

# Forest Land & Public Finance: The Right Balance

## Tax Implications of Forest Land Versus Development



North East *State* Foresters Association  
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*Local governments, state government, and citizens are generally better off – from both an overall public good and a financial perspective – if forestland remains undeveloped.*

Introduction

Forests are important to the Northeast's identity. We live, work, and play in our woodlands. But there are costs associated with where we live, work, and play – costs to owners, users, communities and society. We need to understand these costs to help make decisions that work for society, and for the forests we love.

This paper summarizes basic knowledge about the benefits and costs of forestland use in the Northeast, and how we can make decisions that benefit all. In particular, this paper focuses on the public finance implications, the taxes and government spending, that determine – and are determined by – land use and land use policy. The principles contained in this paper are that:

- Forest land produces a variety of public benefits,
- Forest land generally contributes more in taxes than it consumes in public service costs,
- Benefits, tangible or intangible, to forest owners must exceed the costs of ownership for forest land to remain as forest land, and
- Public policy can encourage forestland retention and still produce a net financial benefit to state and local units of government – **in other words, the public can actually save money by keeping forestland forested.**

There is extensive literature on the impacts of land ownership and use on public budgets. This paper will review the highlights while focusing on policy measures that can help maintain forestland and improve its already favorable impact on public budgets. To do so, we must compare forestland to other land uses, and address opportunities to improve land use and tax treatment in public policy.

The basic questions are not whether or not to maintain forests or whether or not to develop land. Instead, the question should be: “how can we encourage land development that maintains the public values of forests and reflects the true cost of services, while leaving landowners with reasonable freedom of choice?”

To address this question, we will first examine the “public good” aspects of forested land, and then examine the value that forests contribute to other land uses. We will then look at forest land's low service cost relative to the taxes it generates, examine causes for differences in the service to cost ratio of different land uses, and conclude with a review of strategies for keeping forest land in an undeveloped, forested condition.

These issues are complex and involve a wide array of public and private benefits, costs, and interests. Rather than subsidizing sprawling development, it is possible to develop alternatives that are good for forests, good for government, and good for the citizens who benefit from well-planned land use.

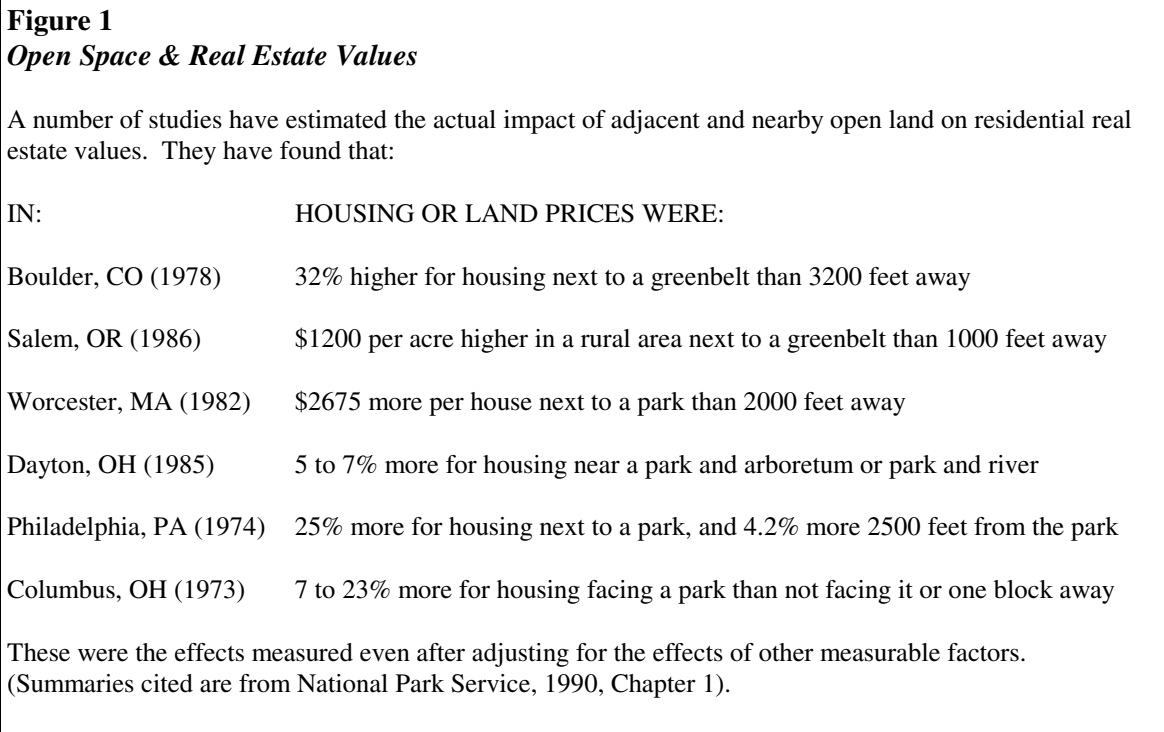
The “Public Good” Aspects of Forest Land

Forests produce a wide array of public benefits, including clean air and water, wildlife habitat, pleasant scenery, and recreational use. In addition, we are starting to recognize that forests sequester carbon to help mitigate global warming. Public goods such as these tend to be freely available, because people can enjoy them without using them up. Forests produce more of these goods than agricultural land, and much more than residential, commercial, or industrial land.

We generally take these public goods for granted. Typically, we just expect forest owners to produce goods and services. Society sometimes forces private landowners to produce public values by using regulation or land-use restrictions. While public agencies commonly pay substantial sums to purchase and manage forestlands to ensure the production of public goods, private landowners are seldom fully compensated for providing them. Some ways forest owners are sometimes compensated for producing public goods are addressed below in the section entitled “Strategies for Keeping Forests as Forests”.

The Residential Value of Forested Land

Because people value forest land, many prefer to live in first and second homes surrounded by forests and the free public goods they provide. As a result, forestland tends to increase the value of adjacent or nearby property, thereby increasing the property tax going to local governments.



When people cannot rely on nearby forests to produce these goods for them, they often buy forest land to avoid being “locked out” by other land uses or landowners. As a result, forests can become fragmented into small ownerships that produce relatively few public goods, thereby re-fueling the drive for private residential development in an endless spiral of decreasing public benefit. And, as will be discussed below, it is expensive to provide public services to residents of this “fragmented forest”. It is more expensive, in fact, than the value of the tax revenues it generates, resulting in a net cost to the community. This rush to capture the public values of forest land not only reduces their total benefits, it also tends to redistribute benefits to those most able to own land and to those with the least tolerance for crowding. This

often leaves the original residents of an area feeling frustrated, powerless, and angry. They commonly respond with harsh limits on development when more constructive approaches might be better for all concerned.

### The Commercial Value of Forested Land

Forests produce timber for homes, furniture, numerous grades of paper and fuel for power. In addition, Northeastern forests provide maple syrup, firewood, decorative boughs and a growing number of herbs and medicinal plants. Forests are an important stage and backdrop for much of the region's tourism. Forests also regulate clean and steady water flows for drinking, agriculture, fishing, boating, manufacturing, and power dams. A 1999 study for New Hampshire showed that each acre of open-space land (not built up, excavated, or developed) provides \$ 1,500 of economic benefit to the state and communities annually (Resource Systems Group).

Finally, because people prefer to in work in a pleasant setting, forests increase the value of adjacent commercial and industrial land, just as they do for residential land.

In addition to a willingness to pay more for housing near forests, many people are also willing to accept lower incomes to live and work in forested regions. As a result, employers find it easier to attract, compensate, and keep workers who live in forested settings. In fact, "quality of life" is a growing consideration in the location decisions of workers and, therefore, of employers.

In general, owners of commercial and industrial land pay more in property, income, and other business taxes than governments spend to provide them with services. This is one reason that communities are so often interested in attracting new business – even to the point of reducing this advantage by offering tax breaks. However, commercial and industrial development can not be considered in isolation: it usually leads to residential development, with its unfavorable ratio of costs to benefits.

### The Service-Cost Advantage of Forested Land

In spite of the clear public benefits of forestland, many people believe it is too expensive to maintain land in forests because it is worth more when developed. While this is undoubtedly true in certain situations, the truth of the statement depends on public policies that affect the private costs and benefits of land development. These policies affect who pays how much for new infrastructure such as roads, parks, government offices, schools, and utilities, for maintaining the existing infrastructure, and for providing services such as libraries, schools, utilities, waste collection, and police and fire protection. These policies can determine patterns of land development and whether development is a net contributor or a net drain on public budgets.

Costs can be paid through service "hook-up fees", direct user fees, property taxes, and income, business, and other taxes (many of which pass through state budgets). When service costs are paid through hook-up and user fees matched to costs, each land use comes closer to paying its own way. Though there is a trend in this direction, both government and utility services tend to involve heavy subsidies of residential users by commercial and industrial users.. The more service costs are paid through taxes, the less likely they are to match costs incurred and the more likely they are to involve the cross-subsidies of some users by others.

Many studies have examined the relative public cost of providing service to various classes of land use, and the tax revenues derived from those uses. These studies uniformly show that residential housing costs government more than it contributes and that commercial, industrial, agricultural, and forestland cost less than they contribute. This is true even when forests and open lands are given use value tax treatment, because trees don't call ambulances, send children to school, or require water and sewers.

**Figure 2**

*Cost of Community Services* – Average cost of services (dollars) by land use category.

TOWNS IN:	LAND USE CATEGORY		
	Residential	Commercial /Industrial	Open Space
Southern New England Average of 11 towns	1.14	0.43	0.42
Bethel, Maine	1.29	0.425	0.06
Massachusetts average	1.09	0.56	0.44
New Hampshire Average of 11 towns	1.08	0.39	0.52
New York Dutchess County and communities of Red Hook, Fishkill & Amenia NY <i>Median</i>	1.23		0.45

A figure of 1.00 means that a land use just covers its cost through its tax and fee contributions.

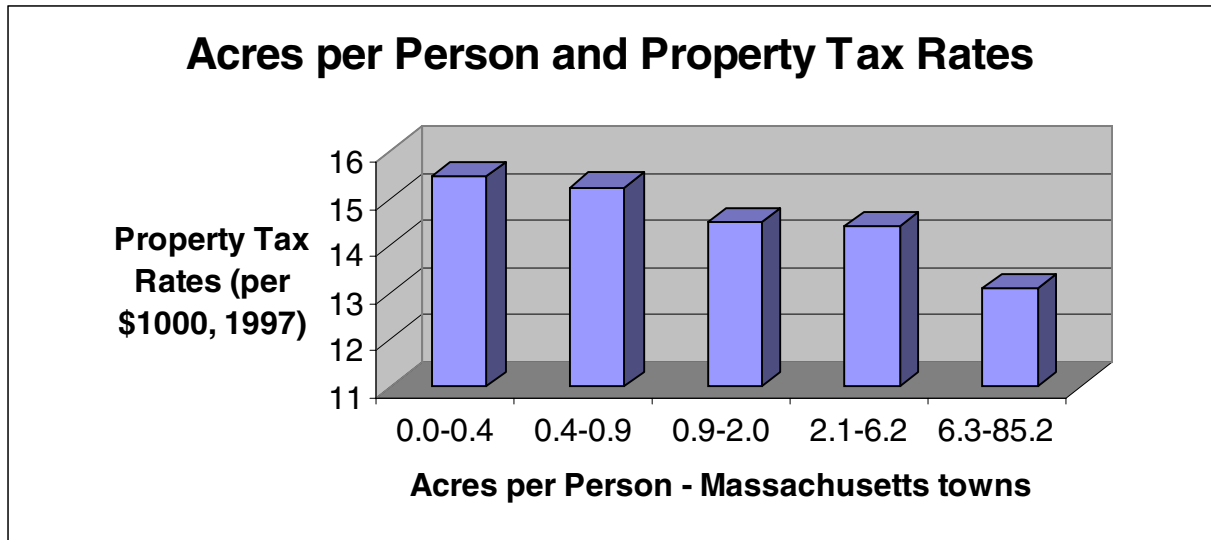
Using methods developed by the American Farmland Trust, the Southern New England Forest Consortium (SNEFCI), by Commonwealth Research Group, 1995) and the New Hampshire Wildlife Federation (Taylor, in press) Figure 2 shows the “cost of community services” for twenty towns. The SNEFCI study also summarized the results of studies in twenty-three other communities in the US. Other studies in New York (1989, 1990) found similar results. They found that ratios of service costs to contributed revenues were lowest for open space/forest land, i.e., for every dollar of property tax revenue collected less than a dollar was required in services.

For nearly all these studies, forestland is lumped with other “open” land. The largest category of “other” open land is agriculture, which consumes far more public services than does uninhabited forest land. As a result, the favorable public financial advantage of forest land may be even greater than these studies show.

In another study of Maine’s 488 organized municipalities, property tax bills for a median-valued house were found to be lower in towns with more acres of open land and higher in towns with larger tax bases, higher values of buildings and developed personal property, higher populations and more employment (Ad Hoc Associates).

A similar study for Massachusetts in 1999 showed that property taxes are higher in more developed communities and, on average, are lower in more rural towns where there are more acres of open land per capita (The Trust for Public Land). Figure 3 below shows this graphically.

Figure 3



Source: *Community Choices*, 1999

Whether commercial development benefits communities financially or not is a subject worthy of discussion. Deb Brighton of Ad Hoc Associates, a land use and property tax researcher who has spent the 1980s and 1990s researching these issues, cautions our look at the commercial figures in the cost of community services studies and similar analyses. She wrote in the 1999 publication “Community Choices”:

*“Commercial/industrial development and residential development go together.  
Municipalities that have commercial and industrial development generally have jobs.  
Residential growth, which costs more than it pays, accompanies jobs.”*

Hence, ultimately, most communities that grow their commercial and industrial tax base will also receive these secondary tax impacts that affect whether or not commercial/industrial development could be seen to have positive or negative impacts tax-wise.

In Maine, a livable communities study (ME State Planning Office) suggest that developers do not cause “sprawl”. Instead, developers go to sell their product in places where public policies provide the least public resistance. The study suggests that in order to conserve open lands and forests, policies should encourage development in traditional New England village clusters or in existing urban areas. The Maine Tree Growth Tax law and similar use value policies elsewhere are an important part of the picture because they reduce costs to those owning forest land and other open space, thereby discouraging landowner decisions to sell to developers.

Brighton completed a thorough analysis of property taxes, open space in Maine in 1997 (Ad Hoc Associates). Significant findings and conclusions were made in that study and are found in Figure 4.

**Figure 4 Open Land, Development, Land Conservation and Property Taxes in Maine’s Organized Municipalities – Ad Hoc Associates, 1997**

This study determined:

- The tax bill on the median-value house is, on average, *lower* in towns where there are more acres of open land
- The tax bill on the median-value house is, on average, *higher* in the towns that have
  - larger tax bases
  - larger populations
  - more employment
  - higher values of taxable sales
  - higher taxable value of buildings and personal property
  - more seasonal homes
  - a greater portion of property value exempt from taxation.
- The tax rate is, on average, *higher* in towns that are more developed and lower in more rural towns
- It is generally true in Maine that the towns with the most development have higher rather than lower tax bills
- From the town taxpayer’s perspective, conservation of a key parcel in town may be a less expensive option than allowing it to be developed in a way that would not pay enough to cover the costs to the town.

In looking at a comparison among the 20 percent of towns in which the tax bill on the median-value house is the lowest with those with the highest, the study showed:

Characteristic	Lowest Tax Bill Towns	Average of All Towns	Highest Tax Bill Towns
Average Tax Bill on Median-Value House	386	799	1,407
Tax Base (Full Valuation)	20,833,190	137,000,000	420,626,768
Developed Property	11,177,854	90,549,289	285,262,351
Acres of Open Land	15,139	8,278	4,230

*Source: Ad Hoc Associates, Open Land, Development, Land Conservation and Property Taxes in Maine’s Organized Municipalities, 1997*

Finally, Altshuler and Gamez-Ibanez summed it up in a 1993 study for The Brookings Institute and Lincoln Institute of Land Policy entitled “Regulation for Revenue: The Political Economy of Land Use Exactions” when they wrote:

*“The available evidence shows that development does not cover new public costs (in the US); that is, it brings in less revenue for local governments than the price of servicing it.”*

Causes for Differences in the Service-Cost Coverage of Different Land Uses

Residential land use tends to pay less than its service costs largely because of how these services are offered:

- Public services are generally provided independent of the landowner’s lump-sum property tax payment and independent of the cost of providing the service.. Landowners pay the same for police, fire, and

ambulance protection, and for utility services regardless of the associated travel and transmission costs. The latter effect may be blunted by owner-provided well water or bottled gas, for example, but when the infrastructure costs of utilities and roads are folded into general tax and utility rates, rather than paid “up front” as a cost of specific land development, the problem of some users subsidizing others becomes acute. This situation is , somewhat less problematic , if costs are paid over time at a subsidized interest rate.

- Property taxes are based on the market value of property. Property values are lower for land situated further from public services, since landowners bear more of the cost of travel and reaching commercial services. As a result, landowners actually pay lower taxes the farther out they live, even though they cost local government more.
- When government tries to control development, it is usually with the relatively blunt instruments of land-use regulation. However, it is difficult to provide meaningful controls without limiting private land choices to the point of political unpopularity. As long as landowners can develop legally, they are entitled to public services on the same terms as everyone else, often regardless of the cost of the services provided.
- Finally, the political reality is that residential landowners vote, and not surprisingly, they tend to vote their own interests.

Commercial and industrial landowners are easier to identify and administer than numerous small residential holdings. Probably as a result of these factors, it is easier to assign users costs to the services they consume. In addition, many businesses provide some of their own services, especially security, but including utilities and even a degree of fire protection. Despite the growing tendency to limit cross-subsidies of residential services by businesses, this practice is still common.

Owners of undeveloped forestland are generally a minority. Worse, they may not live in the community where they own land, distancing them even more from the political process. Still, they may have property tax advantages that recognize and compensate their public-good contributions. Even with such advantages, their favorable public budgetary impacts depend primarily on the fact that non-residential forest lands consume virtually no public services, especially in the fire-resistant Northeast. As a result, they also tend to subsidize residential land use.



### Strategies for Keeping Forests as Forests

Given that forest land subsidizes residential land use, it is little wonder that new housing is sprawling across the Northeastern forest. Many methods have been employed to combat this trend, and to reduce its tendency to strain public budgets and fragment forests. Among these methods are:

- Forest tax preferences are a more voluntary approach, but programs that mandate reimbursement to communities by the state can also be costly. Tax preferences can take the form of “current use” assessment, specific rates for forest land, or optional participation in programs that trade lower property tax rates for yield taxes on timber at time of harvest. To be most attractive to forest owners, programs should be stable. Even though these programs are voluntary, many landowners are reluctant to participate in such programs because they do not want to limit their future options, or because they change over time, for example.
- Another approach is to help landowners lower management costs and increase incomes by offering technical land management assistance free or at less than cost. Already-existing programs at the federal, state, or local level could be used. This approach encourages better land management, but requires active landowner participation and can also be quite costly.
- Conservation easements – generally, the purchase of development rights – is an approach targeted directly at keeping forests in a forested condition. This strategy can also be costly, but the cost can be reduced if landowners donate easements. The landowners benefit by receiving income and property tax reductions, but the easements still must be monitored for compliance, at some cost to the holder of the easement.

### Summary & Conclusions

Given the public benefits that forests produce, it would make sense for society to provide incentives to landowners to keep land in a forested condition. In fact, society often does, in the form of property tax advantages, technical services, and even through the purchase of development rights. On the other hand, society also tends to provide disincentives for forest landowners through regulation, tax disadvantages, trespass, and liability law. At a minimum, society could improve its support of forests through careful consideration of the effects of a whole host of public policies.

Often the reason for failing to improve forest-based incentives is that society believes we cannot afford it. Society in fact can afford it, and can even save money in the long run. The biggest threat to the public benefits associated with forests is the tax advantages that accrue to residential development that fragments the land.

Property tax programs that tax forest land based on their current use are incentives that can be helpful. These programs must be stable, however, if they are to attract significant forest acreage over the long-term.

A number of approaches are available to reduce the threat of residential sprawl that leads to forest fragmentation, but each requires a change in current practice. The strength of these approaches is that each is based on making each land ownership responsible for bearing its own cost of development by using market – rather than regulatory – incentives. The disadvantage is that this approach is a significant departure from current practices that will involve some short-term sacrifices until a more equitable strategy can be fully implemented. Short-term subsidies and other incentives could be used to help make the transition.

Better land use, more responsible public finances, and freedom of choice – who could ask for a better combination.

## Appendix A - The Reliability of Cost-of-Community-Services Studies

“Cost-of -community-services” studies have become a standard approach to analyzing issues of sprawl and land development (see, e.g., Morse, 1988, and Lincoln Institute, 1992). The methods are well documented, are apparently consistently applied, and are producing consistent findings. While these studies are generally well accepted, the methods and studies are not perfect. To deal with real-world complexities, they use several simplifying assumptions:

- Generally, they focus only on property taxes, and/or fail to consider financial or service transfers among different units and levels of government. As a result, they might miss the true costs and incentives – and the accompanying benefits – that governmental units face. Since state and federal grants to local governments are often funded through non-property taxes but subsidize residential, commercial, and industrial development, actual costs may be understated.
- They consider the budgetary benefits and costs of different land uses in isolation and not as they affect and depend on each other. For example, commercial and industrial development generally occurs in combination with residential development, so their joint tax picture needs to be considered together.
- They generally consider a “snapshot” in time based on current cash flows, rather than matching costs and revenues over time. Similarly, allocating the costs of infrastructure such as roads and utilities to various land uses is a difficult and inherently somewhat arbitrary. Difficulties in specifying an appropriate discount rate for comparing costs and revenues that occur at different times is a special component of this problem. The net effect of this simplification, however, varies from situation to situation.
- Almost all consider average costs, not the marginal costs that are more difficult to quantify, more relevant to many policy decisions, and often lower. As a result, estimates may be biased, and more importantly, fail to differentiate cases of excess public infrastructure with its overstated costs, from those requiring major infrastructure investment, with understated costs..
- Many fail to distinguish between different sub-categories of land use, land users, or their resulting tax liability. This is particularly important for forest land, which:
  - differs in many respects from the agricultural land with which it is often lumped in these studies,
  - in itself varies greatly in location, travel costs, service needs, and tax program coverage, and
  - has received little specific attention differentiating forestland from other “open space” land uses in these studies.

As a result of these factors, the favorable findings for open land would generally be even more favorable if focused specifically on forestland. In spite of these difficulties, it is still clear that forest lands, in general, cost the taxpayer much less than they return, even without counting the secondary budgetary benefits that they induce or the free public benefits that they produce. This is especially true when forestland does not receive preferential property tax treatment. In any event, scattered development in forest land both decreases its public benefits and costs government more than does concentrated, well-planned development.

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