

The Virginia NEWS LETTER

Preserving Virginia's Farm and Forest Land and Natural Landscape

An Assessment of Existing Tools and the Potential for Transfer of Development Rights

by Terance Rephann

Introduction

Over the last four decades, state and local government legislation and resources have been directed at containing urban sprawl and protecting Virginia's rural open spaces. The state's policy kit now contains a variety of regulatory and incentive-based tools that have been used with various degrees of success. However, with rural open space losses mounting and land protection program costs increasing, interest has grown in alternative approaches. One focus of this article is to provide information about transfer of development rights (TDR), a promising land preservation tool that has been used in some other states. Before getting into the specifics of TDR programs, the article sets the scene by reviewing state trends in rural land loss and describing other land protection methods that have been used in Virginia.

It doesn't take a degree in urban planning to recognize that urban sprawl, a pattern of unplanned, low density, and often noncontiguous urban development, is becoming an increasingly more visible and controversial part of Virginia's landscape. A drive along any of the congested corridors emanating from Washington, DC, Hampton Roads, and the Richmond metropolitan area provides ample evidence that the traditional urban, suburban and rural land use continuum has given way to a more complicated spatial arrangement. Even the term

"ex-urban" conjured up to describe the phenomenon of "sprawl beyond sprawl" fails to convey the extent of recent residential decentralization patterns. Newer migration streams of suburban workers and "extreme commuters" to remote small towns are presenting rural communities with new growth challenges.

The facts on paper look similar to those on the ground. Virginia's developed land area grew from 7.3 to 12.3 percent of its total land area over a 25-year period from 1982 to 2007 (see **Figure 1**).¹ These figures compute to a growth rate of 68 percent compared to population growth of 41 percent over the same period, reflecting preferences for lower density living. Approximately 200,000 acres of rural land were lost to development between 2002 and 2007. However, these statistics don't entirely communicate the gravity of the sprawl problem. The true rural land base that remains in many instances is increasingly fragmented. That is to say, large tracts are being divided into ever-smaller parcels while paved parking lots, large lawns, housing and commercial buildings commonly intrude into formerly natural landscapes. Moreover, this pace of transformation may quicken. One rural land conversion projection suggests that 1.74 million acres of open space (equivalent to 6.9 percent of Virginia's land area) could be lost to development between 2003 and 2030.²

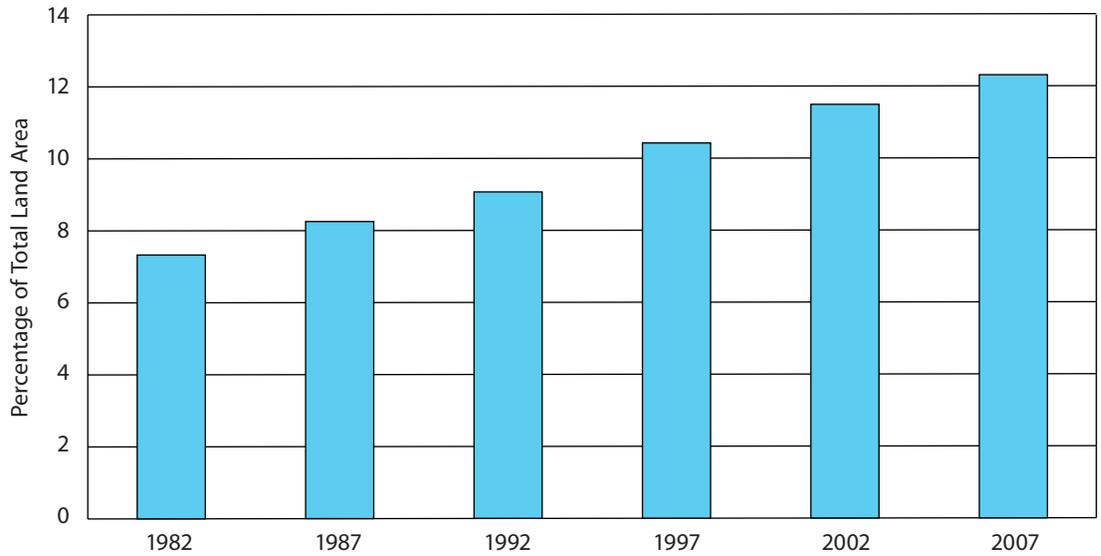


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“Virginia’s agricultural land shrunk by 882,000 acres and forestland by 413,000 acres from 1982 to 2007.”

Figure 1: Virginia’s Developed Land as a Share of Total Land Area, Selected Years, 1982 to 2007*



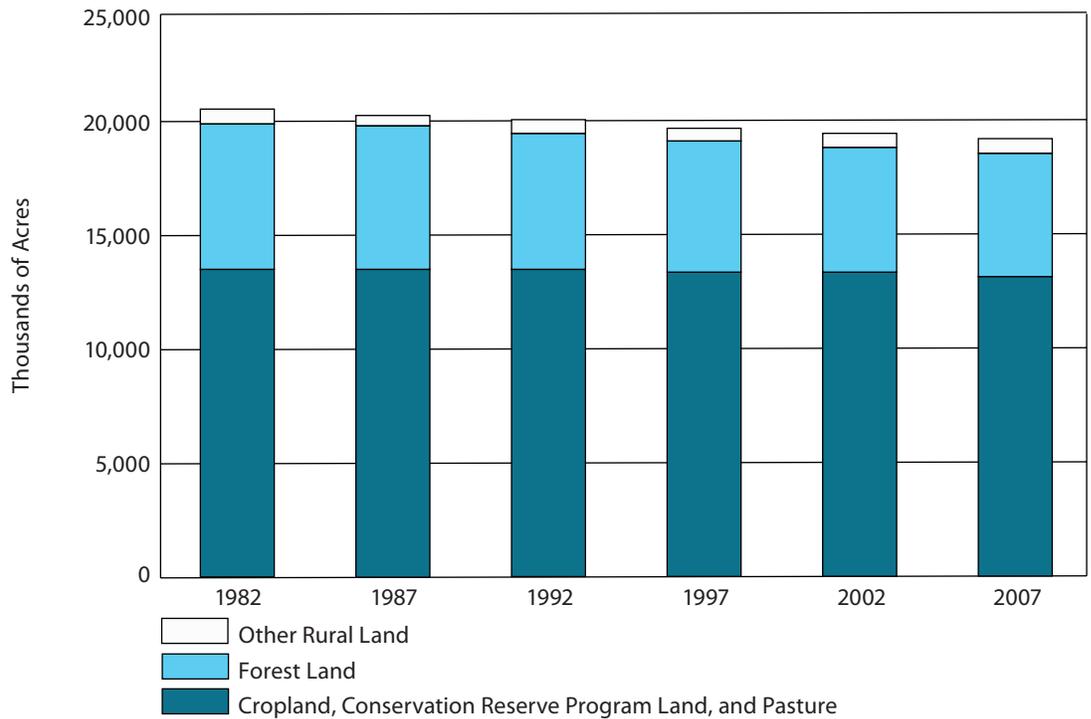
Source: U.S. Department of Agriculture, *Summary Report: 2007 National Resources Inventory* (Washington, DC: Natural Resources Conservation Service, 2009), 29.

* Excludes land area of federal land.

There are many reasons to be concerned about sprawl. First, sprawl consumes the natural resource base used for farming and forestry; Virginia’s agricultural land shrunk by 882,000 acres and forestland by 413,000 acres from 1982 to 2007 (see **Figure 2**). While less forestland was consumed because of the compensating effect of

abandoned agriculture land reversion to forest, much forestland has become divided into smaller unmanaged privately owned tracts making commercial forestry infeasible. The loss of farming and forestry in turn has implications for input-using industries such as sawmills and poultry processing and for supplier industries such as agricultural services and trade.³

Figure 2: Virginia Rural Land Area, Selected Years, 1982 to 2007*



Source: U.S. Department of Agriculture, *Summary Report: 2007 National Resources Inventory* (Washington, DC: Natural Resources Conservation Service, 2009), 42.

* Excludes land area of federal land.

A second concern is that forests, farms and natural landscapes provide valuable ecological benefits such as improved water quality, air quality, storm water control, wildlife habitat, and biodiversity. Properly managed open spaces also help the state attain aggressive milestones needed to revitalize the environmentally compromised Chesapeake Bay. Third, Virginia's natural landscape provides valued scenic and recreational amenities, envelops important historic landmarks, such as civil war battlefields, and contributes to residents' quality of life. These amenities, in turn, support higher property values. Fourth, sprawl results in more vehicle trips taken and more vehicle miles traveled, aggravating traffic congestion. Fifth, a continued exodus of middle class residents from urban areas results in more residential segregation and worsens urban economic and fiscal conditions. Finally, sprawl may have an adverse public fiscal impact on rural communities by increasing the costs of extending infrastructure and services to lower density areas.⁴

Despite all this, sprawl does have perceived advantages and advocates. Commentators such as Joel Garreau⁵ and Joel Kotkin⁶ extol the economic, political, cultural and even esthetic virtues of urban sprawl. Sprawl reduces the costs of construction and presents more affordable housing options. When given the choice, consumers seem to prefer the large yards, privacy and other amenities that low-density living affords. Meanwhile, technological and productivity advances in agriculture, forestry and the environmental sciences allow more natural resources to be extracted from a smaller land base.⁷

Furthermore, in some instances, the supposed remedies for sprawl may worsen the condition. These remedies may include *downzoning*, *clustering*, and *conservation easements*. *Downzoning* involves reducing the permitted development density. *Clustering* calls for concentrating development in one portion of a developable parcel and creating permanent open space on the remainder by reducing the permitted development density. *Conservation easements* secure legal commitments from landowners that they will not use their land for certain types of development such as residential and commercial projects generally in exchange for some type of compensation. Such land use restrictions may aggravate rather than remedy the sprawl by attracting additional development or redirecting leapfrog development beyond preservation zones.⁸ They can result in even higher fiscal costs by resulting in lower utilization rates for public infrastructure, such as water and sewer lines and roads. Or, they can exacerbate spatial economic disparities by creating exclusionary

protected green zones populated by wealthy residents housed in large lot estates.

The challenges that Virginia's sprawl creates are not unlike those in many other states, including our northern neighbor, Maryland. But, Virginia has responded somewhat differently and less aggressively to the challenges of sprawl than some states by relying more on incentives rather than regulations. Several reasons can be given for the character of the response. First, like many southern and midwestern states where regulatory approaches are weaker, Virginia has a strong property rights culture.⁹ Powerful and organized opposition can be expected to growth management policies that restrict private property use or reduce property values. Second, Virginia is a Dillon Rule state, meaning that local governments have only powers granted to them by the state.¹⁰ The need to achieve statewide agreement on land use management strategies in order to obtain authority for local implementation can be a difficult and laborious process that may significantly slow innovation and action on the local level.¹¹ Third, the current Great Recession with its accompanying housing market collapse has dampened enthusiasm for growth management policies because of their potentially stifling effect on the economic stimulus of construction. For these reasons, Virginia has continued to favor a less regulatory growth management approach and relies on more voluntary incentives instead.

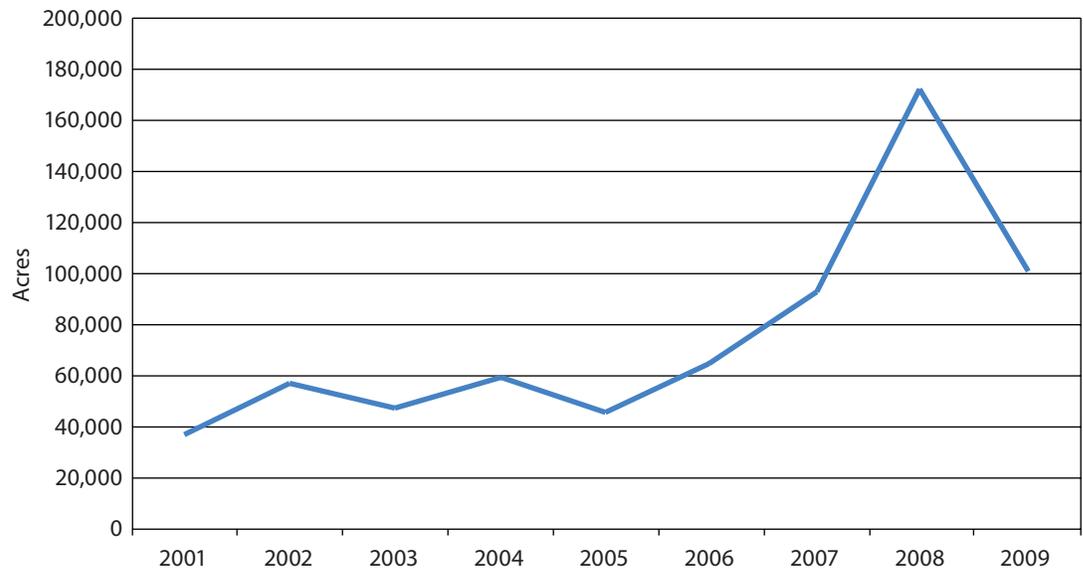
With this approach, the state has not eliminated sprawl, but it has protected significant amounts of open space. No one can tell for certain how much land is protected from *imminent* development. That would require measuring the cumulative magnitude of development restrictions imposed by large lot and other zoning restrictions, the enrollment in conservation tax abatement programs such as use value assessment, and the amounts of open space protected by public ownership and private conservation easements. Zoning regulations and use value participation are administered locally, and a comprehensive central information repository for inventory purposes is unavailable. Further complicating measurement is the fact that properties could be affected by one or more development restriction. For instance, a property could be zoned for large lots, be encumbered by conservation easements, and be enrolled in a use value program at the same time.

A few figures, however, are perhaps suggestive of the scale of open space protection in Virginia. In 2009, over 1.2 million acres were included in agricultural and forestal districts, a program that allows landowners to receive use value property assessments in exchange for a temporary

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“Virginia’s land protection accomplishments have not come without considerable financial cost.”

Figure 3: Virginia’s Additional Land Preservation by Fiscal Year, 2001 to 2009



Source: Virginia Department of Conservation and Recreation, Virginia Conservation Lands Database.

agreement to use the land for agriculture and forestry production.¹² However, this acreage covers only those few dozen localities that contain such districts and excludes the far more common use value assessment programs adopted by the vast majority of localities.

More importantly, as of July 1, 2009 over 3.69 million acres of open space, parks, historic lands, natural areas, forests, farms and other lands have been permanently protected by federal, state and local governments, and private conservation organizations.¹³ This later amount accounts for about 14.6 percent of the commonwealth’s total land area of 25,270,000 acres¹⁴ and is more sizeable than its developed area. The lion’s share is federal, state and local park and forestland. Slightly less than two-thirds (65 percent) of the preserved lands are held by the federal government, 26 percent by the state, about 4 percent by local governments, and 5 percent by private/nonprofit organizations. **Figure 3** shows that over 700,000 acres have been protected in the nine-year period from fiscal years 2001 to 2009, an average of 78,700 each year over the period. Almost 92 percent of growth in protected open space from fiscal years 2005 to 2009 can be attributed to private conservation easements.

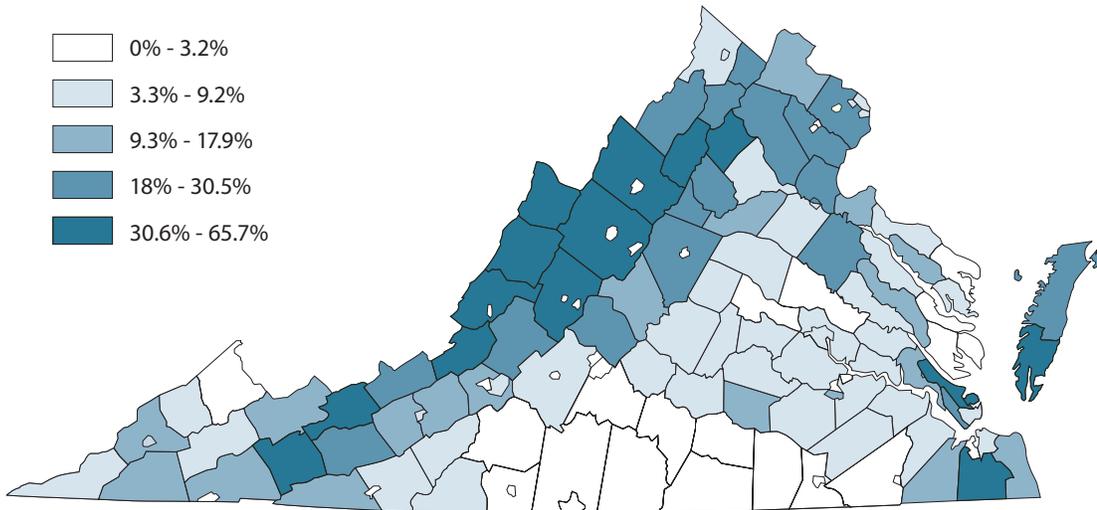
Open space preservation varies markedly by locality and region (see **Figure 4**). Federal parkland such as the George Washington National Forest, the Jefferson National Forest, and the Shenandoah National Park help make the Shenandoah Valley and Allegheny Mountain regions the largest in terms of land preservation as a percentage of total land area in 2009. Northern Virginia localities also exhibit high preservation rates, largely due to

private easements. Chesapeake City, which contains much of the Great Dismal Swamp National Wildlife Refuge, and the Eastern Shore also stand out. The Southside Region, under the least development pressure, has the smallest percentage of preserved land.

When the picture is restricted to private conservation easements, the pattern is much more varied (see **Figure 5**). Counties in the high-growth U.S. 29 corridor from Fauquier County to Albemarle County have the largest percentages of privately protected land. But, relatively high percentages are also found in West-Central Virginia, the Middle Peninsula, and the Eastern Shore where growth pressures are more modest.

Virginia’s land protection accomplishments have not come without considerable financial cost. A multitude of federal, state and local government programs, special tax assessments, as well as special private land trust and non-profit funds have supported the acquisition of land and easements or provided financial incentives for restricting or delaying property development. However, during an era of fiscal strain, state and local governments are searching for more affordable options for land protection. At the same time, the continued inexorable march of development into Virginia’s hinterland has increased the demand for additional and more effective tools to use to protect open space. It is in this context that citizens and policymakers have become attracted to a market-based tool such as transfer of development rights (TDR), which is the major focus of this article. In some ways, a TDR program would appear to be the ideal land preservation tool. It seems to offer

Figure 4: Percentage of Land Preserved as Open Space by Locality, 2009



Source: Virginia Department of Conservation and Recreation, Virginia Conservation Lands Database.

the best of all worlds: the ability to permanently preserve land with minimal public out-of-pocket expense, voluntary transactions among consenting parties, and little additional administrative burden or regulation. The reality, however, is a bit more complicated.

The Open Space Protection Toolbox

State and local policymakers have a variety of growth management and open space protection tools available that have been utilized in the United States. A thorough classification and description of policies, ranging from (a) public acquisition of park land, recreation land, and environmentally sensitive areas, (b) regulation via moratoria and growth phasing, adequate public facility ordinances, zoning, etc., and (c) incentives such as impact fees, infill incentives, agricultural

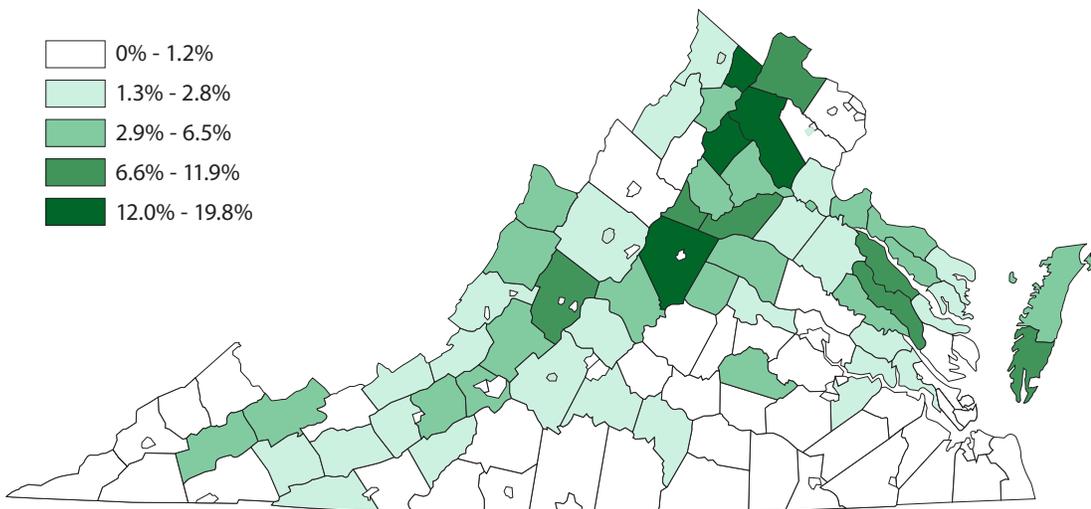
districts, purchase of development rights, and use value taxation can be found elsewhere.¹⁵ Many of these have been employed in some form in Virginia. However, it would be useful to review some of the most commonly used tools in Virginia because they share certain features with transfer of development rights programs. They also have certain problems that transfer of development rights attempt to rectify.

Zoning

Zoning is the primary regulatory-based approach used by localities to control densities, direct growth and preserve open spaces. It is used in one form or another by every Virginia locality. In some communities, zoning regulations have been used creatively to protect open space. For instance, downzoning, clustering or agricultural zoning

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Figure 5: Percentage of Land in Private Easements by Locality, 2009



Source: Virginia Department of Conservation and Recreation, Virginia Conservation Lands Database.

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involve establishing a regulation for an area that increases minimum lot sizes, requires developers to cluster housing units and create contiguous open space, or restricts the types of activities that may take place on the land. The practice is deeply unpopular with most landowners because it is compulsory and is perceived to significantly alter land development potential or market value. On the other hand, critics argue that it provides inadequate protection of desired open spaces. Where used, it has often not prevented conversion of farmland. Moreover, what is done can easily be undone. Downzoned land can be upzoned by local governments at any point in the future.

Use Value Assessment

Use value taxation is one of the oldest land preservation tools available to localities in Virginia. Following the adoption of a new constitution in 1971 that permitted classification of real property devoted to agricultural, horticultural, forest or open space uses,¹⁶ a state statute was passed authorizing jurisdictions to create local ordinances for the special assessments for those types of property. Prior to that time some agricultural and forestal land may have benefited from extra-legal preferential assessment.¹⁷ The state statute was subsequently amended to ease local administrative burdens of adoption by creating a State Land Use Advisory Council (SLEAC) to estimate local use values for assessment purposes.¹⁸ Such values are not compulsory, and a number of localities have chosen not to use them.¹⁹ Use value was created for the expressed purpose of fostering “the preservation of real estate for agricultural, horticultural, forest and open space use in the public interest.”²⁰ However, advocates often justify use value taxation on the grounds that it rectifies supposed inequities in real property taxation. By this line of argument, land intensive production activities impose negligible demands on public services compared to other land uses such as residential and are deserving of a much lower effective tax rate.²¹

Use value taxation offers substantial real property tax relief to eligible rural landowners whose land and farm/forestry related improvements are assessed at values ostensibly reflecting their agriculture and forestry uses rather than residential/commercial development values. One hundred and eighteen Virginia localities (19 cities, 75 counties and 24 towns) have adopted land use value assessments for at least one type of property allowed by statute—agricultural, horticultural, forestal or open space real estate.²² Fifty-seven localities permit use value assessment for all four types of property.²³ Particular aspects of local programs such as eligibility criteria, valuation assessment methods,

documentation requirements, fees, and penalties for withdrawal vary by locality. Properties meeting specific requirements for size, conservation, aesthetic, and historical value, or that are permanently protected by a conservation easement, are eligible for open space use value assessment in those communities permitting it.

An additional use value program was authorized by statute in 1977. It provided for agricultural and forestal districts as an alternative mechanism for landowners to make application for use value assessments. Districts of statewide significance must constitute at least 200 acres in total area. However, the statute allows smaller districts of local significance to also be established. The program offers rural landowners certain additional benefits such as the protection against state and local government encroachment to install public utilities and roads. Currently, 37 localities (6 cities and 31 counties) have such districts.²⁴

Many economists and planners do not view use value taxation as an effective tool for protecting open space. Landowners receiving use value assessment are subject to penalties should they convert the land to nonconforming uses. However, the penalty—rollback taxes for five years plus simple interest—is often too meager to deter landowners from dropping out of the program when it proves attractive for them to sell or develop their property. Moreover, since economic theory suggests that reduced property taxes are capitalized into property values, the initial land sellers stand to realize large financial windfalls. Thus, critics argue that it effectively “... subsidizes speculation by landowners who determine when conversion [to development] occurs.”²⁵ Although some research suggests that land use taxation slows the conversion of land to development purposes in areas where development pressures are moderate, it does so at a huge expense by subsidizing both land that is eventually converted and by subsidizing land that would not likely be converted. More troubling, use value taxation may actually provide a perverse incentive for removing land from production and placing it into development. By increasing land values, it may actually encourage landowners to sell their property and create a financial hurdle for new farmers to buy land and existing farmers to augment their farmland.²⁶

Land use assessment is also very costly for the limited open space protection it affords. **Table 1.** provides an estimate of tax revenue that localities forego as a result of use value taxation based on tax year 2008 information on fair market value of land, fair market value of taxable land, total taxable fair market value, and local levy for all cities and counties with use value programs from the

Virginia Department of Taxation.²⁷ The implicit assumption is that localities would have retained the same tax rate after ending use value. This assumption probably overstates the foregone revenue since some localities would no doubt have lowered the tax rate, but perhaps left it at a level to raise some additional revenue. The end result would be a redistribution of the tax burden among property owners with some increase in revenue. Still, the data suggest that approximately \$210 million was involved in tax year 2008 alone. This amount exceeds the current annual costs of other land protection programs in the state.

Table 1. Foregone Revenue from Use Value Taxation, Tax Year 2008

Fair market value of land	\$423,907,132,004
Fair market value of taxable land	\$393,464,275,718
Difference	\$30,442,856,286
Effective tax rate per \$100	\$0.69
Foregone revenue	\$210,055,708

Source Virginia Department of Taxation, *Annual Report, Fiscal Year 2009* (Richmond, n.d.), 43-47. <http://www.tax.virginia.gov/documents/AnnualReportFY2009.pdf>

Purchase of Development Rights

The transitory protection afforded by zoning and use value assessment is unlikely to meet the long-term open space protection needs of many communities. One obvious alternative would be for government agencies to finance fee simple²⁸ purchases of open space. This option has political, economic and financial drawbacks. Except in those rare situations where it can be argued that a new public good is needed (e.g., land for park and recreation purposes and extremely environmentally sensitive land for watershed protection), it is unlikely to be attractive. It raises normative questions about the proper size and role of government. Moreover, land purchases can be expensive and require perpetual maintenance and assumption of liability. Lastly, public ownership could potentially limit productive economic uses of the land and public revenue generation.²⁹

Purchase of development rights (PDR) sometimes provides a more attractive tool for permanently protecting open space. Real property can be viewed as a bundle of rights that includes the right to build and extract natural resources. PDR programs purchase the right to develop a private property from a landowner, in the process creating a conservation easement. Conservation easements are usually permanent. While dissolving the permanent easement is not altogether impossible, it is costly and uncommon. Public agencies can acquire the property by eminent domain and reinsert the development rights. The contract may be terminated by the holder or by mutual consent of

the parties to the agreement. Or contracts can be terminated by courts if conditions have changed so much that the conservation value of property has dissipated, for example due to surrounding development.

Purchase of development rights has numerous advantages over fee simple purchases.³⁰ Easements are less expensive than the purchase price of property. Moreover, the easement holder assumes none of the costs of maintaining and insuring the property. The property itself remains on the tax rolls and can continue to be used for productive activities such as farming.

PDR may also be preferred to other less permanent open space protection tools because of indirect benefits. Recent economic research suggests PDR programs can potentially delay private development decisions for unprotected property by several years due to the existence of the option to preserve private land sometime in the future.³¹ In addition, permanent private open space protection in many instances enhances the value of neighboring properties. The taxed enhancement value can in turn provide a revenue stream to help perpetuate program funding.³²

Virginia authorized localities to adopt PDR ordinances in 1966.³³ Twenty-two Virginia localities have enacted ordinances, although only 16 have funded programs.³⁴ Moreover, a small subset of these 16 account for the bulk of spending.³⁵ PDR adopters tend to be localities under greater development pressure.³⁶ While localities assume the bulk of program expenses, some extra funding is available from state agencies (i.e., the Virginia Department of Agriculture and Consumer Services' Office of Farmland Preservation and the Virginia Department of Conservation and Recreation Virginia Land Conservation Fund), federal agencies (e.g., the U.S. Department of Agriculture and the National Park Service), and private land trusts and non-profits. Localities applying for FY 2009 Office of Farmland Preservation program certification reported that they had over \$43 million in available non-state matching funds of which \$12 million was drawn from the FY 2009 budget year and the remainder from earlier years.³⁷ With local PDR program funding limited and demand sometimes exceeding supply, localities often award funds on a competitive basis that targets properties with greatest conservation values that are under the highest development pressures.

PDR programs are not without their downsides.³⁸ First, they can still entail considerable expense, particularly in areas experiencing development pressures. The run-up in property values that accompanied the 2002-2007 housing bubble

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only exacerbated this situation. On the other hand, the collapse of housing values hasn't helped matters either. The fiscal austerity that has accompanied the real estate valuation downturn has meant that land preservation outlays are among the first budget items to be axed. Second, valuations may frequently be inflated because of the lack of reliable data and the relatively crude methodologies used for appraising the value of development rights.³⁹ Third, conservation easement holders assume maintenance costs associated with assembling the baseline documentation of conditions, monitoring land use, maintaining records, and enforcing of easement violations. These costs are not negligible, on a cumulative basis amounting to as much as 10 percent of the property value.⁴⁰

Land Preservation Tax Credit Program

One of the most productive state programs is the Virginia Land Preservation Tax Credit Program, which has resulted in approximately 457,000 acres being placed under conservation easements through the end of 2009 at a public cost of \$1 billion in tax credits.⁴¹ It is similar to purchase of development rights in requiring applicants to place permanent conservation easements on their property. However, instead of selling development rights at market value, the landowner donates them to a qualified land trust or government agency in return for state income tax credits. The terms of this program have changed over time. The original statute allowed up to 50 percent of the fair market value of easement donation to be credited toward state income tax balances due. In 2002, the tax credits became transferable, allowing property owners to sell them rather than apply their value toward payment of state income taxes. In 2007 because of budgetary restrictions and oversubscription to the program, an annual cap of \$100 million on total credits was established, and the percentage of the donation of fair market value eligible for tax credit was reduced from 50 percent to 40 percent. The amount of the tax credit that could be claimed for tax years 2009 and 2010 was reduced from \$100,000 to \$50,000. Unused credits could be carried forward for up to 13 subsequent tax years. For those landowners unable to take advantage of the tax offset, the market rate for state tax credits is reportedly approximately \$0.84 for each dollar of tax credit.⁴²

For a conservation easement donation to qualify for Virginia tax credits, the properties must meet several tests of the Virginia Land Conservation Incentives Act. In brief, the following tests must be met: (1) the easement must be perpetual, (2) it must be held by a qualified organization and held for conservation purposes, and (3) it must (a)

preserve historical structures or historically important land areas, (b) preserve a significant natural resource such as natural habitat areas or ecologically sensitive areas, and (c) preserve open space such as farmland, forest land, or land for scenic enjoyment/outdoor recreation, or any other open space guarded by state or local public policy, such as a comprehensive plan, for the public benefit.⁴³

Since the act incorporates standards for favorable federal tax treatment, the donations are also eligible for federal tax benefits on personal income taxes and estate taxes. Thus, the federal government is a partner in subsidizing Virginia's land preservation. Eligible easements are generally confined to relatively large parcels of 100 acres or more because of the more significant ecological and natural resource value of the properties and the unwillingness of land trusts to assume the costs of monitoring and enforcing agreements on smaller properties.

The financial benefits of donating easements extend beyond the state tax credit program and favorable federal tax treatment. These tax benefits will vary depending on the tax liability faced by the landowner, which means that the owner's taxable income and land value will be important factors. Property owners will also experience a reduction in real property taxes because of the lower tax assessment value. The sum total present value of these tax benefits for some participants may very well exceed the easement values themselves.⁴⁴ Thus, an uneven playing field may result with wealthier landowners, larger estates, and higher valued properties receiving greater incentives to participate than lower income landowners, smaller estates, and lower valued properties. Aside from the potential wastefulness and inequities introduced by awarding benefits in this manner, such incentives may fail to protect properties with the best conservation value.

Transfer of Development Rights

Concept and History

Transfer of development rights (TDR) originated as a land use regulatory tool in 1968 to compensate landowners whose building air rights, the rights to develop the vertical space above a property, were restricted by zoning regulations. The tool was challenged in court and upheld in the signature Supreme Court case of *Penn Central Transportation Company versus New York City*. TDR programs operate in a manner not unlike market based tradable emissions permit programs such as those regulating greenhouse gases and non-point source nutrient runoff. A tradable commodity is created through regulatory action that

can be sold to buyers in a marketplace. However, whereas emission permit programs create a new property right from a shared natural resource like air or water, TDR programs involve the trading of an existing private property right.⁴⁵

A transfer of development rights program has many potential advantages as a land use management tool. The first is fairness. A TDR program is often recommended because it can potentially deal equitably with the financial “windfalls” and “wipeouts” problems that arise from zoning changes. The granting of re-zonings and zoning variances can arbitrarily expand property owner options, increase land values, and create windfall profits for owners. On the other hand, new zoning restrictions can unfairly burden property owners and reduce property values. The second benefit is permanence. Like purchase of development rights and unlike use value taxation and zoning, it can create permanent protection. The third benefit is cost. It can accomplish protection at much lower public expense than many of the alternatives such as purchase of development rights and tax credits.

In a TDR program, development rights are severed from a land parcel and traded in a private market for use on another parcel of land. It is common for communities to designate an area to be protected (a “sending area”) and an area where additional growth is desired (a “receiving area”). Transfers of development rights occur between these two areas. Individual programs vary widely in design and mechanics across localities where they have been used, but the ultimate goal is to stimulate enough transactions to achieve land preservation objectives in the sending area.

In order for any market to exist, there must be scarcity of the good or service. In the case of TDR, the mechanism for creating this scarcity is local land use regulations such as zoning, which in effect cap the type or density of development possible in different locales. In some instances it would be profitable for developers to legally circumvent the restriction. They are willing to pay a price for the allowance. Similarly, landowners would be willing to relinquish the right for acceptable compensation and either forego the opportunity to develop properties in the future or sell them in the future with conservation easements.

TDR programs differ widely in the degree to which they motivate parties to exchange. Some TDR programs are completely voluntary and allow property owners and developers to exchange rights on their own terms. Others downzone sending or receiving areas in an attempt to motivate either buyers or sellers, create favorable trading ratios, provide financial incentives such as infrastructure funding in receiving areas and tax abatement

in sending areas, or establish and operate TDR banks.⁴⁶ For readers interested in the mechanics of setting up a TDR program, Rick Pruetz’s *Beyond Takings and Givings* is a useful reference. It provides a cookbook approach to establishing and calibrating TDR markets using readily quantifiable information from sources such as development right appraisals, real estate development financial data, zoning regulations, and the characteristics of sending and receiving areas.

It must be admitted that TDR programs have at best a mixed record of success. There are 191 TDR programs nationwide that have resulted in at least 350,000 acres of protected land.⁴⁷ To keep that number in perspective, it works out to less than the approximately 395,000 acres of land preserved in Virginia over the three-year period 2007-2009. However, even these figures present a somewhat distorted picture of reality. The TDR land protection acreage is heavily skewed toward a handful of localities under severe development pressure in Maryland, such as Montgomery and Calvert counties, as well as the Pinelands region of New Jersey, and King County, Washington. Most TDR programs around the country have seen little or no utilization. Moreover, where successful TDR markets have been established, they have been extremely fragile and have needed readjustment and recalibration over time.

The Virginia General Assembly passed very basic legislation in 2006 allowing localities to establish TDR programs.⁴⁸ Prior to that, one Virginia locality had experimented with a form of TDR. The town of Blacksburg proffered a subdivision in exchange for developers creating a conservation easement in another location.⁴⁹ However, the 2006 statute helped to clear up lingering questions about the legality of full-fledged TDR programs.

Virginia’s TDR statute was modeled on ones found elsewhere in the country, but it was not overly prescriptive. For instance, unlike statutes in some other states, it does not require localities to specify allocation formulas for TDR transfer, conduct a formal analysis of receiving and sending areas to assure that the sending area development rights can be accommodated in the receiving area, prohibit downzoning, or restrict receiving areas to county designated “growth areas.”⁵⁰ Some procedural elements are outlined. The statute lays out the requirements for establishing a local TDR ordinance, (a) including a public notice and hearing, (b) a system for issuance, recordation, severance, ownership, assignment, and transfer of TDR, (c) requirements for a sending property easement encumbrance and maps or descriptions of sending and receiving areas, (d) identification of where

“A transfer of development rights program has many potential advantages as a land use management tool.”

“Although a TDR program has great potential, it faces numerous formidable obstacles on the path to public acceptance in Virginia.”

and how the TDR may be used in the receiving area, (e) identification of where and how development rights can be transferred from the sending area, and (f) an “assessment of infrastructure in the receiving area that identifies the ability of the area to accept increases in density and its plans to provide necessary utility services within any designated receiving area.”⁵¹

Interestingly, the existence of this new state law spurred little official interest in adopting a local TDR ordinance. Albemarle and Arlington counties have publicly discussed or formed study committees to examine TDR, but action has gone no further.⁵² The General Assembly established a working committee to investigate the reasons for the inactivity and explore revisions to the law to make it more attractive. Based on the working committee’s recommendations, amendments were made to the statute in 2009. The revised statute reflected several significant changes that made TDR easier to implement. It allowed development rights to “float” or be “banked” with third parties rather than being immediately transferred to a receiving property. It permitted inter-jurisdictional transfers of development rights. It allowed the severed rights and land to be taxed separately, thereby providing landowners another route to obtain use value type assessments without the restrictions of use value or agricultural and forestal district programs. In early 2010, a committee representing a diverse group of stakeholders drafted a model local TDR ordinance in a further effort to “... help to spur localities’ adoption of TDR provisions.”⁵³ Shortly thereafter, Frederick County became the first Virginia locality to formally approve a TDR program.⁵⁴

Obstacles and Questions

Although a TDR program has great potential, it faces numerous formidable obstacles on the path to public acceptance in Virginia. First, the availability of TDR will not make conservation and denser development suddenly attractive to those communities where comprehensive planning is weak. Second, such a program is not free. It involves a considerable amount of time and resources in creation and administration, which may be beyond the capacity of smaller localities. Moreover, localities offering bonus density development through TDR must resolve the financial issue of how the infrastructure for the added density is provided. Third, considerable evidence suggests a TDR program is unlikely to be successful without stringent zoning regulations in sending areas. Fourth, in some localities where a TDR program has been adopted and transactions have resulted, the prices of transfer of development rights are sometimes

lower than might be expected. In some cases, purchase of development rights funds have been needed to help establish acceptable floors for TDR values.⁵⁵

There are several political constituencies that may find different aspects of TDR programs unappealing. For instance, landowners in a designated receiving area may object to added density. Anti-growth activists may contest upzoning new areas for additional development. Property owners in the sending area are likely to be the most motivated stakeholders and to perceive themselves as having the greatest to lose. Some sending area landowners will oppose a TDR program accompanied by downzoning regardless of the likely compensation levels because it restricts their autonomy to dispose of the land in a time and manner of their choosing. Moreover, if it cannot be demonstrated that TDR provides reasonable value for the added development restrictions, a local ordinance will face even more strenuous opposition.

So what is a development right really worth to the owner in the absence of development restrictions such as downzoning adopted in conjunction with TDR? Unfortunately, unlike land sales, development rights aren’t universally traded in established markets with readily observable transactions. In the absence of such information, the only option is to rely on indirect methods of valuation such as appraisals of conservation easements conducted to qualify for PDR or other land tax benefit programs. But, conservation easement programs don’t have a long history, comparable sales transactions by area are relatively scarce, and the appraisal methods used to value the easements are necessarily speculative and inexact.⁵⁶

The valuation picture gets even fuzzier because of the external benefits created by development restrictions in many situations. That is because open space can be a “public good” that creates community value in the form of ecological benefits (e.g., water quality, stormwater management, and air quality) and landscape amenities.⁵⁷ The landscape amenity portion of this value may be captured by landowners in the vicinity of the open space in the form of higher property prices. Not all open spaces will necessarily have positive amenity values. Open space values are highly variable and location dependent. They will differ based on size, type, proximity, configuration and property management characteristics.⁵⁸ Besides, amenity values are in the eyes of the beholder. They are normal or even superior goods, meaning that the quantity of amenities demanded increases as incomes increase and perhaps even at a faster rate than incomes increase.⁵⁹

Since the question of downzoning lies at the heart of the functionality of TDR and at the same time its political acceptability, what is its likely true impact on land values? Here again, the empirical evidence is fairly murky. As a further matter, economic theory does not provide a definitive answer.⁶⁰ On the one hand, downzoning may depress land values when it disqualifies development that constitutes the highest and best use of the property in terms of market valuation such as parcels in close proximity to urbanization. On the other hand, downzoning may also increase property values. Aside from the scenic and environmental amenity value alluded to earlier, downzoning may also remove a “disamenity” value that results from greater uncertainty about the future area land use characteristics.⁶¹ For instance, it could increase the value of agricultural land by reducing the likelihood of nearby incompatible residential land uses that might potentially hinder operations. Zoning restrictions may also decrease the supply of marketable lots and increase equilibrium lot prices. Reducing low density residential development can decrease public service burdens and create fiscal benefits that are reflected in higher land values. Lastly, downzoning may also have little or no effect if it is viewed as a temporary measure that is easily reversible.⁶²

Downzoning’s effect on property prices and the residual value needed to compensate landowners for their lost development rights therefore depends on interactions among a variety of factors including the characteristics of the open space being protected, the development pressures being experienced, resident tastes and demographics, and the degree of permanency afforded by the protection. One cannot conclude deductively that in every situation a development right should even have a positive value.

Moreover, downzoning, by enforcing an open space public good, can in certain situations remove the free-rider problem that occurs when conservation of a property creates new property amenity value for nearby property owners who choose to develop. Therefore, all landowners can capture the full value that is created by open space protection. By internalizing the social benefits that accrue from open space protection, downzoning could theoretically result in transfer of development right values that are less than purchase of development rights values where such zoning restrictions are absent. This result occurs because the private development right value does not reflect its true value, which includes a disamenity social cost.

Summary and Conclusions

Virginia has been under severe pressure from urban growth that resulted in a loss of approximately 200,000 rural acres to development from 2002 to 2007. Along with the loss of these rural areas are the scenic vistas, natural resources and ecological benefits they produce. Thus, for Virginia’s open spaces, the current construction downturn may prove a blessing. It provides a respite from the recent frenetic pace of growth and an opportunity to rethink and retool to improve the amount, quality and cost-effectiveness of open space protection.

Virginia’s current open space toolbox contains a mixture of both effective and ineffective policy tools. Restrictive zoning is often an effective open space protection tool and it can be accomplished with only administrative expense. However, it is highly controversial because it restricts private property rights and does not afford permanent protection. The state’s land preservation tax credit program and local purchase of development rights programs have contributed toward the preservation of over 775,000 privately owned acres.⁶³ However, this result has come at the expense of over \$1 billion in public outlays or forgone taxes. Use value taxation alone cost Virginia’s localities nearly \$210 million in property tax revenues in tax year 2008 without creating compensating long-term land protection.

At first glance, transfer of development rights appears to be a promising and painless tool for localities to use in addressing or fortifying their open space needs. It seems to rectify shortcomings of other tools. It doesn’t explicitly require additional regulatory restrictions. It provides permanent protection. Public outlays are much lower than for fee simple purchase and purchase of development rights. Conservation properties receive lower property tax assessments only in return for permanent protection. However, evidence compiled from the experience of TDR programs elsewhere suggests that the reality is different. TDR programs are replete with logistical, administrative and political challenges. A TDR program is unlikely to be effective without invoking stricter land use regulations such as downzoning. Lastly, except in a few localities, the amount of land preserved by TDR programs has not been large.

Transfer of development rights may possibly complement other tools offered by localities. TDR has been used with downzoning to provide some compensation for the regulatory “taking” and to ease public acceptance for downzoning. PDR has been combined with TDR elsewhere to prime TDR markets, capitalize TDR banks, and support a floor for TDR market values. Landowners

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who relinquish their development rights through TDR may be eligible to participate in local use value assessments. Increased real estate valuations resulting from properties adjoining property permanently protected through TDR could potentially provide funding that helps to defray administrative costs and the outlays for other open space programs.

On the other hand, transfer of development rights may have some unintended negative consequences. Transfer of development rights may impose new costs on communities. For example, TDR programs allow “by right” density increases in receiving areas which means that they will automatically meet zoning density requirements at the receiving site. Therefore, proffers for offsetting the infrastructure costs of the additional development cannot be negotiated and the community may need to absorb the costs of any new public capital required. One can also imagine certain hypothetical situations where TDR would conflict with other open space programs, including ones in which significant costs are currently absorbed by state and federal governments. TDR program transactions could potentially be used as benchmarks in establishing conservation easement appraisal values. These values could be significantly lower than what would result from current appraisal methods due to peculiarities of the TDR market or the ability of the TDR market to internalize the positive externalities that arise from the establishment of uniform land protection areas. This outcome would make some land preservation programs that rely on donations of easements less attractive. Donors of land for conservation easements are enticed to do so when the tax advantages are greatest, including when easement values are highest. If these values depreciated, it could result in lower levels of participation in these high yielding programs and possibly even less overall land preservation in a community rather than more.

Virginia faces a serious loss of land and landscape to increasing sprawl. The lost land may never be reclaimed for agriculture, forestry, or other important uses, *including maintaining the overall health of the environment*. In the complex and sensitive question of how to protect Virginia’s diminishing open space fairly, various tools are available. One infrequently tried tool—transfer of development rights—may have some value but must be used with care to make sure it strengthens existing land preservation efforts at reasonable cost.

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Endnotes

Note: When available, web links for sources are shown. At the time of publication all of the links worked. However, some links are unstable and may not work with certain browsers or they may be modified or withdrawn.

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10. Dillon’s Rule is a legal theory derived from an 1868 court decision by Judge John F. Dillon of Iowa (*Clinton v. Cedar Rapids and the Missouri River Railroad*). The decision stated “Municipal corporations owe their origin to, and derive their powers and rights wholly from, the [state] legislature.” Dillon’s Rule is used to determine the scope of local gov-

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 23. *Ibid.*, 62-64.
 24. *Ibid.*, 67.
 25. Jane Malme, *Preferential Property Tax Treatment of Land* (Cambridge, MA: Lincoln Institute of Land Policy, 1993), 8.
 26. *Ibid.*
 27. Virginia Department of Taxation, *Annual Report, Fiscal Year 2009* (Richmond, n.d.), 43-47. <http://www.tax.virginia.gov/documents/AnnualReportFY2009.pdf>
 28. Fee simple ownership means that the owner has absolute title to the land without hindrance of any other claims. The property title may be transferred by sale or passed to others by will or inheritance.
 29. One alternative would be to purchase land for public ownership and lease to the private sector for conforming productive uses. For instance, the U.S. Department of Interior Bureau of Land Management administers fee and lease programs for grazing livestock on federal land. However, this buy/lease option has seen little use in the United States for land preservation purposes. See David Berry and Thomas Plaut, "Retaining Agricultural Activities Under Urban Pressures: A Review of Land Use Conflicts and Policies," *Policy Sciences* 9, no. 2 (1978): 153-178.
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 33. The Open Space Land Act (*Code of Virginia* §10.1-1700, et seq.) allowed local governments and state agencies to acquire conservation easements for the purposes of open space protection.
 34. The Virginia Department of Agriculture and Consumer Services, Office of Farmland Preservation is in the process of compiling links to locality ordinances and PDR program websites. They can be found at: <http://www.vdacs.virginia.gov/preservation/tools.shtml>
 35. Two localities (Virginia Beach and James City County) accounted for 78 percent of total local match funding for PDR programs applying for Office of Farmland Preservation state matching funds. Virginia Department of Agriculture and Consumer Services, Office of Farmland Preservation, *Annual Report* (Richmond: Virginia Department of Agriculture and Consumer Services, December 2009), 14. [http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD4002009/\\$file/RD400.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD4002009/$file/RD400.pdf)
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