Southern Forest Sustainability and Local Government: Cases in Perverse Incentives

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America is a nation blessed with extensive forest resources. However, navigating the paved pathways of America’s urban jungles, the public is generally unaware that they are often surrounded by a forested landscape. To illustrate this fact consider that in the 13 southern state region, forests cover an average of 61 percent of the landbase per state. An even lesser-known fact is the ownership pattern of America’s forests: nationwide, over 10 million private forest landowners (PFL) control 58 percent of America’s forestland, 5 million of whom control nearly 80 percent of the southern forest land base.³

Focusing on the southern forest, home to half of America’s private forest landowners, we will examine the incentives - both positive and perverse - local governments employ to affect private forest management. Our thesis is simple and is succinctly stated by the Pacific Forest Trust in their recent book America’s Private Forests: that “…private forests will be preserved only if they remain productive, and can continue to produce only if they are preserved.”⁴ To the degree that local governments have attempted to use regulatory authority to positively affect forest sustainability, they have generally failed. The authors’ home state of Virginia is used to illustrate the impact of local governing authority on sustaining forested landscapes. Virginia is an excellent case study given the environmental policy climate, its rate of urban sprawl and increasingly fragmented forest landbase, and proliferation of local zoning and taxation policies targeting the use of private forests.

Ranging in individual parcels from 1 to over 10,000 acres, America’s private forests collectively form an enormous social asset providing wood and non-timber forest products, filtering air pollution, protecting soil and water resources, supplying fish and wildlife habitat, and creating outdoor recreation and ecotourism opportunities. Often unrecognized by the public and politicians for the role forests play in mitigating air and water pollution, the historic Chesapeake Bay Agreement explicitly recognized the essential contribution of riparian forests toward meeting reduced nutrient and sediment loads into the Chesapeake Bay.⁵ A recent report indicated that of the 23 possible sources of stream impairment, silviculture was one of the least worrisome--contributing to only 5.05 miles of stream, or 0.1 % of the 4282 miles of impaired streams identified within the

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⁵ Virginia Governor Gilmore’s 1996 Executive Order 48.
Commonwealth of Virginia. Additionally, and of no small note, industries relying on Virginia’s private and public forests employ nearly 250,000 individuals throughout all regions of the Commonwealth and contribute over 30 billion dollars annually to Virginia’s economy. Finally, a forest’s ability to contribute both predictable water quantity and quality is well established. While some municipal water supplies are protected by publicly owned watersheds, many are not; instead relying upon a landscape mosaic of privately held forestland. Myriad perverse incentives now threaten the integrity of this private forest landscape and the many associated social amenities provided by private forests.

Virginia’s forested lands are a significant component of the vast private forests covering much of the Southeast. However, while gaining ground for much of the 20th century, these vast private forests are now succumbing to the pressures of urban and suburban sprawl. Commonly known as forest fragmentation, the effects of urban and suburban development are manifested most visibly at the rural/urban interface in the thousands of acres of large forested tracts (i.e., greater than 100 acres) that are annually parceled into numerous fragmented forests. Forest tracts smaller than 100 acres now represent 25 percent of Virginia’s private forest land and this percentage is quickly growing. Urban and suburban development was recently identified as the leading threat to existing forested land in the Southeast. Major southern growth areas, including northern and eastern Virginia, were specifically identified as highly susceptible to losses in forest cover. Due to their smaller size and frequent conversion to non-forest use, many fragmented tracts lose both their economic and ecological forest values. Tracts that do retain forest use values are often transferred to individuals with little or no knowledge of sustainable forest management practices.

Increasing forest fragmentation and pressures to convert these fragmented forests to non-forest use present significant policy problems for Virginia’s local governments. Faced with balancing economic growth and maintaining functioning forest ecosystems, various jurisdictions have turned to regulatory mechanisms to attempt to stem the conversion of forests at the urban/rural fringe. While comprehensive statewide forest regulations have not been enacted in the Southeast, local governments have nonetheless been quite active in the promulgation of forestry-related ordinances. The number of ordinances south-wide have more than doubled in the last eight years, with Virginia tracking that trend closely, increasing from 44 in 1992 to 77 in 2000. Virginia currently has the second highest number of local forest ordinances in the South. While beginning to recognize forests for more than their aesthetic value, even the most benign local governments lack the competence or inclination to seek the expertise needed to develop ordinances that balance the ecologic and economic roles of southern forests while rewarding investments in private forest stewardship.

2 Virginia Dep’t of Forestry, Virginia’s Forests: Our Commonwealth (2002).
5 Id. at SOCIO-3.
6 Id.
Typical of these local ordinances are restrictions on timber harvesting practices. Those restrictions can include requiring pre-harvest plans subject to local approval, restrictions on the use of clearcutting, or requirements for unharvested buffer zones. While some of these regulations are designed to prevent environmental harms such as ensuring water quality, many others are pointed at preserving forest cover. Virginia is a Dillon’s Rule state, and therefore restricts the regulatory activities of local governments, however in practice any Dillon’s Rule limitations on local forest regulation have been largely lost within the morass of local planning and zoning authority.

This upsurge in the number and type of local regulations has not gone unnoticed at the state level. Quite often the primary reason a state enacts a forest practices act is in response to local regulation. For example, nine of the thirteen southern states have enacted statutes protecting the right of its citizens to practice farming and forestry, attempting to ensure that local regulations could only be effective under very narrow circumstances. Virginia was among the states that passed such a statute. Enacted in 1997, Virginia’s Right to Practice Forestry Law prohibited local government from requiring timber harvesting permits, or prohibiting or unreasonably limiting silvicultural activities. This law, however, used as the basis for a challenge to York County’s local forestry ordinance, was determined by the Virginia Supreme Court in 2000 (Dail v. York County) to be largely ineffective in preempting local governments from promulgating such ordinances.

The fallout from the Dail case is that the pattern of local forest ordinance development in Virginia is increasingly haphazard and arbitrary, reflecting little connection to the science of forestry, and even less consideration for the perverse results spawned. As currently designed and implemented, local forest regulations in Virginia are both ecologically and economically irresponsible.

The difficulty with not considering fully the effects of excessive or inappropriate regulation is that such regulations can actually lead to precisely the opposite result intended - a decrease in forest cover, all the while flirting with constitutionally protected property rights. Regulations increase the costs of forest management, in many cases the burden falling on the smaller landowners with less resources at their disposal. Long-term investment in working forests becomes less attractive as the regulatory environment becomes less predictable. The statutory uncertainly left in the wake of the Dail decision compounds the problem as local governments continue to dabble in private forest management. All these factors combine to decrease incentives for investment or retention of forested lands in the face of development pressure.

What local governments face, as a result of the nature of their own regulations, can in fact be more development, less forest cover, and greater challenges to water quality than might have existed in the continued presence of managed forests. Even the

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2 SB 592 (Va. 1997).
tax advantages historically afforded forest landowners have begun to erode, in places where they should be emphasized most.¹

There are at least two recommendations that bear scrutiny. The first echoes the Society of American Forester’s position that any forestry regulations should endeavor to create a predictable and relatively stable management environment.² Virginia’s current situation is a distant throw from that laudable goal. The failings in “Virginia’s Right to Practice Forestry” law identified by the Supreme Court in Dail should form the basis for statutory amendments at the next available opportunity. The zealous approach of local governments to regulating forest land and forest practices should warrant the renewed attention of the General Assembly. This is not a rallying cry for greater state-level regulation to replace the existing patchwork of local regulations. To the contrary, Virginia’s existing state-wide forest regulations have largely succeeded in balancing economic growth with forest stewardship and sustainability. Rather, what is called for is the restoration of the purposes and goals of the 1997 legislation, in terms that will satisfy or correct the problems identified by the Virginia Supreme Court.

Additionally, we must recognize that it is not solely the government’s responsibility to protect landowners and the public from perceived or actual harms from forest management. Common-law remedies for actual harms caused to other property owners by one’s own actions have been available for hundreds of years, and still offer reliable, efficient alternatives to increased regulation.³ Accordingly, private forest landowners bear a certain responsibility for adopting a stewardship ethic, both in crafting mechanisms for sustaining private forest practice and for on-the-ground adoption of scientific and sustainable forest practices. Actual results have varied. For example, only five percent of Virginia’s landowners have a written management plan for their property. Management planning is a critical first step in landowners’ understanding of the value of their resources and strategy for protecting their land’s ecologic and economic assets. While an imperfect measure, management planning is often used as a proxy for the adoption of sustainable forest management practices and as an indication of the percentage of landowners who may be implementing best management practices (BMP’s) and sustainable forestry practices. Management planning though, comes at a cost—one that suggests a second recommendation.

The second recommendation proposes a thoughtful approach to providing incentives for private forest landowners to maintain their properties in forest cover. Taxation is of course one highly effective means of doing so, and one used to some extent in Virginia. The inquiry should not end there, however. In this time of budget deficits and declining tax revenues the idea of tax incentives may seem counterintuitive, but the management and maintenance of forest land must be considered in the long term—over the course of decades and generations, not fiscal years.

If indeed the citizens of Virginia are all beneficiaries of the Commonwealth’s private forests, it is crucial that the problems identified in the Southern Forest Resource Assessment be addressed in a timely fashion. In creating thoughtful mechanisms to

¹ Id.
protect active forest management on private forest lands, the track record of some local governments is less than inspiring.

For example, at the time this article was written, Botetourt County was considering an ordinance that would restrict timber harvesting above 1,500 feet elevation. Interest in creating this ordinance stems from increasing ridgetop development of this bedroom community near Roanoke. While the ordinance was designed to mitigate the aesthetic impacts of forestry and housing development along ridgelines, the ordinance would also restrict other land uses such as agriculture or the nursery/fruit industry. Such is the result of localities designing ordinances that affect rural land use and industry—these ordinances too often have unintended and negative spillover affects, impacting other land uses in their wake. The net effect is the erosion of options and creation of disincentives for viable rural economic development.

Flying in the face of a rational approach to maintaining forest cover, Gloucester County has enacted a program to tax not only the timberland use value, but also the added value of the standing timber. This program is undeniably arbitrary, assessing standing timber values without objective standards, instead relying upon only cursory knowledge of timber valuation. Landowner objectives, while in nearly all cases unknown to the county, are presumed by the county to be commercial in nature. To the contrary, surveys of forest landowner objectives have consistently demonstrated that indeed timber is not the exclusive or even primary landowner goal. Further, timber is not an annual crop, and harvests generally take 30 to 80 years or more depending upon the species. Most costs associated with growing stands of timber are incurred in the early years of the rotation.1 These costs must be carried through the length of the rotation and are not recouped until when and if trees are harvested to generate revenue for the landowner. Gloucester County’s timber tax program is equivalent to taxing farmers on their corn or tobacco crops, except that for forest landowners (many of whom are also farmers) this tax burden is amortized over 30 or more years. Gloucester County forest land owners consequently now face use value taxation, including the added value of the timber annually, as well as a timber severance tax due at harvesting. This is a far cry from a simple yield tax, arguably the best mechanism to encourage long-term investment in forestland.2

In rural Grayson County, landowners are currently struggling with their own Board of Supervisors (BOS) to create a countywide agriculture-forestal district program. Having little industry in this rural economy, and denying land use taxation to farmers and forest landowners, Grayson County has attracted the attention of urbanites from North Carolina’s piedmont triad region seeking rural retreats in this picturesque landscape. The tax base relies on the taxation of land and rural land values now approach $10,000 per acre. Given the lack of industry in Grayson County, the Grayson BOS must address the creation of agricultural-forestal districts that may arguably decrease tax revenues. Regardless of the eventual resolution, a comprehensive plan that would implement a creative approach to the rate and placement of housing development, the Grayson BOS will still be faced with the unenviable task of maintaining a rural landscape and economy and generating tax revenue on a land base that is unattractive to industry while highly sought after for large-tract housing development.

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1 A rotation is the time period (usually in years) between establishment of a stand of trees and the cutting of those trees.

The City of Bluefield has recently rejected a zoning variance request to harvest timber on 80 acres of private land within the city limits. The City’s decision, admittedly on residentially zoned property, ensures that the parcel will remain subject to development deforestation pressures, while simultaneously precluding economic forestry uses and continued forest cover.

Even the Chesapeake Bay Local Assistance Board has recently promulgated regulations that will prevent landowners of less than 20 acres of forest land from taking advantage of the forestry exemptions to the Chesapeake Bay Preservation Act regulations- particularly when the average forest land ownership is only 29 acres. The exemptions will remain, however, for large landowners. The Board’s failure to recognize the forestry implications of such a regulation may indeed stem from the absence of a professional forester on the Board.

Virginia is by no means alone in facing the problems illustrated here. Many of the southern states are facing increases in the number of local regulations (Figure 1), many to the point where “without successful amelioration measures it will become impractical to practice forest management in increasingly large areas of the South.”

<table>
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<tr>
<td>Virginia</td>
<td>44</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>141</td>
<td>346</td>
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Figure 1. Local forest-related ordinances in the southern states.
Source: USDA, SFRA 2002.

The problem is not limited merely to increases in local regulations. While use value taxation, an historic strategy for preserving forest land, is available in all thirteen southern states, it is mandatory in only three (Figure 2). Furthermore, while its effectiveness as a means for preventing conversion to other uses is questionable, the elimination or the corruption of use value taxation only encourages the pace of land use conversion. Specifically, while several states statutorily prohibit the taxation of standing

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1 Birch et al., supra note 4.
2 USDA SFRA
timber, others do not (Figure 2). The taxation of standing timber in addition to taxation of the bare land (and its potential for timber production) largely defeats the original purpose of the use value forestry tax incentive. Annual ad valorem taxation of standing timber will inevitably drive investment away from forests and into alternative land uses. These regulatory and taxation policies at the local level are conspiring to accelerate the loss of Southern forest cover.

<table>
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<tr>
<th>State</th>
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<td>Florida</td>
<td>Optional</td>
<td></td>
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<tr>
<td>Georgia</td>
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<td>Prohibited</td>
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<tr>
<td>Kentucky</td>
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<tr>
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<td>Optional</td>
<td>Prohibited</td>
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<tr>
<td>Mississippi</td>
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<tr>
<td>North Carolina</td>
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<tr>
<td>Oklahoma</td>
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<td></td>
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<tr>
<td>South Carolina</td>
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<td></td>
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<tr>
<td>Tennessee</td>
<td>Optional</td>
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</tr>
<tr>
<td>Virginia</td>
<td>Optional</td>
<td></td>
</tr>
</tbody>
</table>

Figure #2. Use Value Taxation in the southern states. Source: USDA SFRA (2002).

In seeking to maintain a rural landscape, many counties default to their ability to simply regulate land use. However, other counties have adopted a more proactive collaborative community planning approach. This approach acknowledges the full array of tools available to citizens and planners to conserve land uses. Broadly defined, these tools include incentives (such as use value taxation and agricultural-forestal districts) and investments (such as fee simple land purchases and easement acquisition). Used in conjunction with regulatory and zoning authority, localities can design a creative approach to land use conservation that acknowledges and cultivates the private economic contributions to private forest landowners in addition to the public amenities provided from private forests.

According to Leesburg Virginia community planning consultant Milt Herd, the Virginia counties of Albemarle, Augusta, Fauquier, Loudoun, and Montgomery are at the forefront of adopting and experimenting with the full range of land use conservation tools available under Virginia legislative authority. In addition to the tools already discussed, i.e., land use taxation, agricultural-forestal districts, and zoning regulations, these counties have either adopted or are in the process of catalyzing active land use via private and public investments. Two such examples are rural economic development initiatives and purchase of development right (PDR) programs.

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Rather than exporting raw farm and forest commodities from a locality to be processed into final products, rural economic development initiatives promote economic activity in rural areas by helping communities add value to natural resource-based commodities close to home. In the process, local jobs are created and the active land uses on which those jobs depend, i.e., agriculture and forestry, compete in the land market against “higher and better uses” such as urban and suburban development. Undeniably, most rural economic development programs have focused on promoting independent family-run agricultural enterprises, taking the form of farm tours, farmers markets, market guides, agri- and ecotourism development, and producer cooperatives. One notable exception is the Northwest Pennsylvania Industrial Resource Center (NWIRC) that focuses on promoting local value-added forest products industry in rural northern Pennsylvania. By adopting a “business clusters” approach, NWIRC has helped create communication and marketing linkages between private forest landowners and local wood products companies. Successful rural economic development programs are characterized by multi-agency cooperation and buy-in from key players such local government, Resource Conservation and Development Councils, cooperative extension, chambers of commerce, and of course, private landowners.

Following the relatively recent growth of the land trust community using conservation easements as their primary land conservation tool, purchase of development (PDR) programs are likewise gaining increased popularity with local governments to conserve rural landscapes. PDR programs are essentially publicly sponsored land trusts that employ conservation easements to protect rural landscapes. Development rights are expensive commodities especially in rapidly urbanizing rural landscapes. Consequently, because these programs rely heavily on taxes to purchase development rights, PDR initiatives have historically been used by rapidly growing and well-healed communities that can afford to implement the program, examples include: Sonoma County California, Boulder Colorado, Southampton New York, and Virginia Beach Virginia. Regardless of whether or not an easement program is publicly or privately funded, easements must be crafted to allow the land to generate revenue from active agricultural and forestry practice while protecting the land resource. This is easier said than done and much attention has been recently paid to promoting active land use, i.e., protecting the right to farm and forest rural lands, versus eroding both development and management rights.

Like the regulatory authority of local government, catalyst programs have their strengths and challenges and must be judiciously applied in the appropriate context to protect active forest land use. However, the common strength of all investment-type programs is arguably the recognition that market-based tools play a critical, and often more effective role than regulation in conserving rural forested landscapes. As the ultimate authority for guiding land use development and conservation in any locality, local governments should thoughtfully incorporate all available and appropriate catalyst and control tools in their comprehensive plan.

A final and often overlooked rural land conservation investment tool is landowner education. Education is a critical mechanism for empowering those who own and manage the majority of the Commonwealth’s land base. While viewed as suspect by the activist environmental agenda as inferior to regulation, forest landowner education is a critical component in helping landowners understand the numerous values of the forest and enabling them to adopt best management practices on their woodlands. Since 1996, slow but steady momentum has been building behind Virginia’s Forest Landowner Education Program (VFLEP). Since 1997, over 73 short courses have been offered in all regions of the state to inform landowners of their options to conserve and protect forest and agricultural land. Based on participant surveys, estimated potential economic impact from these programs is $15 million ranging over 330,000 acres. This sum represents additional income generated (or costs saved) by implementing voluntary land use conservation practices on private forestlands.

Landowners are often surprised at the range of options available for land use conservation, including the opportunity to develop income from timber and myriad non-timber resources on their property. These resources include recreation and hunting leases, non-timber forest products such as greenery, medicinal and edible plants, fee-fishing enterprises, and agri-tourism and eco-tourism opportunities.

In addition, training programs such as the Virginia Certified Planning Commissioner’s Program encourages citizens, including forest landowners, to become actively involved in shaping the form of land use policy in their communities. The service of forest landowners on their local planning commissions, board of zoning appeals, and agricultural-forestal advisory boards is an important mechanism to integrate the views and values of rural landowners in the creation of economic development initiatives and, when necessary, land use regulations in their locality. Because foresters and forest landowners naturally think in terms of decades when planning for land uses, they have a competitive advantage in guiding the land use planning process. In the past two years, the authors have documented numerous success stories of forester and forest landowner activity in guiding reasonable local land use policy.

Nevertheless, while market-based tools and incentives exist for creative land use planning and conservation, the fact remains that few localities adopt a comprehensive community planning approach. In addition, the larger question of who has authority over the management of Virginia’s private forests looms over the best-informed local land use planning bodies and creates an unstable regulatory vacuum that will be filled. Interest groups favoring regulatory approaches have recognized this vacuum and are now placing their supporters, model forest practice ordinances in-hand, on local land-use advisory committees, such as planning commissions, and boards of zoning appeals and supervisors. Further, regulatory uncertainty in southern forests has not gone unnoticed by the forest industry. Many major forest products companies have divested of their American forestland holdings, in part, to replace them with forests in nations with less costly forest regulations. The drain of markets for privately owned forest wood and fiber is already being felt throughout the South and will exacerbate the lack of investment

in private forest management. Again, lack of investments in private forest management will further the liquidation of private woodlands and subsequent increased conversion to development and non-forest use. Vastly differing interest groups can make for strange bedfellows, but their different policies with regard to private forest stewardship should have the same goal -- incentives in private forest investment and prevention of the liquidation of forest lands.

SUMMARY

Southern forests are predominantly owned and managed by nearly 5 million private forest landowners. Collectively these landowners provide many of the benefits that society demands at little or no cost to the general public. In fact, private forest landowners largely (unwittingly) subsidize society’s demand for environmental benefits by absorbing the many costs associated with forest ownership. Local and state governments should recognize the positive externalities provided by private forest landowners by crafting market incentives and, when necessary, ordinances that promote and reward (rather than erode) active forest management on private forest lands. Further, the unresolved and patchwork nature of regulations, particularly at the local level must be addressed. While some local governments are progressively working with foresters and forest landowners to develop sensible market-based approaches to forest stewardship, many are heading in the opposite direction. The trend is disturbing in light of the fact that South-wide, forests alone represented nearly half of the land converted to development from 1992-1997.1

The goal of any local government in designing a comprehensive land use conservation strategy should be just that – comprehensive and in consideration of all available tools. With respect to the conservation of farmland, no locality would consider a farmland conservation plan that does not include farmers or farming. The same is true for forestland. For forests to remain a viable part of the landscape, forestland must compete in a free-market economy with alternative land uses such as housing development. Hence, forests require forestry -- active management -- for the generation of income opportunities for those who own and live on the land. Given the myriad public benefits provided by private forests, the goal of any locality in protecting their green infrastructure should be to ensure that options for active forest management are not only maintained, but also encouraged.

LITERATURE CITATIONS


Virginia Governor Gilmore’s 1996 Executive Order 48.

1 Supra, note 5 at SOCIO-8.

Virginia Dep’t of Forestry, Virginia’s Forests: Our Commonwealth (2002).


Id. at SOCIO-3.


SB 592 (Va. 1997).


A rotation is the time period (usually in years) between establishment of a stand of trees and the cutting of those trees.

Birch et al., supra note 4.

USDA SFRA


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