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How well do Purchase of Development Rights Programs Contribute to Park and Open Space Goals in the United States?

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Abstract

In the United States, momentum for purchase of development rights (PDRs) programs is accelerating and they now exist in 20 of the 50 states. Their primary constituents are agricultural interests, and conservation and open space advocates. The 20 states' statutes were reviewed and telephone interviews conducted with officials in each of the states who were responsible for implementing the legislation. Three analyses were undertaken. The first confirmed that a large proportion of funding was supplied by taxpayers and relatively little by agricultural landowners. However, most benefits were found to accrue to landowners not to taxpayers. The second analysis reviewed the components of state statutes and concluded that in most cases: (i) statements of purpose were confined to agricultural interests, omitting reference to preserving environmentally and aesthetically important lands; (ii) the range of benefits cited did include open space; and (iii) term and rescinding provisions were authorized as well as in perpetuity purposes, even though they offer no enduring public benefits. The final analysis reviewed criteria for eligibility and prioritizing projects and concluded that no prioritization was given to the environmental and aesthetic attributes sought by the general public. It is concluded that environmental and aesthetic contributions of PDRs tend to emerge serendipitously as an incidental collateral benefit to agricultural interests.

Keywords: *United States, conservation easements, purchase of development rights*

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Introduction

In the United States land for parks and open space traditionally has been purchased "in fee simple". This means that all of the rights associated with the land are acquired. Ownership of a parcel of land can be conceptualized as a bundle of rights. These may include such elements as the right to sell or bequeath the land; the right to keep others off it; the right to use it for farming, ranching, recreation, or timber production; the right to extract minerals from on it or from under it; the right to use water passing through it; and the right to erect buildings and other structures on it. Taken together, the total set of rights constitute the full fee simple interest. During the past two decades, there has been an accelerating trend to supplement this traditional approach by embracing an array of "less-than-fee-simple" strategies. A less-than-fee-simple

interest consists of one or more rights, or of specifically defined parts of rights. The most commonly acquired less-than-fee-simple interests are access rights (right-of-way easements), mineral rights and development rights (conservation or scenic easements).

The primary less-than-fee-simple mechanism is the conservation easement. It results in landowners relinquishing their rights to build on the land, while retaining their title to the land and their rights to engage in ranching and farming on it. This movement has increased in prominence because it has become apparent that acquiring full public ownership of all the land needed for parks and open space is neither possible nor desirable.

It is not possible to own all of the land needed because the amount of money required is not available to pay for the initial costs of buying land or for the ongoing costs of maintaining it once it has been acquired. The demand for park and open space lands continues to grow exponentially. However, the price of land has risen rapidly in recent years while the availability of funds to purchase and maintain parkland has increased only marginally. These conditions make the greater use of less-than-fee-simple approaches inevitable.

When it is possible to purchase full ownership, it may not be desirable. One early authority observed:

> The primary consideration in choosing a technique for protecting a given area is to ensure that it is adequate for achieving the public purpose. The appropriate method will generally call for the minimum necessary level of control by governmental bodies, and the maximum permissible level of choice for private landowners. Often the method chosen will entail lower public costs than full fee acquisition. But appropriateness rather than cost should be the primary criterion (Coughlin, 1981, p. 482).

There are at least four reasons why it may not be considered desirable always to purchase land in fee simple. First, at times, transferring the land from private to public ownership for recreational use may destroy some of the vital qualities that make it aesthetically attractive. In the United States, this view was articulated to a generally unresponsive parks field as long ago as 1962 when Holly Whyte, who more than any other individual was responsible for initiating interest in conservation easement programs, stated:

> The public do want parks, but intuitively it is the living, natural countryside they seek, and they will respond to a program that articulates this. To present open space action almost purely in terms of conventional park acquisition does not touch this nerve, and the vision of institutionalized open space that it conjures up is a somewhat sterile paradise (Whyte, 1962, p. 19).

Second, if land is purchased in fee simple, it must be maintained at the taxpayer's expense, which is likely to be a costly burden unacceptable to many elected officials. Third, the less-than-fee-simple approach does not take land off the tax rolls. It may result in the land being taxed at a lower rate, but the entire potential tax base is not lost. Fourth, conservation easement acquisitions are likely to be less disruptive, for they do not deprive people of their right to remain on the land. Indeed, voluntarily selling only some of the rights to a property may permit a landowner to derive substantial monetary gains from the property, while at the same time continuing to use it as it has been used in the past. One experienced U.S. conservationist articulated this philosophy in the following terms:

> Protection of natural areas is no longer a matter of buying land and building fences. Here on the Virginia coast, the islands, marshes, and seaside farms are tied to the local economy. People have made a living fishing and farming here for centuries. So any program protecting natural resources also has a human component. Resource conservation and economic vitality are parts of the same puzzle; you can't address one without the other. This realization has caused a

> sea of change in the way conservation organizations do business in the 1990s. The us-against-them attitude of the 1970s and early 1980s gradually has given way to partnerships between business and conservation and to the development of sustainable industries that provide jobs and economic vitality without damaging natural resources (Badger, 1995, p. 40).

Conservation easements offer ways of working with people who own desirable open space so that private interests are protected and public park and open space goals are met. The acquisition of development rights is perhaps the most widely used less-than-fee-simple approach. In his seminal work in this area in the late 1950s and early 1960s, Whyte (1959) suggested that the term "conservation easement" was preferable to "acquiring development rights" because the former term stressed the positive (i.e. environmental conservation), while the latter term focused on the negative (i.e. preventing development). This has led to some semantic confusion since often they are used interchangeably. However, a convention appears to have emerged whereby the term "conservation easement" is associated with *donations* of development rights, whereas the term "development rights acquisition" is associated with the *purchase* of those rights.

Traditionally, conservationists relied on conservation easements i.e. development rights being donated by landowners. There are both income tax and inheritance tax incentives in the U.S. which encourage landowners to do this (Crompton, 1999). However, as tax rates have been cut in recent years, these incentives have been less enticing. This has created momentum for creating sources of public money to purchase these rights. In the last three decades, 20 states have established funding programs for the purchase of development rights.

PDR programs are voluntary. Landowners decide whether it is to their advantage to participate in a PDR program. Willing landowners apply to an authorized program offering to sell the development rights on all or part of their property. PDR programs are authorized to pay landowners the difference between the value of the land on the open market in its present state and its value after the development rights have been removed from it. Typically, the programs pay the costs of surveys and appraisals needed to establish the value of the PDR. Selling the development rights does not affect the owner's rights to use the land for non-development purposes; or to sell it any time; or to be transferred to heirs.

The rationale for tax fund investment in purchase of development rights (PDRs) programs invariably incorporates the public aesthetic, conservation and environmental benefits that it is anticipated will accrue from them. The objective of the research reported in this paper was to review the effectiveness of PDR programs enacted by the states in meeting the goals of park and conservation advocates.

Initially, the courts were asked to determine the legality of the public good rationale undergirding PDR programs. An early case in California provided a foundation for PDR law as a legitimate public interest (*Soda v. Sierra Club*, 1978). In 1978 the Soda family petitioned Hayward City in California to remove their land from the PDR program and simultaneously petitioned for a development zoning change. After Hayward city council authorized termination of the PDR, the Sierra Club of California brought suit against the city of Hayward. The County Superior Court overturned the city's decision to rescind the PDR agreement because of the public benefits that would be lost. Citing the economic cost, cultural and health costs of urban sprawl and congestion, the US Court of Appeals confirmed that PDR programs constituted a legitimate public good (1996).

After the implementation of PDR programs in the Mid-Atlantic and Eastern seaboard states in the early 1980s, the authority of county and state boards to purchase development rights was challenged. *Matlack v. Board of Chosen Freeholders* upheld the authority of counties to purchase development rights (1984). Both two-party transactions be-

tween governmental agencies and non-profits, and bank-based transactions (a governmental agency or non-profit purchase of development rights which are banked for later sale to third parties) were upheld as legal mechanisms for purchasing development rights. Subsequently, this ruling consistently has been upheld (e.g. *City of Boerne v. P.F. Flores, ArcBishop*, 1996; *Kjeldahl v. Fish & Wildlife Service*, 1996).

Evolution of Purchase of Development Rights Programs

PDRs are sometimes referred to as "a third generation preservation technique" (Kelsey & Lembeck, 1998). The earliest less-than-fee-simple techniques were limited to protection by zoning (e.g. the zoning of land for agricultural purposes). From a government's perspective this was a low cost strategy, but it is a temporary strategy easily changed by subsequent political pressures. The second generation techniques revolved around using differential taxation which enabled owners of agricultural or open space lands to petition for their land to be assessed at current-use value rather than at market value. These strategies are more costly to governments because they surrender substantial property tax revenue by not assessing land at its market value. Again, differential taxation approaches are temporary.

All states use both of these approaches, but their lack of permanence makes them ineffective. PDRs are a third generation technique and require government investment which provides long term or permanent protection of land from development so it remains in agricultural and/or conservation use. Under a PDR arrangement, a landowner voluntarily sells the development rights and receives compensation for the development restrictions placed on the land (Daniels, 1991). Development rights are extinguished in exchange for the compensation provided by the PDR funding. Even though they are a relatively expensive approach for preserving land compared to the earlier approaches, momentum for PDR programs is growing.

The first extensive PDR program to be enacted was in Suffolk County, which occupies the eastern two-thirds of New York's Long Island (Buckland 1987). Legislation was passed in 1974 after voters approved a $21 million bond issue, the first acquisition was made in 1976, and by 1983 PDR transactions had been completed on 71 properties comprising 4,115 acres.

At the state level, PDR programs were pioneered by Maryland which passed its Agricultural Land Preservation Act in 1977, made its first purchases in 1980, and by 2005 1,964 transactions had been completed in the state protecting 281,545 acres of land. The American Farmland Trust (2005) monitors PDR transactions and the data they have collected on them are shown in Table 1. The "program funds spent to date" column in Table 1 refers to the amounts spent by the states' PDR programs while the "additional funds spent to date" reports funds contributed toward state program acquisitions by local governments (e.g. counties, municipalities), private land trusts, foundations or individuals, and federal programs. The value of landowner donations is not included.

Table 1 shows that PDR programs were first established in the northeastern states, but have subsequently spread across the country. In addition to the 20 states listed in Table 1, there are another 7 states that have passed laws authorizing state-level PDR programs, but have not appropriated funds to operationalize this authorization. The most active and extensive state PDR programs have been those in Pennsylvania, Maryland, Colorado, New Jersey and Vermont. Since the first state program was launched in Maryland, 1.36 million acres in all states have been protected by PDRs at a cost of $1.85 billion (i.e. $1,360 per acre). An additional 241,000 acres have been protected by local jurisdictions who have invested $761 million ($3,158 per acre) in this effort (American Farmland Trust, 2005).

In the "funding sources" column of Table 1, it will be noted that most states use funds from FRPP. This is the federal Farm and Ranch Lands Protection Program, which was origi-

Table 1. State Purchase of Development Rights Programs

State	Year of Inception/ Year of First Acquisition	Easements/ Restrictions Acquired	Acres Protected	Program Funds Spent to Date
California				
California Farmland Conservancy Program	1995/1997	100	32,727	$44,160,000 ^
Colorado				
Great Outdoors Colorado ⊿	1992/1995	160	244,584	$77,935,213 ^
Connecticut				
Connecticut Farmland Preservation Program	1978/1979	220	30,750	$88,279,632 ^
Delaware				
Delaware Agricultural Lands Preservation Foundation	1991/1996	442	79,955	$88,674,323 ^
Kentucky				
Purchase of Agricultural Conservation Easement Corporation *	1994/1998	111	23,209	$11,067,920
Maine				
Farmland Protection Program	1999/1990	19	5,950	$4,109,376
Maryland		2,030	289,439	$355,294,124
Maryland Agricultural Program *	1977/1980	1,750	241,806	$241,708,157
Rural Legacy	1997/1999	280	47,633	$113,585,967 ^
Massachusetts				
Agricultural Preservation Restriction Program	1977/1980	655	57,221	$146,798,621 ^
Michigan				
The Farmland and Open Space Preservation Program	1974/1994	78	17,022	$26,089,603 ^
Montana				
Montana Agricultural Heritage Program x	1999/2000	8	9,923	$888,000
New Hampshire		88	11,845	$13,803,308
Agricultural Lands Preservation Program x	1979/1980	31	2,864	$5,000,000
Land Conservation Investment Program x	1987/1988	36	6,232	$5,349,008
Land & Community Heritage Investment Program	2000/2001	21	2,749	$3,454,300 ^
New Jersey				
The New Jersey Farmland Preservation Program	1983/1985	1,313	140,553	$471,935,846
New York				
New York State Farmland Protection Implementation Grants	1996/1998	95	17,532	$42,487,327 ^
North Carolina				
Agricultural Development and Farmland Preservation Trust Fund *	1986/1999	33	4,247	$2,384,500 ^
Ohio		122	23,310	$15,600,000
Ohio Agricultural Easement Program *	1999/1999	108	20,310	$15,600,000
Southern Ohio Tobacco Agricultural Easement Purchase Program x	2002/2002	14	3,000	$0
Pennsylvania				
The Pennsylvania Agricultural Conservation Easment Purchase Program *	1988/1989	2,783	318,350	$513,553,278 ^
Rhode Island				
Purchase of Farmland Development Rights Program	1981/1985	66	4,841	$19,361,425
South Carolina				
South Carolina Conservation Bank	2002/2004	13	3,070	$3,325,245
Utah		26	46,575	$7,059,122
Critical Agricultural Land Conservation Fund	1999/2001	2	29	$139,000
LeRay McAllister Critical Lands Conservation Fund	1999/2000	24	46,546	$6,920,122
Vermont				
Vermont Housing and Conservation Board	1987/1987	389	113,000	$44,700,000 ^
State Totals		**11,017**	**1,845,272**	**$2,369,263,417**

Additional Funds Spent to Date	Program Funds Available	Program Funds Available Per Capita	Outstanding Applications	Funding Sources
$37,519,000	$15,000,000	$0.42	12	Appropriations, bonds, private contributions, FRPP
$148,417,205	$6,600,000 ▫	$1.41	16	Local government contributions, portion of lottery proceeds, FRRP
$2,191,377	$8,000,000	$2.28	110	Bonds, local government contributions, recording fees, FRPP
$15,372,365	$13,600,387	$16.12	106	Agricultural transfer tax, appropriations, bonds, local government contributions, portion of lawsuit settlement, private/foundation contributions, property transfer tax, transportation funding, FRPP
$5,964,275	$400,000	$0.09	616	Appropriations, bonds, tobacco settlement funds, FRPP
$4,277,663	$4,641,012	$3.51	35	Appropriations, bonds, credit card royalties, local government contributions, private contributions, FRPP
$124,495,166	$56,521,705	$10.09	142	
$177,125,739	$42,500,000	$7.59	117	Agricultural transfer tax, bonds, local government contributions, private contributions, real estate transfer tax, FRPP
$7,369,427	$14,021,705 ▫	$2.50	25	Bonds, local government contributions, private contributions, real estate transfer tax, federal wetlands conservation funds
$34,277,077	$7,750,000	$1.21	95	Appropriations, bonds, local government contributions, private contributions, transportation funding, FRPP
$3,980,965	$745,059	$0.07	15	Local government contributions, private/foundation contributions, repayment of tax credits by landowners withdrawing from the state's circuit breaker program FRPP
$1,420,710	$0	$0.00	N/A	Appropriations, FRPP
$11,112,890	$750,000	$0.57	4	
$140,000	$0	$0.00	0	Appropriations, local government contributions, FRPP
N/A	$0	$0.00	0	Bonds
$10,972,890	$750,000	$0.57	4	Appropriations, FRPP
$247,046,216	$141,655,464	$16.25	529	Appropriations, bonds, local government contributions, portion of state sales and use tax, private/foundation contributions, FRPP
$22,177,430	$16,000,000	$0.83	39	Bonds, local government contributions, property transfer tax, FRPP
$26,000,000	$0	$0.00	2	Appropriations, FRPP
$8,400,000	$5,520,000	$0.48	1,105	
$6,900,000	$5,520,000	$0.48	1,105	Bonds, FRPP
$1,500,000	$0	$0.00	0	Tobacco settlement funds
$224,723,985	$102,000,000	$8.21	2,000	Appropriations, bonds, cigarette tax, interest on securities, local government contributions, FRPP
$15,025,352	$2,000,000	$1.86	30	Appropriations, bonds, local government, private contributions, property transfer tax, FRPP
$11,924,655	$15,250,000 ▫	$3.58	2	Recording fees
$27,353,793	$3,432,600	$1.39	1	
$166,000	$50,000	$0.02	1	Appropriations, FRPP
$27,187,793	$3,382,600 ▫	$1.37	0	Appropriations, local government contributions, private/foundation contributions, FRPP
$51,800,000	$2,100,000	$3.37	50	Appropriations, bonds, Farms for the Future pilot program, local government contributions, private/foundation contributions, property transfer tax, transportation funding, FRPP
$1,254,841,973	**$468,190,532**		**6,161**	

nally established in the 1996 Farm Bill as the Farmland Protection Program and expanded in the 2002 Farm Security and Rural Investment Act. The FRPP provides matching funds to state, local and tribal governments to purchase development rights.

Support constituencies for PDRs

The expansion in the number of states enacting legislation for PDRs, and in the appropriation of federal funds in recent Farm Bills, is a manifestation of the widespread public support which has been shown to exist for PDRs (Kline and Wichelns, 1994, 1996). This support emanates from two primary constituencies: agricultural interests and open space/ conservation advocates.

There is substantial interest in PDR programs by landowners. Indeed, it has been reported that in states which have these programs, because funds are limited, six landowners are turned away for every one who sells development rights (Western Governors Association, 2002). Agricultural constituencies articulate five main reasons for supporting PDRs. First, they offer a mechanism both for preserving good agricultural land, and a heritage and lifestyle that they value which would end if the land was developed. Second, they provide a means by which landowners can extract the development value of their land that would occur if it was sold for development purposes, without having to give up their lifestyle. They are able to transform some of their equity in the land into cash that can be used to enhance their current standard of living, reduce mortgages, provide working capital, purchase new equipment or land, create an endowment fund for retirement income, or plan for the financial needs of heirs not interested in inheriting the property.

Third, the removal of development rights reduces the market value of the property which has the effect of reducing both property taxes and estate taxes. The reduced estate taxes may allow those inheriting the property to continue to operate it as an agricultural enterprise instead of having to sell off at least some of the land, in order to pay the estate taxes. Fourth, the lower value better enables young farmers and ranchers to purchase property that otherwise would not have been affordable to them. Finally, landowners perceive that the general public receive aesthetic and environmental benefits from the land being in agricultural use, which they receive "free of charge." Many of the amenities flowing from this open space can be accessed free (Derr & Dhillon (1999). PDRs mean that the public pay for these benefits, rather than remaining "free riders."

The open space/conservationist constituencies' interest is in retaining environmental and aesthetic benefits associated with agricultural land. These may include:

(i) protection of both surface and ground water; watersheds; and wetlands;

(ii) protection of flora, fauna, and wildlife habitat; encouragement of biodiversity

(iii) reduction of flooding by avoiding hardscape that accelerates run-off;

(iv) maintenance of scenic and historic landscapes;

(v) making available more wholesome locally grown food and fiber.

The use of PDRs enables these benefits to be obtained without taxpayers being encumbered with the costs associated with administering and maintaining the property.

Empirical evidence reported in the literature suggests that taxpayers who fund PDR programs are primarily concerned with the environmental and aesthetic benefits that accrue. For example, Rosenberger (1998) highlighted differences in perspectives of the constituencies. He reported that environmental and open space amenities were the most important benefits of PDR programs to the general public. In contrast, among landowners farmland protection and retention of an agrarian lifestyle were the priorities. Duke and Aull-Hyde (2002) reported that public preference was strongest for protecting land especially with meritorious environmental or agricultural attributes. Their survey of Delaware residents reported that most support for

PDRs was for their use to preserve a traditional rural way of life and the natural environment. Gobster and Dickhut (1988) in a survey of residents along the Hudson River in New York confirmed this, reporting that people were less supportive of using PDRs to alleviate development pressure than on using them to retain rural neighborhood character and historical features of the landscape.

Duke and Aull-Hyde (2002) concluded, "The public is demanding many attributes from land preservation programs. The high importance of the environmental attributes is consistent across all three studies" (p. 143) [The three studies refer to their own, Kline and Wichelns 1996, and Rosenberger 1998]. They went on to assert that results from their empirical study in Delaware "reinforces Kline and Wichelns' (1996) argument that PDR programs focus too heavily on criteria associated with production agriculture. Further attention to public preferences across land preservation programs is needed" (p. 143).

It has been suggested that the widespread public support for PDR programs reflects a far-reaching redefinition of the countryside "from being primarily a locus of production to one of consumption" (Pfeffer and Lapping 1995, p. 30). By this they mean that it is driven primarily not by a concern to stem agricultural land loss, but rather by amenity factors:

> The urbanization of rural/urban fringe areas has created demand for rural amenities provided by agriculture. For example, new residents in rural/urban fringe areas value agriculture for high quality, fresh produce, and open space, and for maintenance of scenic values, water and air quality, and a habitat for wildlife, all of which preserve the quality of life in the area (p. 30).

Procedures and analyses

Given that much of the rationale for public investment in PDRs is based on environmental and aesthetic benefits, a central question is: "To what extent are those interests embedded in the PDR legislation enacted by the states?" To address the issue, two primary sources of data were used: (i) the legislation from the 20 states; and (ii) telephone interviews with officials in each of the states who were responsible for implementing the legislation.

These sources provided data which facilitated three analyses. First, procedures adopted to distribute the state PDR funds. This analysis reveals the extent to which there is a nexus between the funding sources and its beneficiaries. Second, an identification of the component elements in the state statues. Third, the criteria used to prioritize PDR acquisitions.

Procedures for distributing state PDR funds

The financial distribution mechanism adopted by all the state PDR programs is that they are administered at the state level, and county and municipal governments and land trusts submit project proposals to compete for the funds. Table 1 shows that the primary sources of revenue are appropriations from the general fund and bonds, but these are supplemented by a wide array of other sources. This pattern is similar to the funding sources used for state parks. It primarily reflects the use of whatever funding source was expedient in the unique political environment in each state at the particular point in time when legislation establishing designated appropriation funding was passed, rather than any consistent logical nexus between PDRs and the funding source.

Interviews with administrators of PDR programs in each of the states consistently emphasized the priority given to leveraging the state funds by using them in association with federal matching funds. The two most cited federal sources were the Transportation Improvement Program authorized through the federal Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETY-LU) and its predecessors ISTEA and TEA-21; and the Farm and Ranch Lands Protection Program (FRPP) in the 1996 and 2002 Farm Bills. The legislation allocates 10% of the Transportation Trust Fund for "enhancement" projects which include acquisition of scenic easements and historic preservation. It pays up to 80% of the project costs.

The FRPP provides matching grants for the acquisition of development rights on agricultural lands. The most a landowner can donate is 25% and the federal match is 50% so the minimum match for a local/state partner is 25%. If there is no landowner donation contribution, then the local/state match is 50%. These requirements protect the landowner from pressure by the state partner to sell the development rights at a 50% bargain sale to qualify for the federal 50% match. Those jurisdictions that have not initiated a funded PDR program forego access to these federal funds. These incentives for PDRs were first included in the 1996 Farm Bill which invested $53 million in PDRs over the six year period of the bill resulting in 108,000 acres being protected. Its successor, the FRPP passed in 2002, increased the six year funding for this program to $600 million, a more than eleven fold increase. The momentum and support for this program is further indicated by the Senate including $1.75 billion for the PDR program in its version of the bill, but acceding to the House figure of $600 million in the negotiations to reconcile the two bills. The FRPP is the most substantial commitment towards conservation on private lands that the federal government has ever made.

Leveraging is done not only "upwards" with the use of federal funds, but also "downwards" with the use of local entity funds. That is, most of the state programs require communities to create local funding mechanisms before they are permitted access to state funds. For example, in Pennsylvania PDR funds are distributed through matching grants to counties, so counties have to generate 50% of the funds for a PDR project. A suggested source for the local contribution is the use of rollback taxes. All states provide for agricultural land to be assessed for tax purposes at its use rather than its market value. However, most states incorporate a rollback provision by which landowners are required to pay the increment of additional property taxes for a specified number of previous years (typically five), between those paid on the land's use value and those that would have been paid had the land been assessed at its market value. Thus, rollback taxes are collected by local appraisal districts when lands under agricultural valuation are developed (or their development rights are sold). These revenues could be applied to a county or regional fund to purchase development rights. If rollback revenues were used, then counties with rapid development would generate more funding for PDR than counties with minimal developmental pressure. County governments may be reluctant to give up rollback taxes as a source of general revenue, but it could be argued that agricultural lands have required little investment from the county in infrastructure and service costs and therefore the county has already captured the economic benefit from these lands. An analysis of fiscal impact analyses undertaken in 98 different jurisdictions revealed that for every $1 million in tax revenues these communities received from farm/forest/open space users, the median amount government entities had to expend to service these users was only $350,000 (Crompton 2004). Exemption from a county match is incorporated in some state statutes so counties with an exceptional project but no available funds are eligible (American Farmland Trust 1999).

Another option which some local jurisdictions use to generate the local match is a conversion tax, which taxes the conversion of agricultural land to urban uses (based on a percentage of the assessed fair market value of the land). This is sometimes assessed in addition to a rollback tax. If lands are converted, a conversion tax that contributes to local land conservation offsets the impact of new development and so provides a clear nexus between conversion and conservation (American Farmland Trust 1999).

Component elements of state statutes

Three components of the states' statutes which pertain to the primary objective of this study were analyzed: statement of public good; acceptable land uses; and timeframe.

i. Statement of public good. Most of the state statutes did not explicitly specify the public benefits of their PDR program, but the

inclusion of such language was perceived by some of the telephone respondents as being likely to assist in defending against any legal challenges to PDR. Explicit statements were included in the legislation enacted by California, Connecticut, Maine, Montana, New Hampshire, New York, and Vermont. For example, the Connecticut act states, "The General Assembly finds that the growing population and expanding economy of the state's ... remaining agricultural land and adjacent pastures, woods, natural drainage areas and open space areas is vital for the well-being for the people of Connecticut" (4-22-26aa). In another example, the Montana code reads,

> The legislature finds that: (1) the rapid growth and spread of urban development are creating critical problems of service and finance for the state and local governments; (2) the present and future rapid population growth in urban areas is creating severe problems of urban and suburban living; (3) this population spread and its attendant development are disrupting and altering the remaining natural areas, biotic communities, and geological and geographical

Table 2: Eligible Land Uses for PDR Acquisition

	Agriculture	Open Space	Recreation	Wildlife habitat	Water	Forest	Scenic beauty	History	Shoreline	Architecture	Archaeology	Education
California	X	X		X								
Colorado	X	X	X	X	X	X	X					
Connecticut	X	X			X	X						
Delaware	X	X			X							
Kentucky	X	X	X		X	X		X		X	X	
Maine	X	X	X	X	X		X		X			
Maryland	X	X				X						
Massachusetts	X	X	X		X		X	X				
Michigan	X	X										
Montana	X	X	X	X			X	X				X
New Hampshire	X	X	X	X	X	X	X	X	X	X	X	
New Jersey	X	X	X	X	X	X						
New York	X	X					X					
North Carolina	X	X										
Ohio	X	X	X	X	X	X	X					
Pennsylvania	X	X		X								
Rhode Island	X	X	X	X	X	X	X	X	X			
South Carolina	X	X	X	X	X	X	X	X			X	X
Utah	X	X	X	X	X			X			X	
Vermont	X	X	X	X				X				

Table 3. Typical Language Used to Define Each Acceptable Land Use

Use Covered	Typical Statute Language
Ag: Food & Fiber	"`Agricultural use' means all forms of farming, including agriculture, horticulture, aquaculture, silviculture and activities devoted to the production for sale of food and other products useful to humans which are grown, raised or harvested on lands and waters" (Delaware code, 378-93-902).
Open Space	"…open condition, or for recreational, agricultural, cultural, wildlife habitat or other use or condition consistent with the protection of open land" (Utah Code, 57-18-2).
Recreation	"…may acquire and hold conservation easements for the preservation of land areas for public outdoor recreation" (Ohio Code, 5730.69).
Wildlife Habitat	"the value of the proposal for the conservation of unique or important wildlife habitat; the value of the proposal for the conservation of any rare or endangered species; the value of the proposal for the conservation of a relatively undisturbed or outstanding example of an ecosystem indigenous to South Carolina" (South Carolina Code, 48-59-70).
Water	"…the value of the proposal for the conservation of riparian habitats, wetlands, water quality, watersheds of significant ecological value, critical aquifer recharge areas, estuaries, bays or beaches" (South Carolina Code, 48-59-70).
Forest	"Woodland shall be considered land of a farm only if it is part of or appurtenant to a tract of land which is a farm, or held by common ownership of a person or entity owning a farm, but in no event may woodland include land used primarily in commercial forestry or the growing of timber for commercial purposes or any other use inconsistent with farm use" (West Virginia Code, 8-24-79).
Scenic beauty	"Areas of special scenic beauty for enjoyment of citizens" (Pennsylvania Code 24-806).
History	"Historic property or resource" means any building, structure, object, district, area, or site that is significant in the history, architecture, archeology, or culture of this state, its communities, or the nation" (Rhode Island Code 42-113-3).
Shoreline	"areas of special open space, undeveloped shorelines" (Maine Code, 458-2-6206).
Architecture	"Preservation of a structure or site historically significant for its architecture" (Massachusetts 132A).
Archaeology	"To prevent the loss of historical and archaeological sites that embody the heritage or human habitation in the State" (South Carolina Code, 48-59-20).
Education	"The establishment of a program of education and promotion of agricultural lands preservation" (Delaware Code, 118-2-70).

formations and thereby providing the potential for the destruction of scientific, educational, aesthetic, and ecological values ... the statutory provision enabling certain qualifying private organizations to acquire interests and rights in real property to provide or preserve open-space land is in the public interest.

According to the Vermont Act;

In the best interests of all of its citizens and in order to improve the quality of

> life for Vermonters and to maintain for the benefit of future generations the essential characteristics of the Vermont countryside, Vermont should encourage and assist in creating affordable housing and in preserving the state's agricultural land, historic properties, important natural areas and recreational lands.

The Act specifically states in its definitions the "retention of agricultural land for agricultural use," and "the protection of important wildlife habitat, natural areas, historic resources and preservation."

ii. Acceptable land uses. PDR programs, which embrace the widest range of land uses are likely to secure the broadest base of support. The uses provided for in each state statute are summarized in Table 2. Typical definitions of these land uses are included in Table 3. PDR legislation that encourages land preservation for multiple purposes makes it likely that in order to be competitive, landowners will have to incorporate into their proposals such elements as public access, encourage wildlife conservation, and preserve scenic beauty in addition to continued agricultural use.

The New Hampshire statute is the only state PDR program which requires the protected lands to be made accessible to the public, although the landowner may petition to restrict this access at times when crops may be at risk by allowing access. New Hampshire has protected almost 11,000 acres while providing public access. Its statute specifies (227-M:15 Public Access; Liability):

> Lands and interests in lands purchased with funds from this program by any eligible applicant shall be open in perpetuity for passive recreational purposes. Language to be used in easement interests secured through the program shall approximate the intent of the following:
>
> I. There is hereby conveyed pedestrian access to, on, and across the property for hunting, fishing, and transitory passive recreational purposes, but not camping, by members of the public. A grantor may reserve the right to post against vehicles, motorized or otherwise and against hunting on active livestock fields, against access to agricultural cropland during planting and growing season, and against access to forest land during harvesting or establishment of plantations.
>
> II. The authority shall have the discretion to limit or prohibit passive recreational use on a case-by-case basis, where this activity would be inconsistent with the purpose for protecting the property and/or when public safety would be at risk. Additionally, the authority may stipulate, as a condition of funding, on a case-by-case basis where appropriate, that certain lands or interests in lands be available for motorized recreational uses.
>
> III. No person, or successor in title, who has granted or sold rights of public access by virtue of an easement, right-of-way, development right, or other means in accordance with the purposes of this chapter shall be liable to a user of that right of access for injuries suffered on that portion of the access unless those injuries are caused by the willful or wanton misconduct of the grantor or successor in title.

The only other statute which positively addresses public access for recreational purposes is the Maine program. Unlike New Hampshire, it does not *require* public access for recreation, but includes language which seeks to ensure that those proposals that include access will receive priority: "When acquiring land or interest in land, the board shall examine public vehicular access rights [to recreation areas] as part of the acquisition."

iii. Duration of PDR agreements. The timeframe options incorporated in states' PDR agreements are diverse. Some states (e.g. Colorado, New Hampshire, Pennsylvania and

South Carolina) are unequivocal in their requirement that PDRs must be contracted for in perpetuity. Such agreements are legally binding on all present and future owners of the land and always move with the title to the land.

In some states, the statutes authorize term PDRs to be negotiated. The minimum period of the term specified varies widely. For example, in Maine, it is 99 years; 20 years in North Carolina; and 15 years in Montana. In other states, a minimum term is not defined in the statute, but is left to the discretion of the administrative board overseeing the PRD program. If no minimum term is specified, there is potential for abuse of the intent of the PDR program. In a variation of term PDRs, the Vermont legislation includes a provision whereby land use inconsistent with the conservation intent of PDRs may be approved for a five year period, and this exemption may be renewed for an unlimited number of subsequent five-year periods. In its original form, the Pennsylvania PDR legislation allowed purchases that let the landowner buy back the development rights after 25 years, as well as in perpetuity PDRs. However, this option was subsequently removed.

Term PDRs may have some utility in that they give landowners more time to consider whether they want to sell their development rights irrevocably. Also they may be useful as a temporary measure while a public entity raises the funds needed to purchase the development rights in perpetuity or to buy the land-in-fee-simple. However, for the most part, term easements offer minimal or no public benefit. Often they are included in legislation to forestall opposition from private property rights advocates. Further, the cost of negotiating repeated extensions of term easements is likely to be as high as acquiring a permanent easement. The danger of term PDRs is that they do nothing to prevent development. They encourage a holding action rather than a permanent solution, and may become a source of subsidy for land speculators. For example, a 10 or 15 year term PDR may provide income to landowners and reduce their property taxes, while they wait for the urban fringe to reach their land at which time they can capitalize on its development value. In some instances, the concerns surrounding term PDRs are resolved by market forces associated with the programs. Given that the number of proposals received far exceeds the funds available in most states, it is likely that term proposals would be ranked too low to receive funding.

Some statutes include a provision permitting a seller of development rights to request that an agreement be rescinded. Thus, in Rhode Island, sellers can repurchase their development rights if a two-thirds majority of city council members support such an action. In Maine, the rescinding process is more difficult. The Maine legislature must approve such an action by a two-thirds majority, and a petition to the legislature may only be submitted after a city's residents have approved the release of the development rights for sale. Again, such provisions appear to offer advantages to the landowner, but no commensurate benefits to the general public.

Selection and prioritization criteria

Some states incorporate eligibility criteria in their statutes. For example, in California, Connecticut, North Carolina, Pennsylvania, Vermont, and West Virginia, potential sellers must already have their land approved for taxation at "agricultural use value" or "wildlife preservation value." In some states, (e.g. Connecticut, Maryland, Montana, Pennsylvania, and West Virginia) PDR applicants must be approved by a local board before their application is forwarded to the county or state-level for review. The Maine and South Carolina statutes mandate a county vote of approval for landowners applying for a PDR. These requirements have been incorporated to ensure that a PDR decision meets with approval of a landowner's local community.

Connecticut, Maryland, and Pennsylvania applicants also are required to reside in a county with an established land management program. These state legislatures have mandated that counties develop zoning and use plans before land in a county is eligible for

PDR funding. Similarly, the New Jersey statute requires applicants to live in a voluntary agricultural district. This ensures that the applicant has a vested interest in keeping the land undeveloped and is participating in an existing, comprehensive program which has that as its goal. In North Carolina, the PDR legislation is focused on supporting agriculture and requires landowners to demonstrate that PDR land qualifies as having soils which meet United States Department of Agriculture criteria.

Many states include a minimum acreage in their criteria for prioritizing eligible projects. For example, the statutes in Pennsylvania and Rhode Island require applicants to offer at least 5 acres for sale to qualify for the PDR program.

The responsibility for prioritizing projects for funding in approximately half the state statutes (e.g. Connecticut, Delaware, Maine, and New Jersey) is retained centrally at the state level. In these states, the legislation directs how members of a state-wide commission responsible for overseeing the work are appointed. The alternative approach adopted by approximately half of the statutes in states with strong county governments (e.g. California, Colorado, Kentucky, Maryland and Massachusetts) is to delegate decision-making authority for the PDR program so it is based and prioritized at the county level in accordance with state-wide recommended guidelines. In some states where the delegation option is preferred, but where there is little tradition of conservation at the county level, authority may be delegated to land trusts which are prepared to accept responsibility for monitoring PDR agreements.

Some PDR programs (e.g. California, Colorado and New Jersey) authorize land to be purchased in fee, protected with a development rights easement, and then resold to a private landowner. These statutes implicitly recognize that this approach is often less expensive than negotiating for the purchase of development rights alone.

Prioritization of projects is achieved by establishing a set of criteria for evaluating landowner applications, weighting them in some way, and developing a standardized scorecard that typically rates (Western Governors Association, 2002):

- the cost of the easement,
- urgency of development pressures on the land,
- productivity for agricultural and other economic uses,
- the condition of the land in general,
- proximity to other preserved lands,
- amount of landowner donation of the value of the easement,
- leverage of matching funds coming from other funding entities,
- demonstration of coordinated support from affected landowners, local governments and nonprofit organizations, and
- environmental and cultural benefits of preservation.

Discussion

To identify the extent to which park and open space benefits were embedded in PDR legislation enacted by the states, three facets of state PDR statutes were analyzed.

There are two beneficiaries from PDR transactions: the general public and the landowners. The first analysis examined the sources of funding for PDRs. While a variety of taxing mechanisms were used, it confirmed that a large proportion of the funding was supplied by taxpayers. That emanating from landowners was limited to (i) rollback or conversion taxes which they may be mandated to pay and which could be used to provide part of the match required at the county level by some statutes; and (ii) the amount of landowner donation included in the PDR transaction.

This finding leads to two conclusions. First, since a large majority of the funding is provided by the general taxpaying public, the primary concern should be to ensure that most of the benefits from PDR programs accrue to the general public rather than to

landowners. This is not currently the case in most of the programs.

A corollary, and second conclusion, from this analysis is that the price paid for PDRs should be commensurate with the benefits which accrue to the general public. *Their value may be quite different from the value of the development rights to a developer.* In the last decade, a substantial empirical literature has emerged which addresses the economic value of such public benefits as ground and surface water; wildlife habitat, flooding alleviation, scenic landscapes and open space. Economic analyses should accompany PDR proposals to confirm that the price paid for PDRs is not higher than the value of public benefits accruing to taxpayers.

The second analysis examined three components of the states' statutes which pertained to the concerns of park and open space advocates. It found that most state statutes did not explicitly specify their intent to deliver public benefits to taxpayers. This is unfortunate, since the absence of such language in the statute makes it likely that PDR programs will not have this focus. Given that the general public is funding PDR programs, the rationale for the statute should be unequivocally driven by the need to preserve environmental and aesthetically important lands which benefit the general public, rather than by a focus on the preservation of agricultural lands where benefits accrue primarily to landowners. If park, open space and conservation advocates are not centrally involved in the development of PDR statutes to ensure such verbiage is inserted, then those representing agricultural landowner interests will set the agenda. The verbiage in the Maine statue preamble reproduced in Figure 1 offers a good template for ensuring park and open space interests are primary.

A second statutory component analyzed was the range of benefits cited in the statutes. The protection of agricultural lands and the retention of open space were primary

Figure 1. Rationale for the Maine PDR Statute

The Legislature finds that Maine is blessed with an abundance of natural resources unique to the northeastern United States; that these natural resources provide Maine residents and visitors to the State with an unparalleled diversity of outdoor recreation opportunities during all seasons of the year and a quality of life unmatched in this nation; that the continued availability of public access to these recreation opportunities and the protection of the scenic and natural environment are essential for preserving the State's high quality of life; that public acquisition programs have not kept pace with the State's expanding population and changing land use patterns so that Maine ranks low among the states in publicly owned land as a percentage of total state area; that rising land values are putting the State's real estate in shoreland and resort areas out of reach to most Maine citizens and that sensitive lands and resources of statewide significance are currently not well protected and are threatened by the rapid pace of development; and that public interest in the future quality and availability for all Maine people of lands for recreation and conservation is best served by significant additions of lands to the public domain. The Legislature further finds that Maine's private, nonprofit organizations, local conservation commissions, local governments and federal agencies have made significant contributions to the protection of the State's natural areas and that these agencies should be encouraged to further expand and coordinate their efforts by working with state agencies as "cooperating entities" in order to help acquire, pay for and manage new state acquisitions of high priority natural lands. The Legislature declares that the future social and economic well-being of the citizens of this State depends upon maintaining the quality and availability of natural areas for recreation, hunting and fishing, conservation, wildlife habitat, vital ecologic functions and scenic beauty and that the State, as the public's trustee, has a responsibility and a duty to pursue an aggressive and coordinated policy to assure that this Maine heritage is passed on to future generations.

stated conservation purposes in all the statutes. Other benefits were specified in some statutes, but not others. A majority cited recreation and protection of wildlife habitat and water. However, citing these benefits in the statute as being qualifying benefits to be considered in PDRs did not necessarily translate into them being given high priority in the ranking of projects to be funded.

The pressures of urbanization may create new opportunities for land owners beyond traditional agricultural uses which may be compatible with the conservationist goals of a PDR program. Examples may include emergence of equine business opportunities such as breeding, boarding, showing and sales; "agritourism" or "working farm" developments; and bed and breakfast services (Derr & Dhillon 1999).

The third statutory component examined was duration of the PDRs. It revealed that in many states, term PDRs could be negotiated. From the perspective of the general public's interest in acquiring park and open space benefits, only *in perpetuity* PDRs should be eligible for funding. Term and rescinding provisions enable landowners to take advantage of funds from PDRs in the short-term, and still sell their lands in the long-term. There is no obvious public benefit from term purchases. The combination of an agriculturally driven rationale for PDRs and term/rescinding provisions can have substantial negative implications for those concerned with retaining open space. Consider the following illustration:

> Forsyth County, North Carolina, negotiated the sale of an easement back to one of the landowners in its program. The easement on the 67 acre tobacco farm was purchased in 1958, when most of the surrounding land was in agricultural use. By the mid-1990s, the farm was largely surrounded by houses. The remaining farmland was under option to developers, and the farmer could no longer lease enough land to operate his farm economically (American Farmland Trust, 1999, p. 10).

While this land has declined in value for farming, the proximity of the new development suggests that it has probably increased in value for park and open space purposes, but these functions were not included in the scope of the county's ordinance and so the land was lost as open space.

The third analysis reviewed the eligibility and selection criteria used to prioritize projects for PDR funding. The priority criteria related primarily to cost, development processes, and agricultural productivity of the land. In most cases there was no evidence that prioritization was given to the park and open space attributes sought by the general public.

Concluding comments

Since a majority of the funds used for PDR programs are derived from taxes, commensurate benefits should accrue to the general population who supply them. However, this review of the states' PDR statutes and interviews with the programs' administrators suggests that benefits from PDR programs accrue primarily to landowners, rather than the general community. This slant is evident in the omission of specific verbiage relating to park and open space benefits in the purposes of most statutes; the lack of priority given to environmental and aesthetic benefits in criteria that determine which projects are funded; the prevalence of term and rescinding provisions in the statutes; and the lack of insistence on public access to protected lands.

These findings are consistent with others. For example, Duke and Aull-Hyde (2002) observed, "the political process has shaped the weighting factors to favor agricultural attributes" (p. 132). Similarly, Kline and Wichelns (1994) reported in their studies in Rhode Island and Pennsylvania that environmental and growth control objectives were deemed to be important by residents and, consequently, it was inappropriate to consider only agricultural attributes when designing PDR program guidelines. The same authors in a subsequent paper (1996), Rosenberger (1998) and Duke and Aull-Hyde (2002) af-

firmed the need to reflect the public's preferences for environmental features by prominently incorporating environmental amenity attributes in the weighting of factors to be considered in PDR prioritization.

The public's investment in state PDR programs is approaching $2 billion and is accelerating as the number of states adopting these programs increases. However, much of this is effectively being used to sustain agricultural interests who, typically, are the primary lobbyists for PDR legislation. The central role of park and open space amenities in securing and sustaining public support for PDR programs is widely acknowledged by its agricultural advocates: "PDR programs need broad based support from both the agricultural and nonagricultural communities. The perceived environmental amenities from open space in general and farmland in particular are crucial because of the high cost of the program" (Derr and Dhillon 1999, 109). However, while agricultural interests may use the rhetoric of conservation values in their efforts to win widespread public support for PDR programs, they typically seek to orient the legislation towards their agricultural interests and minimize its potential environmental and aesthetic contributions. The public's widespread support is based on their belief that substantial public benefits accrue, but the legislation and subsequent administrative procedures are not designed to accomplish this goal. At best it emerges serendipitously as an incidental collateral benefit to agricultural interests, but too frequently public benefits are minuscule.

There appear to be two approaches to changing this situation. The first is to limit the funding made available for PDRs. If this is done, then there are likely to be many more landowner proposals submitted than can be funded from the resources allocated to the program. This is likely to encourage both increases in landowner donation proportions to the PDR transaction, and to make it more likely that those proposals offering the most substantial public benefits will be funded. This outcome means that the agricultural lobby has much incentive to press for higher levels of funding, since this will enable their constituents to receive higher prices, and make it likely that projects will have to incorporate fewer public benefits in order to be funded. On the other hand, if park and open space advocates deliberately work to restrict funds in order to facilitate maximum public benefits through creating a more competitive market, then the limitation of funds will make it more difficult for public entities to intercede with timely PDRs on threatened properties.

The second approach acknowledges concerns which were expressed by some open space advocates in the early days of PDR programs. For example, the Urban Land Institute recommended that open-space policies be pursued separately from farmland preservation concerns (Rose 1984), while Wolfe (1981) concluded: "It is an approach that should be reserved for the most environmentally and ecologically significant terrain" (p. 293). Similarly, Gardner (1977) in his early discussion of farmland preservation policies observed, "It is likely more efficient to address open space preservation issues directly, rather than attempting to preserve open space using farmland preservation programs that must consider agricultural criteria in selecting the land to be preserved" (Kline and Wichelns 1994, p. 225). More recently, Duke and Aull-Hyde suggested, "PDR programs that do not sufficiently acknowledge the non-agricultural attributes of applicant parcels should either be revised or reflect the weights of public demand or, perhaps, should be split into agricultural and environmental land preservations" (p. 144).

It may be time to accept that alliance with agricultural interests in lobbying for PDRs is not in the best interest of either the taxpayer or park and open space advocates, unless there is a clear understanding and acceptance by agricultural interests that environmental and aesthetic criteria will be dominant in the selection of lands to be protected. The conservation community regards PDRs as a means to an end and has little interest in agricultural sustainability per se. If allying with agricultural interests for PDR programs

does not accomplish the park and open space ends being sought, then from the conservationists' perspective, there is no virtue in such an alliance.

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