

Chapter 3



ECONOMIC AND TAX ISSUES

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Introduction

Economic conditions and tax policies affect land use decisions everywhere, but their effects on the rate of change in land use are particularly large in the wildland-urban interface. We begin this chapter with a brief economic history of the South and a description of the macroeconomic trends and conditions that affect microeconomics at the wildland-urban interface. Next comes a description of the many Federal and State taxes that affect nonindustrial private landowners. This is followed by a summary of historical trends in rural land taxation and a discussion of how taxes affect land use change at the wildland-urban interface. The chapter concludes with discussion of existing economic and tax tools and of challenges and opportunities in research, education, and policy. ▶



Economic Trends and the Wildland-Urban Interface

Historical Trends in the South

From its earliest settlement through the end of the 19th century, the South's economy was based on agriculture and natural resource extraction. The population was dispersed throughout the region, and very few major metropolitan areas developed. Around the turn of the century, southern governors and mayors sought to attract northern industries to the area by touting the region's modest tax rates and inexpensive labor, and by offering relocation subsidies. Because subsidies often included substantial tax incentives, industries contributed little to the generation of tax revenue. With modest tax revenues, local governments could not increase school spending, so the low-skilled labor pool remained that way, and wages remained low. Furthermore, many of the industries that came south were declining in competitiveness, and their move south was a temporary stop on their way overseas.

Changes in these trends came gradually, but their influence throughout the South lasted until the 1970s and continues to affect parts of the region today (Autry and others 1998, Cobb 1990). Since 1978, nearly 4 of every 10 jobs gained in the United States were in the South. During the same period, the number of jobs increased by 54 percent in the South and by 38 percent in the rest of the Nation. While the South has narrowed the gap, it still trails the Nation in per capita income. A generation ago the South depended on tobacco, textiles, other low-skilled blue-collar manufacturing processes, and northern capital. While portions of the South still depend on these economic sectors, today southern industry draws on global capital to fuel a diversified economy that includes automotive, chemical, computer manufacturing, and blue- and white-collar service sectors (Bishop and others 2000). The South is also attracting new residents. Between April 1, 1990, and April 1, 2000, the South's population grew by 13.9 percent, mostly attributed to immigration from other countries and migration to the South from other regions of the United States. A more detailed description of demographic changes in the South is provided in chapter 2.

For much of the 20th century, industrialization of the South occurred without significant urbanization (Schulman 1994). Today, however, the majority of job and population growth occurs in and around large cities, and 7 out of 10 southerners live in metropolitan areas (**fig. 3.1**). On average, the South's major metropolitan areas grew faster than 3 percent per year since 1970 (Autry and others 1998) (refer to chapter 2 for details on urban growth and rural transition). Unlike urban areas in the Northeast and Midwest, southern cities have adopted a sprawling growth pattern with urban centers surrounded by successive rings of suburban neighborhoods and bedroom communities. For example, in Charleston, SC, for each 1-percent increase in population since 1973, urban land use increased by 6 percent (Allen and Lu 1999). During the same time period, the population of Mobile, AL, grew 25 percent while its urban footprint doubled (Southern Environmental Law Center 1999). Woodstock, GA, has over 66,000 residents, but it and surrounding areas in southern Cherokee County host fewer than 14,000 jobs. The vast majority of these residents commute to Atlanta to work (Brookings Institution 2000). Further discussion related to land use patterns and public policy is presented in chapter 4.



Photo courtesy of USDA Forest Service

Figure 3.1
In the South, the majority of job and population growth occurs in and around large cities.

Macroeconomic Trends

Economic factors involving areas larger than one or two counties fit the term “macroeconomics.” Macroeconomic trends contributing to change at the wildland-urban interface are, by and large, related to efforts to improve the southern economy as a whole. As chapter 4 indicates, local governments receive most of their funding from property and sales taxes. This creates an incentive to promote economic development at the local level. For example, in the early 1990s South Carolina successfully lobbied German automaker BMW to locate its American

“We don’t have any sources of income in local government other than property tax, so that tends to drive an awful lot of these issues. If your only money is coming from the land, you have some self-interest in seeing it developed.” Virginia

automobile assembly plant on Interstate 85 near the city of Spartanburg. Initially drawn to the area by its relatively low cost and abundant blue- and white-collar labor, by the close proximity of a land-grant university with a strong engineering program, and by easy access to the interstate highway transportation system, BMW finalized its decision when the State provided special tax incentives and agreed to make substantial improvements to the Greenville, SC, airport. Anchored by BMW, BASF, and Michelin, more than 90 international companies are located in the area. South Carolina’s portion of Interstate 85 is referred to as “America’s autobahn” (Bishop and others 2000). Pioneered in North Carolina’s Research Triangle Park, this exploitation of available labor, interstate highways, universities, and incentives has been a powerful force in the modern southern economy. Urban areas throughout the region have been best positioned to utilize this multifaceted approach and have grown, while rural areas dependent primarily on blue-collar manufacturing industries and agriculture have declined. Chapter 2 provides additional information on shifts in employment within the southern economy.



Photo by Annie Hermansen, USDA Forest Service

Figure 3.2
Roads are often widened to accommodate increased development in the interface.



Photo courtesy of USDA Forest Service

Figure 3.3
An increase in development in the wildland-urban interface can cause some residents to seek new development on a new interface.

As these cities grow, interface areas become more attractive to develop and to live in. Rural landowners find it financially attractive to subdivide farms and forests. In fact, rising land values and property taxes force some landowners to subdivide to keep any land at all. New residences and business parks require sewer, water, garbage, fire, emergency medical services, and schools, but especially, they require bigger roads to facilitate increased automobile traffic (fig. 3.2). Bigger roads bring additional interface areas within reasonable commuting time from city centers, begetting more residential development. Lower home prices in these new developments draw families out of more expensive and congested areas. Congestion and other negative factors increase in developed, former interface areas, and eventually reach levels that spark some residents to seek a new development on a new interface, repeating the cycle (fig. 3.3).

A reluctance to utilize zoning restrictions, land use planning, and other growth management strategies is the final macroeconomic factor in the southern interface (see chapter 4). The result is that developers for the most part pay only a fraction, if any, of the costs borne by governments to extend services to new developments (Pae 1997).

The pace of urban development in the South is sobering. In Atlanta, over 350 acres of open space are converted each week, and in northern Virginia, on average, 28 acres are converted each day. Whereas the United States lost 6 percent of its farmland between 1982 and 1997, the South lost 10 million acres, or 14 percent (Southern Environmental Law Center 1999).

Unknowns include the costs related to regional declines in environmental quality resulting from urbanization, such as reduced air and water quality, increased energy costs, increased storm runoff and sewer infiltration, and loss of recreation opportunities. Also not known is the increased monetary and nonmonetary value of rural land to an urbanizing society. All of these costs can be associated with human influences to forest ecosystems (see chapter 5).

“I’d take you to several places across north Georgia that have very intense commercial development, shopping centers, factory malls, and that type of thing. Then you go a mile down the road and look at the small farms and the ‘for sale’ signs on those properties.” Georgia

Microeconomic Trends

The term “microeconomics” describes localized conditions such as changes in prices, the amount collected in tax revenues, expenditures to provide services, and other situations that might be faced by an individual family, county, or municipality. Microeconomic conditions can be divided into two categories: monetary and nonmonetary. Monetary costs are measured in dollars, whereas nonmonetary, or “quality-of-life,” costs are expressed in other terms. Governments, private individuals, farmers, and forest land owners are among the many who pay these microeconomic costs.

Land development in the wildland-urban interface generates less revenue than municipal governments spend to provide services to the area. Numerous studies have shown that municipalities spend between 15 and 80 cents in services for every dollar of tax revenue generated by farms and forests, and between 15 and



Photo by Annie Hermansen, USDA Forest Service

Figure 3.4
Municipalities spend far less to provide services for farms and forest lands than they do for residential development.

47 cents for every dollar of revenue generated by commercial development (**fig. 3.4**). In contrast, spending on services for residential development ranges from \$1.04 to \$1.55 per dollar of revenue collected (Esseks and others 1999). These costs would have been even larger had the nonmonetary value provided to municipal governments by forests been considered. For example, the trees lost to development in the Puget Sound region since 1973 would have reduced stormwater storage requirements by 1.2 billion cubic feet—the equivalent of a \$2.4 billion stormwater management system (Smith 1999).

Many southern examples illustrate the revenue problem. Prince William County, VA, spent \$3,838 to provide services to the average single family home, while the same home generated \$2,150 in revenue (Lipton and Perez-Rivas 1996). Fairfax County, VA, had only \$700 million of the estimated \$1 billion needed to provide schools, fire stations, libraries, and other infrastructure to growing interface areas. Nearby Loudon County anticipates the need to build 22 new schools in the next 6 years (Frankel and Fehr 1997, Katz and Liu 2000). An additional cost factor is damage to road and bridge infrastructure as increased traffic exceeds original design standards. Additional discussion on infrastructure costs is provided in chapter 4.

While this arrangement appears to favor private individuals in residential settings who receive more in services than they pay in taxes, a look at some of the monetary and nonmonetary costs they face presents a different picture. They face lower quality, overcrowded schools that expend a significant portion of their budgets on busing and less efficient fire, police, and ambulance services. Emergency units have increased response times as they attempt to cover larger territories and longer distances (Esseks and others 1999). The numbers of miles driven by interface residents and the time they lose to traffic delays have increased in most large- and medium-sized cities (**fig. 3.5**). Between 1987 and 1997, Virginia's population increased by 16 percent while the number of miles per driver increased by over 60 percent. Atlanta, GA, area residents drive the most miles per person per day (34 miles) of any city in the United States (Southern Environmental Law Center 1999). Average household transportation expenditures by Houston, TX, and Atlanta, GA, residents in 1997–98 were \$8,840 and \$8,513, respectively, or slightly more than 20 percent of total household expenditures (McCann 2000). Finally, there is a social cost that is often overlooked: resources diverted to providing services and infrastructure to interface areas reduce the amount available for similar actions in city centers. Businesses migrate outward from these areas, isolating poorer and less-educated residents in stagnating or declining metropolitan zones. In some instances, low-skilled, blue-collar workers cannot afford to commute to suitable jobs available in interface areas (Katz and Liu 2000).

Rural landowners in the interface also bear their share of costs. In a 1999 study, researchers at the Southern Rural Development Center found that highest rural land prices were exclusively in counties adjoining metropolitan areas.

Figure 3.5

The number of miles that interface residents commute is increasing for many medium- and large-sized cities.



Photo by Nick Cowie

Furthermore, they estimated that row-crop agriculture in high-value areas throughout the South would not generate a 4-percent rate of return to a landowner (Hite and others 1999). The implicit costs of rural land management in the wildland-urban interface are further increased by the amount owners forgo in returns they could have gained by selling the land and investing the proceeds in other venues (Hite and others 1999).

“I work with landowners trying to encourage them to manage their timber, and they’re getting offered \$10,000 per acre for the land. I’m trying to tell them to plant trees on it, and in thirty years they might see a profit.” Georgia

Economic returns to owners of forests and wildlands are more difficult to calculate. Investors consider not only the productive capacity of the land, but interest rates, fluctuating stumpage values, and irregularly timed returns on management treatments, as well as a long time horizon between revenue-generating events. In a Mississippi example looking at three time periods, three different rates of return were calculated (Hartsell and Bullard 2000). Forestry-based returns were noticeably higher than the rates of return for row-crop agriculture identified by Hite and others (1999). This work looked at mature, undisturbed timberland and not at forest land at the urban interface, where high land prices (as much as \$5,000 per acre in the case of northern Virginia) raise real and implicit forest land management costs and lower returns to timber investments (Hite and others 1999).

Tax Issues Driving Change

Throughout the United States, Federal and State taxes affect every aspect of rural land ownership. The land itself is taxed annually, income derived from the land is taxed, the transfer of land and other assets from one generation to another is taxed, and, in several States, the act of removing timber or minerals from the land is taxed. Depending upon how they are structured, taxes can accelerate development at the wildland-urban interface or help shape development to meet the needs of a growing population while retaining as much land as possible in a rural condition.

Individuals and families own 97 percent of farm acres (National Agricultural Statistics Service 1999) and 70 percent of private forest acres (Birch 1996) in the South. Except where otherwise noted, we focus here on the effect of Federal and State taxes on these nonindustrial private landowners. Individuals and families hold land for a variety of reasons, many of which are unrelated to financial returns, and few people respond solely to economic pressures. At the same time, however, an understanding of the economic pressures that Federal and State taxes place on rural landowners can provide insight into the reasons behind land use changes occurring at the wildland-urban interface.

Federal Taxes

Income tax—Since its institution in 1913, provisions have been added to the Federal income tax to encourage improved management and stewardship of farm and forest land. These provisions help owners retain their land in rural uses. Some examples are:

- ◆ Farmers can average their income over 3 years, a provision that is not available to other taxpayers (Internal Revenue Service 2000).
- ◆ Farmers also can immediately deduct part or all of the cost of qualifying expenditures for soil and water conservation, expenditures that other taxpayers must capitalize (Internal Revenue Service 2000).
- ◆ Farmers and forest owners can exclude from their gross income part or all of qualifying payments they receive from cost-sharing programs such as the Environmental Quality Incentives Program, the Forestry Incentives Program, the Stewardship Incentives Program, the Wetlands Reserve Program, or the Wildlife Habitat Incentives Program (Haney and others 2001).
- ◆ Forest owners can take a 10-percent investment tax credit on and amortize (write off) over 8 tax years up to \$10,000 per year of reforestation expenses (Haney and others 2001).
- ◆ Landowners who sell natural resources, such as timber or minerals, can recover their investment in the resource by taking a depletion deduction (Haney and others 2001, Siegel 1978).

Income from the sale of timber generally can qualify as a “long-term capital gain,” which is taxed to individuals at a maximum rate of 20 percent (Haney and others 2001). Most other income from rural land is “ordinary income,” which is taxed at rates that range as high as 39.6 percent. This is true whether the income is farm related from the sale of field crops or livestock (Internal Revenue Service 2000) or forest related from the sale of products like pulpwood or firewood made from harvested trees, pine straw, mushrooms or medicinal plants gathered from the forest, or from hunting leases (Haney and others 2001) (**fig. 3.6**).

The Federal income tax has the greatest economic effect of any tax on working land in the South (Greene 1995, 1998), because it applies uniformly across the region and because the tax rates are high compared to most other taxes. The economic effect of the tax is to increase the variable cost of owning or managing rural land. The tax, therefore, influences production decisions (Gregory 1972).

Particularly if the opportunity cost of keeping land in its present use is increasing, the Federal income tax places pressure on rural owners to sell or convert their land. At the wildland-urban interface, an area undergoing slow development might see a gradual shift from less intensive to more intensive uses over time, with



Photo by Robert L. Anderson, USDA Forest Service

Figure 3.6
Income from the sale of nontimber forest products, such as shitake mushrooms, is taxed at rates that range as high as 39.6 percent.

Figure 3.7

In the wildland-urban interface, an area undergoing slow development may see a gradual shift from rural to developed uses; an area undergoing rapid development may see a sudden conversion, with little or no intermediate shift in uses.



Photo by Hans Reker, University of Florida

individual holdings at the edge of the interface being converted from rural to developed uses. An area undergoing rapid development might see a sudden conversion from rural to developed uses, with little or no intermediate shift in uses (fig. 3.7).

Estate and gift taxes—The Federal Government has taxed transfers of estates since 1916 and lifetime gifts since 1932 (Haney and Siegel 1993). Congress combined the estate and gift taxes into a single structure in 1977. As society in general has become wealthier, Congress has redefined what constitutes a taxable transfer. At present, gifts up to \$10,000 per recipient per year plus other lifetime gifts and estate values below the amount shielded by the “unified credit effective exemption” are not taxed. The Economic Growth and Tax Relief Reconciliation Act of 2001 increases the unified credit effective exemption from \$675,000 to \$1 million beginning in 2002 and gradually reduces the top rate for Federal estate and gift taxes from 55 to 45 percent by 2009. The act eliminates the estate tax entirely and sets the top tax rate for gifts equal to the top individual income tax rate beginning in 2010. The act itself, however, is scheduled to “sunset” at the end of that year, returning estate and gift taxes to current law (Manning and Windish 2001).

Many strategies exist to reduce or eliminate the impact of the estate tax, so the brunt of the tax is borne by the estates of people who fail to plan or who do not realize the value of their assets. Sharp increases in timber and land values over the past two decades (Morrow and Fritschi 1997, Peters and others 1998) have put many rural landowners into the second group.

“Part of what’s driving all the loss of our farmland is taxes. When the older generation dies, the younger generation that now has this large farm can’t afford to pay the estate taxes on that property and has no choice but to at least sell part of it, if not all of it, in order just to pay the taxes.” Virginia

The economic effect of estate, inheritance, and gift taxes is difficult to quantify, because they occur at irregular intervals. They do, however, increase risk and place a premium on keeping management options open. For rural landowners, the consequences of inadequate estate planning can be severe, requiring the premature sale of timber or the conversion or sale of land if other family assets are not adequate to pay the estate tax. A study undertaken to quantify the effect of the Federal estate tax on forest owners found that rural landowners in general are many times more likely than the U.S. population as a whole to be affected by the estate tax. The study estimates that, nationwide, on the order of 2.6 million acres

of forest must be harvested and 1.3 million acres must be sold each year to pay the Federal estate tax (Greene and others, in press).

The cost of minimizing the estate tax also is high, both in terms of the fees paid to estate planning professionals and the personal cost of following tax-minimization strategies. Virtually all of the strategies involve transferring ownership or surrendering control of assets through the use of gifting, trusts, or ownership structures like family-limited partnerships and limited-liability corporations. Rural landowners' inability or unwillingness to sustain the dollar cost, loss of control, and management changes required to minimize the Federal estate tax is another reason an inordinately high proportion of rural estates incur the tax.

State Taxes

Income taxes—The Southern States vary widely in the way they tax personal income. The tax codes of seven States correspond closely to the Federal income tax. Of the five remaining States, Alabama, Arkansas, and Tennessee have their own definitions of taxable income, while Florida and Texas do not tax income at all (Bettinger and others 1989). State income taxes have a smaller impact on rural landowners than the Federal income tax, because their rates are a fraction of the comparable Federal rates (Bailey and others 1999). In terms of their economic effects, State income taxes generally mirror those of the Federal income tax (Holley 1988): they influence production decisions and contribute to the development of land in areas that are undergoing development.

Estate, inheritance, and gift taxes—Southern States also vary widely in the way they tax the transfer of estates and gifts. Like the Federal Government, Mississippi and South Carolina levy an estate tax on the right of a decedent's estate to transfer property. Kentucky, Louisiana, North Carolina, and Tennessee, on the other hand, levy an inheritance tax on the right of heirs to receive property. The remaining States impose a "piggyback" tax, equal to the credit for State death transfer taxes allowed on the Federal estate tax return. Four States—Louisiana, North Carolina, South Carolina, and Tennessee—also tax gifts made during the donor's lifetime (Walden and others 1987). As with Federal estate and gift taxes, most of the cost of State transfer taxes falls on families that fail to plan, and tax minimization strategies entail giving up ownership or control of the land. Researchers have noted that the tax burden in States that have a piggyback tax is somewhat lower than in States that use other types of transfer taxes (Walden and others 1987).

Property and yield taxes—As in other regions of the United States, rural land in the South originally was assessed and taxed based on its "highest and best use," using an unmodified ad valorem property tax. Highest and best use typically is interpreted as the use that would generate the greatest economic return to the owner, given the overall level of development in the area. By this method, farm or forest land in an area undergoing conversion to commercial use would be assessed and taxed as commercial rather than agricultural land, increasing the property tax burden and placing economic pressure on the owner to convert or sell. Such an occurrence was rare through the early decades of the 20th century, when the South was predominantly rural. As the region developed, however, it became clear that an unmodified ad valorem property tax encourages too-rapid conversion of rural land. The approaches the Southern States have taken to address the problem of taxing rural property appropriately fall into three categories: modified assessment laws, yield tax laws, and exemption laws (Siegel and Hickman 1989).

“ Involved with that are the taxation issues for farmlands and agriculture where the farmer wants to keep his one hundred acres and thirty head of cattle. Even with the preferential tax assessment we have in Georgia, which helps some, to me it doesn't seem to go far enough.” Georgia

Under a modified assessment law, rural land is appraised differently from other forms of property. The assessed value of the land may be fixed, calculated using a reduced assessment rate, or calculated based on the land's actual use instead of its highest and best use. All Southern States have modified assessment provisions for rural land (Siegel and Hickman 1989).

Yield tax laws and exemption laws apply only to forest land. Under a yield tax law, the forest is divided into land and timber components for property tax purposes. The land is taxed annually, but the timber is not taxed until it is harvested. The deferred property tax on the timber most often is based on the amount, or yield, of the harvest. Alabama, Louisiana, and Mississippi have yield tax laws (Siegel and Hickman 1989). Exemption laws remove forest land, timber, or both from the property tax rolls, either permanently or for a specified number of years. Alabama, North Carolina, and Tennessee have exemption laws; in all three States, the exemption applies to essentially all standing timber (Siegel and Hickman 1989).

Two Southern States have helped pioneer a policy under which landowners can opt to apply for a special assessment that further reduces their property tax in exchange for accepting certain use restrictions. Tennessee's Greenbelt Program was one of the first of this type in the United States. Georgia also passed a version of this policy—the Conservation Use Valuation Assessment program—in 1991. The Georgia law, however, limits the program to ownerships under 2,000 acres. Larger ownerships, including all forest industry firms, remain under an ad valorem property tax. The results of Georgia's approach have been mixed. In the counties surrounding expanding urban areas, rising ad valorem property taxes often reduce the returns to agriculture and forestry below a level that is acceptable to owners who cannot participate in the program. Forest industry firms in north Georgia, for example, are finding they make the most profit by performing what they term a “residential cut,” then subdividing and selling their interface holdings for development (Newman and others 2000).

Because they occur annually, property taxes have a greater potential than other State taxes to influence owners' land use decisions (Greene 1995). The economic effect of property taxes is to increase the fixed cost of owning or managing rural land. Thus, property taxes influence owners' decisions about whether or not to continue to hold land (Gregory 1972). As shown above, an ad valorem property tax promotes fragmentation, conversion, and development of rural land. In contrast, a modified assessment law should result in enclaves of land remaining in rural uses as the area around them develops. The stable property tax rate would enable families dedicated to a rural lifestyle to resist pressures to convert or sell—at least until the later stages of development.

Severance taxes—Seven Southern States—Alabama, Arkansas, Louisiana, Mississippi, North Carolina, South Carolina, and Virginia—levy a severance tax when timber is harvested or minerals are removed from the land. All of these

States with the exception of Louisiana use part or all of their timber severance tax receipts to support a forestry incentive program or another forest-related purpose (Haines 1995). The economic effect of a severance tax is minor (Greene 1995); taken alone, it would have little effect on a landowner's management or land ownership decisions.

Existing Economic and Tax Tools

So far, this work has focused on traditional economic, tax, and policy models that generally treat profit maximization (and loss minimization) as primary goals of human economic behavior. A challenge that remains is moving toward an approach that incorporates intrinsic, nonmonetary values of wildlands along with their monetary values. Ecological economics is a new discipline that has made strides toward this goal. Mitigation banks for carbon sequestration and wetlands protection are examples of the ecological economics approach. Under existing and proposed programs, forest land owners whose properties qualify are able to capture normally unrealized revenues from the intrinsic values of their lands by expanding their management efforts to include wetland restoration and carbon sequestration in living trees. These revenues may make it more profitable for landowners to continue rural land uses in interface areas, thereby slowing sprawl and land conversion.

Conservation easements represent another popular and effective method of incorporating social values and property rights with tax and other land valuation methods (Bick and Haney 2001) (see chapter 4). Underutilized opportunities for preserving forests at the interface include landowner cooperatives and forest banks (see chapter 6). These two conservation vehicles convert the normally irregular returns to forest investments into smaller annual payments. They can also keep rural land uses in interface areas economically competitive. However, these have proved largely ineffective up to now in most U.S. applications. One challenge to conservation easements and other approaches to reducing the rural landowner's tax burden and improving profitability is the lack of policy support at the municipal, county, State, and Federal levels. Tax incentives alone cannot prevent the conversion of rural land at the wildland-urban interface, nor can financial agreements that depend on group consensus. With a population that is growing, that is increasingly wealthy, and that is increasingly concerned with its quality of life, economic pressure will yield continued urban expansion. The best that may be accomplished is to eliminate tax and other policy incentives for urban sprawl.

Although there has been some policy action at the State and local levels to improve the economic and tax situation in the interface, these approaches are limited in their effectiveness or are too new to have a track record. State programs include Georgia's regional transportation authority in Atlanta, which has jurisdiction over transportation and air quality in the metropolitan area, and Tennessee's Annexation Reform Act of 1998, which directs counties to adopt comprehensive land use plans or risk losing eligibility for State infrastructure funds. Local and

“I would like to see the State legislature start looking at tax incentives for conservation easements and for the purchase of development rights by the State—ways to try to help keep these areas in green space despite the fact that development around them is causing the taxes on those properties to go up.” Georgia

county-level programs are primarily limited to tree protection ordinances and road protection ordinances, but some counties and municipalities are moving toward programs that hold developers accountable for meeting a greater percentage of the costs of extending services to new interface subdivisions. Tree protection ordinances are effective at maintaining vegetation, but ordinances restricting mud from roads and limiting the weight of vehicles allowed to drive them will make timber management, at least, less cost-effective in certain jurisdictions (see chapters 6 and 7).

There currently is considerable interest in strategies to further reduce the property tax burden on forested and other rural land near the wildland-urban interface. Many strategies involve use of conservation easements (Beauvais 2000, Best 2000) (refer to chapter 4 for more policy-related tools). Other strategies involve governmental action to encourage the transfer of riparian land and forested buffers around new developments from private to public ownership, which concentrates owners' property tax liability on land that is economically operable (Honecny 2000).

Income tax incentives that have been under discussion during the past several years and that would reduce the Federal income tax burden on forested land include:

- ◆ Income averaging.
- ◆ Reducing the tax rates for long-term capital gains, either across-the-board or according to the number of years a capital investment is held.
- ◆ Enhancing the amortization provisions for reforestation.
- ◆ Permitting the immediate deduction of reforestation expenses.
- ◆ Extending the tax incentives available to owners who manage their forest holdings for a profit to owners who manage primarily for environmental or social purposes.

In addition to reducing the Federal income tax burden, the third and fourth of the above incentives have the potential to improve the management and stewardship of rural land because they are linked to reforestation of harvested areas (Greene 1998). The fifth incentive would encourage owners in all timber types to make environmentally beneficial investments in forest stewardship (Wear and Greis, in press).

With the percentage of estates subject to the Federal estate tax increasing yearly, there is active interest in additional ways to reduce the estate tax burden (Herman 2001). The methods under discussion include eliminating the estate tax altogether, reducing the rates, increasing the exemption, increasing the exclusion for interest in a family-owned business, and adding an exclusion for farmers and other rural landowners.

Needs

Research clearly has a role in:

- ◆ Determining which methods are most economically effective and socially acceptable for improving social and environmental conditions in the wildland-urban interface.
- ◆ Determining what factors lead to southern sprawl. Lessons can be learned from American cities outside the South that have successfully concentrated population growth on fewer acres.
- ◆ Identifying the monetary and nonmonetary costs related to changes in environmental quality resulting from urbanization, as well as the monetary and nonmonetary values associated with wildland and rural land to urbanizing areas.
- ◆ Identifying methods that encourage reclaiming of abandoned urban industrial sites and discourage unnecessary “green space” development.
- ◆ Examining the microeconomic factors affecting forest land investment in interface areas. This approach should include timber production as a management objective, but should also be targeted for landowners who are primarily motivated by the nonmarket attributes of their forest land.
- ◆ Determining the impact of various types of property, income, and transfer taxes on land use change, as well as the impact of tax-related landowner incentives programs.
- ◆ Demonstrating the most effective linkages of public policy with tax reform.

Educational needs include:

- ◆ Programs to alert potential new interface residents to the microeconomic conditions they will experience. This role necessitates new extension and other technology transfer agents. A comprehensive program must include outreach to county executives, county councils, city planners, and other local officials.
- ◆ Programs that target policymakers. Positive changes in economic and tax issues at the interface depend almost entirely on policymakers. Efforts by individuals to minimize their tax burden or maintain the profitability of their undeveloped land are not likely to succeed in the absence of a committed vision for land use.

Conclusion

The economic and tax conditions facing rural landowners at the wildland-urban interface are numerous and complex. Some economic issues have tangible and easily quantified monetary costs associated with them; others that are just as important, such as quality of life, are harder to link to a price tag. Property, income, and transfer taxes, in combination with high land prices, make it difficult for some owners to keep their land in rural uses or to transfer their land to the next generation. Often, these economic and tax relationships and their contribution to

land use change at the urban-wildland interface are poorly understood. Some tools to help landowners maintain their land in a rural condition exist, but are either underutilized or of limited effectiveness without a concerted effort by policymakers to integrate and coordinate Federal and State tax codes and landowner assistance programs.

Literature Cited

- Allen, J.; Shou Lu, K.** 1999. Modeling and predicting future urban growth in the Charleston area. Clemson, SC: Clemson University, Strom Thurmond Institute of Government and Public Affairs. 5 p. www.strom.clemson.edu/teams/dctech/urban.htm. [Date accessed: January 16, 2001].
- Autry, G.B.; Bishop, C.E.; Cunniff, C. [and others].** 1998. The state of the South 1998. Chapel Hill, NC: MDC, Inc. 57 p. www.mdcinc.org/S_of_s.pdf. [Date accessed: January 16, 2001].
- Bailey, P.D.; Haney, H.L., Jr.; Callahan, D.S.; Greene, J.L.** 1999. Income tax considerations in the South: a case study on tax planning. *Journal of Forestry*. 97(4): 10-15.
- Beauvais, T.W.** 2000. The role of the Forest Legacy Program in preventing forest fragmentation of forest ownerships. In: DeCoster, L.A., ed. *Forest fragmentation 2000: sustaining private forests in the 21st century*. Alexandria, VA: Sampson Group, Inc.: 359-364.
- Best, C.** 2000. A strategy for conserving America's private forests. In: DeCoster, L.A., ed. *Forest fragmentation 2000: sustaining private forests in the 21st century*. Alexandria, VA: Sampson Group, Inc.: 331-335.
- Bettinger, P.; Haney, H.L., Jr.; Siegel, W.C.** 1989. The impact of Federal and State income taxes on timber income in the South following the 1986 Tax Reform Act. *Southern Journal of Applied Forestry*. 13(4): 196-203.
- Bick, S.; Haney, H.L., Jr.** 2001. *The landowner's guide to conservation easements*. Dubuque, IA: Kendall/Hunt Publishing Company. 188 p.
- Birch, Thomas W.** 1996. Private forest-land owners in the United States, 1994. Resour. Bull. NE-134. Upper Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 183 p.
- Bishop, C.E.; Austin, C.; Guillory, F. [and others].** 2000. The state of the South 2000. Chapel Hill, NC: MDC Inc. 111 p. www.mdcinc.org/state_of_the_south_2000.htm. [Date accessed: January 16, 2001].
- Brookings Institution.** 2000. Moving beyond sprawl: the challenge for metropolitan Atlanta. Washington, DC: The Brookings Institution, Center on Urban and Metropolitan Policy. 48 p. www.brook.edu/urban/atlanta/toc.htm. [Date accessed: January 16, 2001].
- Cobb, J.C.** 1990. The sunbelt South: industrialization in regional, national, and international perspective. In: Mohl, R.A., ed. *Searching for the sunbelt: historical perspective on a region*. Athens, GA: The University of Georgia Press: 25-46.
- Esseks, J.D.; Schmidt, H.E.; Sullivan, K.L.** 1999. Fiscal costs and public safety risks of low-density residential development on farmland: findings from three diverse locations on the urban fringe of the Chicago metro area. DeKalb, IL: American Farmland Trust, Center for Agriculture in the Environment. 100 p.
- Frankel, G.; Fehr, S.C.** 1997. As the economy grows, the trees fall. *The Washington Post*. March 23: A (col. 01).
- Greene, J.L.; Cushing, T.; Bullard, S.; Beauvais, T.** [In press]. Effect of the Federal estate tax on rural land holdings in the U.S. In: *Proceedings of global initiatives and public policies: first international conference on private forestry in the 21st century*. Auburn, AL: Auburn University, Forest Policy Center.

- Greene, J.L.** 1995. State tax systems and their effect on nonindustrial private forest owners. In: *Managing forests to meet peoples' needs: Proceedings of the 1994 Society of American Foresters/Canadian Institute of Forestry Convention*. SAF Publ. SAF-95-02. Bethesda, MD: Society of American Foresters: 414-419.
- Greene, J.L.** 1998. The economic effect of Federal income tax incentives in southern timber types. In: *Meeting in the middle: Proceedings of the 1997 Society of American Foresters National Convention*. SAF Publ. SAF-98-02. Bethesda, MD: Society of American Foresters: 231-241.
- Gregory, G.R.** 1972. *Forest resource economics*. New York: The Ronald Press Company. 548 p.
- Haines, T.K.** 1995. Current status and trends in timber severance tax legislation in the South. Res. Note SO-377. New Orleans: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 4 p. www.srs.fs.fed.us/pubs/rn/rn_so377.pdf. [Date accessed: December 3, 2001].
- Haney, H.L., Jr.; Hoover, W.L.; Siegel, W.C.; Greene, J.L.** 2001. *Forest landowners' guide to the Federal income tax*. Agric. Handb. 718. Washington, DC: U.S. Department of Agriculture, Forest Service. 157 p.
- Haney, H.L., Jr.; Siegel, W.C.** 1993. Estate planning for forest landowners: what will become of your timberland? Gen. Tech. Rep. SO-97. New Orleans: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 186 p.
- Hartsell, A.J.; Bullard, S.H.** 2000. Financial returns on timberland in Mississippi between 1977 and 1999. In: *Proceedings of the 1999 southern forest economics workshop*. Starkville, MS: Mississippi State University: 277-283.
- Herman, T.** 2001. A change in death and taxes?: debating the options for an estate-tax overhaul. *The Wall Street Journal*. February 26; Sect. C:1, 13.
- Hite, J.C.; Terrell, E.T.; Shou Lu, K.** 1999. Land prices and the changing geography of southern row-crop agriculture. SRDC Publ. 211-B. Starkville, MS: Mississippi State University, Southern Rural Development Center. 65 p.
- Holley, D.L., Jr.** 1988. Impact of State income taxes on timber investments. In: Hamel, M.P., ed. *Forest taxation: adapting in an era of change*. Madison, WI: Forest Products Research Society: 135-137.
- Honeczky, M.R.** 2000. Maryland's forest conservation, protection and restoration programs. In: DeCoster, L.A., ed. *Forest fragmentation 2000: sustaining private forests in the 21st century*. Alexandria, VA: Sampson Group, Inc.: 369-370.
- Internal Revenue Service.** 2000. *Farmer's tax guide*. Publ. 225. Washington, DC: U.S. Department of the Treasury, Internal Revenue Service. 118 p.
- Katz, B.; Liu, A.** 2000. Moving beyond sprawl: toward a broader metropolitan agenda. *The Brookings Review*. 2(18): 31-34.
- Lipton, E.; Perez-Rivas, M.** 1996. Suburban budgeters sound a red alert as needs rise and revenue falls. *The Washington Post*. January 7: A1, A20.
- Manning, R.F.; Windish, D.F.** 2001. Tax analysts' guide to the economic growth and tax relief reconciliation act of 2001. *Tax Notes*. 91(12): 1777-1810.
- McCann, B.** 2000. *Driven to spend: the impact of sprawl on household transportation expenses. A transportation and quality of life publication*. Washington, DC: Surface Transportation Policy Project. 25 p.
- Morrow, R.; Fritschi, B.** 1997. Banking on timber. *Forest Landowner*. 56(6): 25-28.
- National Agricultural Statistics Service.** 1999. *1997 census of agriculture*. Geogr. Area Ser. Washington, DC: U.S. Department of Agriculture, National Agricultural Statistics Service. 529 p. Vol. 1.
- Newman, D.; Flick, W.A.; Dangerfield, C.W., Jr.** 2000. Tax policy and sustainable forestry in Georgia. In: *Proceedings, sustaining southern forests: the science of forest assessment*. <http://www.srs.fs.fed.us/sustain/conf/ppt/newman/tsld001.htm>. [Date accessed unknown].

- Pae, P.** 1997. Developers may be asked to shoulder more of Loudoun County's growth costs. *The Washington Post*. February 18: Sect. B: (col. 3).
- Peters, D.M.; Haney, H.L., Jr.; Greene, J.L.** 1998. The effects of Federal and State death and gift taxes on nonindustrial private forest lands in the Midwestern States. *Forest Products Journal*. 48(9): 35-44.
- Schulman, B.J.** 1994. From cotton belt to sunbelt: Federal policy, economic development, and the transformation of the South, 1938-1980. Durham, NC: Duke University Press. 251 p.
- Siegel, W.C.; Hickman, C.A.** 1989. Taxes and the southern forest. In: *The South's fourth forest: alternatives for the future: Proceedings of the policy and program conference*. Misc. Publ. 1463. Washington, DC: U.S. Department of Agriculture, Forest Service: 101-121.
- Siegel, W.C.** 1978. Historical development of Federal income tax treatment of timber. In: *Proceedings of the forest taxation symposium*. For. and Wildl. Ser. 2-78. Blacksburg, VA: Virginia Polytechnic and State University, School of Forestry and Wildlife Resources: 17-25.
- Smith, D.** 1999. The case for greener cities. *American Forests*. 105(3): 18-22.
- Southern Environmental Law Center.** 1999. *Smart growth in the Southeast: new approaches for guiding development*. Charlottesville, VA: Southern Environmental Law Center; Washington, DC: Environmental Law Institute. 37 p.
- Walden, J.B.; Haney, H.L., Jr.; Siegel, W.C.** 1987. The impact of recent changes in State and Federal death tax laws on private nonindustrial forest estates in the South. *Southern Journal of Applied Forestry*. 11(1): 17-22.
- Wear, D.N.; Greis, J.G., eds.** [In press]. *Southern forest resource assessment*. Gen. Tech. Rep. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.