agricultural operations.


\textsuperscript{58}\textit{MD. CODE ANN., AGRIC.} §§ 2-501 to –515. Established in 1979, the state program, run by the Maryland Agricultural Land Preservation Foundation, is the leading farmland PDR program in the U.S., having protected 152,000 acres of farmland at a cost of $177 million as of 1998. See \textit{MARYLAND AGRICULTURAL LAND PRESERVATION FOUNDATION, ANNUAL REPORT 1998} 37 (1998). A threshold for eligibility to sell easements under the state program is enrollment in an “agricultural district.” Use of agricultural districts is seen a “carrot” rather than a “stick.” See \textit{supra} fig.1. Several states authorize these districts, wherein landowners agree to temporary restrictions on development of their land in exchange for government benefits such as tax abatement, protection against
perpetual conservation easements on almost 50,000 acres of farmland in
the county’s Reserve. This is more acreage and a greater percentage—sixty-five percent of all private land in the Reserve—than any other local jurisdiction in the country. A total of about $20 million in public tax dollars, and an estimated $60 million paid for TDRs by developers, have been invested to acquire these easements. This investment in “carrots” has ameliorated or eliminated the weaknesses of the county’s farmland protection regulations.

In contrast to the Reserve’s restrictive zoning, easement sales are strictly voluntary on the part of landowners and, of course, compensate them, at least to some extent, for the property value they lost when their land was downzoned. Just as importantly, the limitations they place on nonagricultural development are about as permanent and inviolate as contemporary property law permits, offering a remedy, if not a total cure, for the impermanence syndrome. Changes in zoning alone cannot restore the right to develop farmland under easements, which are held under a public trust. So, as a matter of law, the stability of agricultural land use in Montgomery’s Reserve is largely above the politics of land use that tend to undermine farmland protection programs relying strictly on statutory regulation. But the political calculus, too, has been fundamentally altered by the acquisition of easements over such a high proportion of farms in the Reserve: a majority of landowners, having voluntarily relinquished most if not all of their development rights, now

eminent domain and, like Maryland, eligibility to sell easements. See Freedgood, supra note 14, at 195.


60 See Freedgood, supra note 14, at 87. See also, Farmland Information Center, American Farmland Trust, Local Purchase of Agricultural Conservation Easement Programs (visited Oct. 24, 1999) <http://farm.fic.niu.edu/fic-ta/tafs-paceloc.html> (providing a table summary of local PACE programs in numerous states, including Montgomery County, Maryland).

61 See Criss Interview, supra note 35. This investment has undoubtedly bolstered the local agricultural economy as well as compensated landowners for property rights. Cf., Robin L. Sherman, et al., Investing in the Future of Agriculture: The Massachusetts Farmland Protection Program and the Permanence Syndrome 23-32 (1997) (discussing the types farm improvements that farmers made with the money generated from the sale of TDRs).

62 These and all other conservation easements remain subject to eminent domain powers, though a strong overriding purpose would be necessary to summon the political will to exercise it. See Janet Diehl and Thomas S. Barrett, The Conservation Easement Handbook 130-34 (1988).

63 See id.
have a vested interest in the new low-density status quo, rather than in relaxing the zoning to permit sprawling subdivisions.64

III. THE NEW PARADIGM

A. Are “Carrots” Alone Sufficient to Protect Farmland from Sprawl?

The strengths of voluntary, compensatory, permanent easement acquisition programs—particularly from the viewpoint of landowners—make it tempting to rely on them alone to protect farmland. Many jurisdictions have done so.65 But to do so raises questions about their weaknesses and whether complementary regulatory policies are needed to offset them, as in the case of Montgomery County.

First and foremost, the purchase of easements is expensive. Even if landowners discount the price, which they often do; even if government can accelerate purchases by debt-financing,66 and even if the cost is shifted to the private sector through TDRs,67 there remains serious doubt

64 Nevertheless, several issues perpetuate some concern about the future of Montgomery County agriculture among farmers and other residents of the Reserve. One is industrial siting policy. The open space preserved by the county was deemed attractive, both physically and politically—the Reserve contains only about five percent of the county’s voters—as a location for a county landfill, trash incinerator and a new jail. Another is a proposed “Outer Beltway” around Washington, D.C. One alternative route for this circumferential highway would cut through the heart of the Montgomery Agricultural Reserve, including about 20 farms under conservation easement. Both Montgomery County and Maryland state officials oppose this route—which is favored mainly by Virginia politicians and developers to relieve traffic congestion caused by that state’s relatively lax land use policies—because of its potential sprawl-inducing impact on the Reserve. These threats demonstrate that there is no sure cure for impermanence, only the necessity for continuing vigilance.

65 See FREEDGOOD, supra note 14, at 86.

66 A number of states have used bonded indebtedness to finance easement acquisitions. See id. Howard County, Maryland for example, has used what is perhaps the most innovative leveraging scheme to acquire easements at roughly half their market value: “securitizable” purchase contracts that generate tax-free income for sellers and can be sold like bonds for a return of principal. See id. at 262-65. However, because easements must compete with zoning that allows development on three-acre lots throughout its agricultural area, the market value of easements in Howard is nearly twice as high as in adjacent Montgomery County. See id. This is a vivid illustration of how relying on “carrots” alone is not as effective as a hybrid approach to farmland protection.

67 Despite the potential of TDRs to reduce the public cost of easement acquisition, no jurisdiction has come close to protecting as much farmland with them as Montgomery County. See id. at 123. The probable explanation is that the essential conditions for a successful TDR program have been missing in other jurisdictions. These include: a vigorous economy producing significant demand for new housing; a large, sophisticated
that, in any given jurisdiction, easement purchases alone can restrict development quickly enough over a large enough area to make a significant difference in directing and managing growth.

This underscores the other major weaknesses of easement purchases and other incentive programs: they are notoriously slow, resulting in at best a patchwork of land protection, at least in the short run. Indeed, the local jurisdiction that has come closest to Montgomery County’s achievement, Carroll County, Maryland, has protected only a small fraction of its agricultural protection area after twenty years of purchasing easements.68 The state of Maryland, whose easement purchase program leads the nation,69 has lost two acres of farmland for every one it has protected;70 and most states and localities that have PDR programs lag far behind this pace. Only where development pressure is not strong enough to pose a major threat to agriculture does it appear that easements alone can be relied on to protect farmland and farming against the prospect of future sprawl.71 As the experience of Montgomery County and of a handful of other local jurisdictions seems to demonstrate, in any community where sprawl is visible on the horizon, effective land use regulations must be adopted to buy time for incentives to provide more permanent farmland protection. Incentives, in turn, can help promote the adoption of such regulations by offering landowners the prospect of compensation for the effect that regulations may have on their property values. As more and more land is permanently protected by conservation easements, an increasing number of landowners will have a vested interest in maintaining the regulations, thus diminishing the risk that it will be changed and undermine the entire farmland protection scheme.

B. Hybridization: What Mix of Carrots and Sticks?

In the ideal “hybrid” growth management program, regulations will be strong enough to hold the line against sprawl and, thus, buy time
for incentives like easement purchases to provide more permanent protection of farmland and open space, while compensating landowners for lost equity. On the other hand, the level of public investment in incentives will be sufficient to convince landowners that their equity concerns will be addressed in a timely manner; and that adequate funds will be available to fairly compensate them when their individual circumstances give rise to the need to recover the equity in their property.

It is important to note that this need will arise at different times for every landowner. For example, a farmer who has unexpected expenses or a debt coming due may need to cash out almost immediately. A young farmer who plans to expand in a few years may look to the sale of an easement to finance the purchase of additional land. Another, like a producer who wants to pass the farm along to one of her children, may include the sale of an easement in her estate plan to provide cash for siblings who will not inherit the land. The very significant implication is that the total cost of purchasing easements over all the farmland in a designated protection zone is not as important as the flow of annual funds required to keep faith with landowners by meeting their need for equity redemption in a timely manner.\textsuperscript{72}

Montgomery County's hybrid program did not initially set a goal for the annual purchase of easements or the transfer of development rights.\textsuperscript{73} Shortly after the PDR program was established, though, county officials determined that a target was needed to help raise a predictable, adequate amount of annual funding, so that the agricultural community could be assured that the program would, in fact, meet their needs in the future.\textsuperscript{74} Since proceeds from the state real estate transfer tax could not be counted on to provide a regular stream of funding, other sources would have to be tapped, such as appropriations from the county council.

To establish a farmland protection goal and PDR funding target, the county's Agricultural Preservation Advisory Board—comprised mostly of farmers—looked at several trends: the number of landowners

\textsuperscript{72} In Montgomery County, landowners that apply to sell easements typically have to wait a year or two before their offers are accepted and payment is made. This seems to be a reasonable planning horizon for landowners to accept, given the complexity of real estate transactions and the amount of money involved. However, among all state and local jurisdictions with PDR programs, the wait to sell easements averages about six years.\textsuperscript{6} See Edward Thompson, Jr., Winning Friends, Losing Ground: State and Local Communities Need A Federal Partner to Protect the Nation's Farmland (1995). This may compromise the ability of these PDR programs to make a good faith offer to compensate landowners in a timely manner.

\textsuperscript{73} See Criss Interview, supra note 35.

\textsuperscript{74} See id.
who annually offered to sell easements, the estimated cost of easements, the average rate of TDR transfers, and the rate of farmland development. Balancing all these factors, the Board established a goal of protecting all 71,000 acres of privately owned, undeveloped farmland in the Reserve by the year 2006. With TDRs protecting approximately 2,000 to 2,500 acres per year, this would entail funding the PDR program at the rate of about $2 million per year to protect 600 additional acres of the highest-quality farmland at an average cost of more than $3,000 per acre. At the time the goal was achieved, there would remain a “cushion” of about 10,000 acres of undeveloped farmland outside the Reserve.

The broader significance of the method used by Montgomery County to establish its farmland protection goal (see Figure 3) is that it can be used to evaluate options for combining regulation and incentives in hybrid programs to protect farmland and achieve more comprehensive growth management objectives. Figure 4 shows a comparison of two options—one more reliant on “carrots,” the other depending more on “sticks”—in a hypothetical jurisdiction. It sheds further light on the relationship between

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75 See id.
these approaches and its effect on how landowners and the public share the cost of achieving desirable land uses.

Figure 4. Hypothetical Model Showing Options for Combining "Carrots" and "Sticks"

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Our hypothetical jurisdiction has established a goal of protecting 50,000 acres of farmland, half of what it started with. The first option for achieving this goal assumes that 5,000 acres of farmland will be developed annually (line D1), reflecting few if any restrictions on development. Under this scenario, about 5,000 acres of land must be protected by PDR easements each year (line P1) or the jurisdiction's goal cannot be met within the ten years that it will take for development to consume all but 50,000 acres of farmland. If the purchase of easements costs, say, $1,500 per acre, the annual public cost of this approach would be $7.5 million.

But what if the jurisdiction simply cannot afford to spend that much money? What if the public is willing to spend only $4.5 million a year on PDR, achieving a rate of protection illustrated by line P2? If development proceeds at the same pace (extension of line D1), the jurisdiction would protect only about 37,000 acres of farmland by the twelfth year, when development will have consumed all but that amount of land. To meet the 50,000 acre goal, a second option would be to strengthen the restrictions on development, slowing its rate to, assume, 3,000 acres per year (line D2). This would buy sufficient time—an additional five years—for a PDR program funded at $4.5 million to meet the goal by protecting 3,000 acres a year (line P2). Significantly, under
either option, all owners of farmland receive compensation for their property rights, whether by selling their land for development or being paid for conservation easements.

In applying this method to an actual jurisdiction, the level of annual funding and the period of time it takes to accommodate the property rights of landowners should reflect the reasonable expectations of the farm community for compensation. If in any given year a certain number of farms change hands or otherwise find it necessary to recoup the equity in their land, the goal of a PDR program should be to accommodate these landowners and, thus, keep faith within the farm community by "being there" when needed. On the other hand, with the knowledge that only a certain amount of funding will be available for this purpose—provided the amount is not simply a token—members of the farm community should be able to adjust their expectations and plan their finances accordingly. In the end, landowners must believe they are being treated fairly.76

C. Prospects for Broader Application of the "Hybrid" Approach

Can the "hybrid" approach to growth management help us escape the polarization that now characterizes the debate over land as both private property and a public resource? Does it have broader application than farmland protection? That depends on the willingness of the public to pay for financial incentives to landowners, and on the willingness of private property owners to abide by regulations without demanding excessive compensation. On this score, the evidence suggests that both are moving in the direction of accommodating the others' interests.

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76 This does not necessarily mean that they will or should receive as much compensation as if they had been allowed to develop their land to its so-called "highest and best use." The imposition of land use regulations will almost certainly reduce land values and, hence, the per acre compensation for conservation easements based on the appraisal method. Viewed from a public perspective, it could be said that regulations recapture some of the windfall conferred on property owners by public infrastructure investments and the like, maintaining a rough sense of fairness. Indeed, most landowners seem to recognize that the "highest and best use" value of their property is attributable at least in part to public investment and other taxpayer-funded subsidies and preferences; and, as a result, believe that just compensation for relinquishing development rights may be something less than this value. See THOMPSON, supra note 41, at 13. Reinforcing this conclusion is the fact that many farmland PDR programs have on average paid less than fair market value for conservation easements. It should be further noted, however, that if deemed necessary to ensure fairness, a formula approach to easement valuation, such as Montgomery County's, could be used to set easement prices that reflect pre-regulation land values.
Montgomery County is not alone as an example of a farmland protection program that has deliberately combined regulatory and incentive-based approaches. Indeed, those local programs that have protected the most farmland, while successfully resisting the encroachment of development, all appear to fit the same basic model as Montgomery County. Figure 5 lists some of these leading programs, showing how the use of “carrots” and “sticks” has been balanced in each jurisdiction. They demonstrate that the “hybrid” approach can and does work under circumstances different than those found in Montgomery County. These programs represent only a few of the many that have gone beyond regulation—or in some cases have tried to avoid regulation—by investing funds in the protection of farmland. In all, fifteen states81 and the federal government82 have invested money in

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77 All figures as of September 1999. Except where otherwise indicated, all data is from Farmland Information Center, American Farmland Trust, Local Purchase of Agricultural Conservation Easement Programs (visited Oct. 24, 1999) <http://farm.fic.niu.edu/fic-ta/tafs-paceloc.html>.

78 Sonoma has three agricultural zones: land intensive/crops (density range 1:20-100 ac), land extensive/grazing (1:60-320 ac), and diverse agriculture (1:10-60 ac). See Telephone Interview with Maria Cipriani, Assistant General Manager, Sonoma County Agricultural Preservation & Open Space District (Oct. 8, 1999).


80 What they all appear to have in common, however, are significant development pressure that has already converted a sizable percentage of the jurisdiction’s farmland; an agriculture that is valued by the public for its productivity and/or scenic characteristics; and a fairly large suburban population capable of generating significant PDR funding.

81 See FREEDGOOD, supra note 14, at 86-87. “PACE” is an acronym for “purchase of agricultural conservation easements,” a term synonymous with PDR.

82 Two federal programs have invested directly in farmland protection. The Agriculture and Food Act of 1981 § 1540, 7 U.S.C. § 4201 (1994 & Supp. IV 1998), authorized interest free loans to states for easement purchases, but was run only as a pilot program in Vermont. The Farmland Protection Program, authorized by the Federal Agricultural
agricultural PDR programs, protecting many acres of farmland, to say nothing of comparable programs that pay to protect natural areas, sensitive environments, and open space. These efforts demonstrate that the public recognizes the advantages of incentive-based approaches to the management of growth, and that it appears willing to share the cost of achieving "smart growth" with private landowners.

Further evidence of this public sentiment is apparent from the November 1998 election results, when more than 150 ballot referenda were passed, authorizing $7.5 billion in new funding for land protection, primarily through the purchase of fee title or conservation easements. The poster child of this new interest in conservation was the $1 billion bond act successfully championed by New Jersey Governor Christine Todd Whitman. Perhaps encouraged by the political popularity of these measures, the Clinton-Gore Administration more recently has proposed a significant increase in federal spending for the acquisition of conservation easements—including $55 million a year for farmland protection—as part of its Lands Legacy proposal to Congress.

But if the public is willing to invest in "carrots" to share the cost of conserving land and managing growth with landowners, are landowners themselves willing to meet the public half-way by accepting the "sticks" that offset the weaknesses of voluntary, compensatory programs? Are private property owners willing to bear a share of the responsibility by accepting reasonable regulations without demanding compensation for every penny of lost profit they could earn if the use of their land were unrestricted?

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Improvement and Reform Act of 1996 § 338, 16 U.S.C. § 3830 (Supp. IV 1998), provided $35 million in matching grants to states and localities over a three year period. It is up for congressional reauthorization as this paper is being written.


84 See id. at 8.


IV. THE TAKINGS ISSUE

A. Whither Private Property Owners?

Last year, American Farmland Trust commissioned a scientific, academic poll of agricultural landowners' opinions about property rights. Among the questions landowners were asked was whether, to protect farming from conflicts with neighboring uses, they preferred mandatory zoning or compensating landowners who volunteer not to develop their property. A surprising fifty-eight percent favored the regulatory approach. This result appears to recognize the weakness of relying entirely on voluntary incentives to achieve land use goals, and seems to endorse regulations that serves the interest of landowners.

The importance of zoning to farmers was recently underscored by the decision of the Iowa Supreme Court in Bormann v. Board of Supervisors, which ruled that the state's Right to Farm Law was an unconstitutional taking of private property—not the property of a farmer, but of a neighboring homeowner! The Iowa Right to Farm statute, and others like it in nearly every state, attempts to insulate farmers from liability for creating nuisances affecting neighboring homeowners who purchased or otherwise occupied their property after the commencement of a farming operation. It does so by allowing the defense of “coming to the nuisance.”

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87 See THOMPSON, supra note 41, at 3.
88 See id. at 7.
89 See id. at 8.
90 The same survey found that a comparable majority of landowners supports regulations to protect water quality from livestock and forestry runoff, provided that such regulations are accompanied by incentives to help share the cost. See id. at 9-10. In contrast, only 40% of the landowners surveyed supported wetlands regulations over voluntary, incentive-based approaches to protecting this resource. See id. at 9. Even fewer, 16%, favored endangered species regulation. See id. The pattern that emerges is that landowner support for regulation decreases as the perceived benefit to them becomes more remote.
91 584 N.W.2d 309 (Iowa 1998).
93 See Bormann, 584 N.W.2d at 321.
94 See NEIL D. HAMILTON, A LIVESTOCK PRODUCER’S LEGAL GUIDE TO: NUISANCE, LAND USE CONTROL, AND ENVIRONMENTAL LAW (1992) (on file with author). See also Thompson, supra note 45, at 211-13 (discussing various statutory provisions that declare pre-existing agricultural land uses as not being a nuisance).
95 See Thompson, supra note 45, at 212. “Right to farm” laws have not been that successful at protecting agriculture against the risks that arise when farmland is sold for development. Most reported decisions under these statutes have favored homeowners,
The Iowa court said that the law, in effect, imposes an easement over the property of neighboring homeowners, whose involuntary exposure to farm odors, noise, dust and drifting chemicals it likened to being flooded by the construction of a downstream dam or being made to tolerate low-level aircraft overflights. In the court’s novel and surprising opinion, this amounted to a physical invasion of the homeowners’ property, one of the threshold tests for a taking under the Fifth and Fourteenth Amendments.

The Bormann decision has prompted discussion in the agricultural community about the scope of private property rights and seems to be causing second thoughts about the validity and value of land use regulation. At least one prominent commentator noted that farmers who have opposed zoning may find in the wake of Bormann that regulation is the best, if not the only way for them to safeguard their farming operations from the risks associated with having non-farming neighbors. How can farmers protect themselves from litigation, as well as trespass, vandalism, theft and other risks of economic losses, if not by regulating the number of non-farmers in their midst?

B. A Broader Notion of “Just” Compensation?

Is the security that zoning affords farming operations compensation enough for the limits on development imposed by this kind of regulation? The aforementioned AFT survey of agricultural landowners found that thirty-six percent believe that no financial compensation is warranted for zoning that protects the “right to farm.” The security it provides agriculture is apparently recompense enough to many landowners. To borrow a phrase from Justice Holmes in the finding loopholes in the laws, well short of unconstitutionality, to reach a just result. See, e.g., Payne v. Skaar, 900 P.2d 1352 (Idaho 1995) (deciding that a cattle ranch that had changed its method of operation was not protected by the “right to farm” law). There is, however, some anecdotal evidence that “right to farm” laws have discouraged some potential litigation. In retrospect, however, these laws appear to be an attempt to close the barn door only after the cows have escaped; that is, to protect farming from residential development after development of farmland has occurred.

96 See Bormann, 584 N.W.2d at 318-19.
97 See id. at 321. The Bormann case, thus, does not appear to affect the other standard test for a taking, i.e., that it denies virtually all economic use of land, which is typically invoked to challenge land use regulations. See Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1019 (1992).
99 See THOMPSON, supra note 41, at 14.
Pennsylvania Coal case, these landowners seem to recognize a "reciprocity of advantage" in such regulation.

They also appear to recognize that private property often enjoys a financial advantage conferred by the investment of public funds; "givings," if you will. Another significant finding of AFT's survey was that an additional thirty-nine percent of agricultural landowners said that any compensation owed for restrictive zoning should be reduced to avoid a windfall where the value of the land has been inflated at taxpayer expense by the construction of highways. The private gain from this and other types of public investment can be considerable. For example, one highway in Georgia caused nearby land values to jump from $4,000 to $14,000 per acre. This makes the concession by landowners that they are not necessarily entitled to such windfalls all the more remarkable.

Between the recognition that regulation benefits private property, and the concession that private land derives part of its value from public investment, a majority of agricultural landowners seems to reject the notion that every regulation is a taking and that government must compensate for every penny of potential loss its actions may cause. This reflects a broader notion of "just compensation" than that which looks only at the fair market value of land. One that encompasses the idea that fair treatment should extend, not only to landowners, but to society at large; one that questions whether it is right for landowners to accept the benefits of government, but none of its burdens. One that rejects the proposition that taxpayers should have to pay twice to achieve land use...

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100 Pennsylvania Coal v. Mahon, 260 U.S. 393 (1922).
101 See id. at 415.
103 See THOMPSON, supra note 41, at 14.
104 See J. BERGSTROM ET AL., supra note 40, at 11.
105 The AFT survey also found that 62% of the landowners surveyed agreed that no compensation or reduced compensation should be paid for erosion control regulations where the value of farmland had been inflated by agricultural subsidies. See THOMPSON, supra note 41, at 14. Such value inflation is not insignificant—one recent study found that the capitalization of federal subsidies accounts for 10-50% of the value of Midwestern farmland. See Charles Barnard, Measuring the Impact of Direct Government Payments on the Value of Midwest Cropland, in, COMPETITION FOR THE LAND: A WORKSHOP ON THE EFFECTS OF PUBLIC POLICY ON THE MARKET FOR U.S. FARMLAND 265 (1997).
106 In fact, more than three-quarters of the landowners AFT surveyed who offered an opinion on the subject (68% of the total respondent pool versus 22%) rejected legislation that would automatically award compensation when regulation reduces property values by a specific, fixed percentage; instead favoring an approach that takes individual facts and circumstances into consideration. See THOMPSON, supra note 41, at 15.
goals—once when government expenditures increase land values, and again when government regulations decreases land values.

V. CONCLUSION

A broader sense of justice in the way government influences private land use is fundamental to making “hybrid” growth management programs work. The fundamental premise of such programs is that the responsibility for, and cost of, achieving land use objectives must be shared between landowners and the general public. Good faith must be exercised by both sides in neither expecting too much from the other, nor imposing too great a burden. Regulations must be effective, but flexible and reasonable. Efforts to compensate landowners for lost equity must be timely and genuine. And counterproductive government expenditures or subsidies—the kind that encourage landowners to do what regulation would prohibit, and that artificially inflate land values, creating an exaggerated sense of entitlement—must be avoided. Montgomery County and other leading jurisdictions have proved that this new paradigm can work in the context of farmland protection. There is no reason why it cannot also succeed to achieve other growth management or natural resource conservation goals. The stakes are high and the current stalemate is getting us nowhere. We can’t afford not to give it a try.