

Proceedings  
of the  
FOREST TAXATION  
SYMPOSIUM

November 30 - December 1, 1977  
Donaldson Brown Center for Continuing Education  
Virginia Polytechnic Institute and State University  
Blacksburg, Virginia

Sponsored By

Cooperative Extension Service  
School of Forestry and Wildlife  
Resources  
Virginia Polytechnic Institute  
and State University

and

United States Forest Service  
State and Private Forestry

In Cooperation With  
Society of American Foresters  
Economics and Policy Working Group

Edited by  
Harry L. Haney, Jr. & John E. Gunter

Publication FWS 2-78

---

The Virginia Cooperative Extension Service by law and purpose is dedicated to serve all people on an equal and nondiscriminatory basis.

An Equal Opportunity/Affirmative Action Employer

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. W. R. Van Dresser, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

## PREFACE

Taxes perennially concern all classes of forest landowners, industrial and non-industrial, large holdings and small, whether in the North, South, East, or West. As American society increases in complexity, so do forest taxation questions. This complexity, plus recent developments, makes it imperative that persons dealing with tax matters keep well informed. While no one program can provide even a partial solution to all the important questions, this Symposium provided a first step in that direction.

The Symposium was organized to present the latest information available on the economic, administrative, political, and resource allocation aspects of forest tax policy. Topics included past developments, present impact, and future trends in federal income, estate, and gift taxation and in state property taxation. One full day was devoted to federal taxes and one to state and local tax issues.

This volume documents the material presented by individual speakers and panel discussants at the sessions in Blacksburg. Papers are arranged in the order delivered. We have made limited revisions in the manuscripts submitted by the authors to standardize the format, correct grammatical usage, and rectify obvious technical errors. The information presented will be useful to anyone concerned with forest tax matters, especially those in middle and upper level positions from industry, academia, trade, and professional associations, consulting firms, state and federal resource management agencies, and state departments of revenue.

The planning committee for this symposium was John E. Gunter (co-Chairman), Harry L. Haney, Jr. (co-Chairman), Emmett F. Thompson, David W. Klemperer, and Keith W. Utz. Special thanks go to Dean James R. Nichols for his welcoming comments and for serving as official host for the Symposium. We gratefully acknowledge the assistance of the many individuals from VPI & SU, the U.S. Forest Service, and the Economics and Policy Working Group of the Society of American Foresters who contributed to the success of this Symposium.

Harry L. Haney, Jr.  
John E. Gunter

# TABLE OF CONTENTS

	Page
Welcoming Address . . . . . John A. Vance	1

## Session I

Moderated by Zebulon W. White

An Overview of Forest Taxation Pros and Cons of Alternative Forest Taxes . . . . . Mason Gaffney	4
--	---

### Panel: Federal Timber Taxation Past and Present

Historical Development of Federal Income Tax Treatment of Timber . . . . . William C. Siegel	17
Impact of Tax Reform on Timber Taxation . . . . . Meade Whitaker	26
The I.R.S. Viewpoint on Administration of the Timber Provision of the Internal Revenue Code . . . . . Chris Nelson, Jr.	39

## Session II

Moderated by Emmett F. Thompson

### Panel: The Future of Federal Timber Taxation from Differing Perspectives

The Landowner Through a Lawyer's Eyes . . . . . William K. Condrell	46
The Landowner Through a Forester's Eyes . . . . . Kelly C. Niemi	65
The Administration's Tax Program . . . . . Emil M. Sunley	72

## Table of Contents, Continued

	Page
The Perspective of Congress . . . . .	77
Gerald D. Isaac	
The Importance of Death Taxes to Forestry . . . . .	81
Charles F. Sutherland, Jr.	

### Session III

Moderated by William A. Duerr

The Ad Valorem Tax on Forest Property . . . . .	92
Norman R. McDonell	

Panel: Experience in Moving from Ad Valorem  
to Modified Assessment Laws

The Impact of Rejecting Valuation Based on Potential Productivity of Forest and Farm Lands in Georgia . . . . .	99
Leon A. Hargreaves, Jr.	
Florida's Experience . . . . .	107
Fred Brett	
The New York Experience . . . . .	113
John W. Stock	
Factors Affecting Forest Yield Tax Impacts . . . . .	119
W. David Klemperer	

### Session IV

Moderated by Richard A. Skok

Panel: Experience in Moving from Ad Valorem  
to Yield Tax Laws

The Washington Forest Tax Law, Its Development and Implementation . . . . .	134
Billy Dean Scott	
The Washington Yield Tax: A Successful Beginning . . . . .	145
John B. Conklin	
Prospective Economic and Land Use Impacts of California's Yield Tax System . . . . .	157
William McKillop	

Table of Contents, Continued

	Page
Forest Taxation in Michigan: A Long History of Moderate Success with Proposals for Change and Improvement . . . . .	163
Henry H. Webster, Raleigh Barlowe, and J. G. Olmstead	
Administration of State and Local Taxation on Timber and Forest Lands . . . . .	182
James K. Wead	
Where Do We Go From Here? . . . . .	194
Robert S. Manthy	

## WELCOMING ADDRESS

John A. Vance\*

On behalf of State and Private Forestry and the Forest Service, I would like to take this opportunity to welcome each of you to this Forest Taxation Symposium. We are pleased that you could attend this meeting and we are pleased that we could play an active part in it.

We particularly appreciate the opportunity to join with the Cooperative Extension Service at VPI and the Society of American Foresters in co-sponsoring this Symposium. This is a fine example of what can be accomplished when different organizations join together in a cooperative spirit. We would like to encourage more cooperative efforts in the future.

We also want to thank VPI for acting as host and taking care of all the local arrangements. This is a big task in itself; one that often receives very little recognition. We recognize that effort and thank you!

Currently, there is considerable concern over, and interest in, the subject of taxation. Your presence here today is a demonstration of that interest. Indeed, the idea behind this Symposium is to bring together tax experts -- if you will -- and others who deal with tax matters to share experiences, disseminate information, and stimulate creative thinking on the subject of forest taxation.

It goes without saying, that the role of the Forest Service -- and the other co-sponsors as well -- in this meeting is not one of converting others to a particular point of view or to assume a position of advocacy on any tax issue. Our role here is that of facilitator or catalyst. We advocate only equitable forest taxation and the promotion of sound forest management practices. There are, however, several forest taxation problems and issues that concern the forestry community.

Many of you no doubt recall that President Carter in his environmental message of May 23, 1977, asked the Secretary of Agriculture to make a comprehensive study of cooperative forestry programs. This study has been completed and in August a report was forwarded to the President (Title: The Federal Role in the Conservation and Management of Private, Non-Industrial Forest Lands). In this report the Interagency Committee that conducted the study identified five (5) taxation problems that may hinder the practice of forest management on private lands. These problems are particularly relevant to this Symposium and are:

---

\*Area Director, Southeastern Area, State and Private Forestry, USDA Forest Service, Atlanta, Georgia.

1. Inadequate knowledge of the more favorable options available under the present tax laws, particularly with regard to capital gains provisions of the federal income tax, and the federal estate and gift taxes (this problem is most serious for non-industrial landowners).

2. Unfavorable federal income tax treatment of planting and site preparation expenses.

3. Inconsistent and unfavorable property tax assessment of forest land.

4. A federal estate tax system that discourages, to some extent, continuation of forest management of lands changing ownership (this problem has been partially solved by passage of the Tax Reform Act of 1976).

5. Inadequate knowledge by the non-landowning public of the benefits which accrue from forests and the need for public support of taxation favorable to proper forest management.

You are, no doubt, well aware of these and perhaps other problems. Indeed, much of the discussion that will be going on here for the next two days will be centered around one or another of these questions.

When the subject of taxes comes up, there are automatically divergent views among the discussants. Divergent views are represented here, today, both among the speakers and among the audience. It is extremely doubtful that anyone here will agree 100 percent with everything that's said.

That's good! But whether you agree or not, you can learn and profit from listening to other points of view.

We in State and Private Forestry view this Symposium as a type of structured learning experience, wherein experiences and viewpoints can be shared. In particular, there is much to be learned from the experiences in other states and other parts of the country on the taxation of forest property. We also see this meeting as a Forum for the airing of different points of view. Can a particular point of view stand up under close scrutiny? Often it can't, and the holder of the view will modify his position if he acts rationally.

The information and viewpoints that are being pulled together here will be published in a Proceedings. The information generated should prove useful in analyzing forest tax programs and formulating forest tax policy, both in Washington, D.C., and in various State capitals around the country. This Symposium could well be a "Benchmark" in the development of forest tax information. We would be extremely pleased if this should prove to be the case.

Although the Symposium is on a fairly tight schedule, the Planning Committee has built-in time for audience participation -- time for you

to ask questions of the speakers, or to comment on speakers' statements. I hope you will take full advantage of this opportunity.

Again, welcome to the Symposium! And thank you.

"An Overview of Forest Taxation"  
Pros and Cons of Alternative Forest Taxes

Mason Gaffney\*

Who Pays the Property Tax, a book by Henry Aaron of the Brookings Institution, published in 1976, and Dick Netzer's earlier book on the same subject from the same publisher would appear to constitute the definitive words on the subject from the fountainhead of establishmentarian social thought. Yet, neither book has a word to say about property taxes on the forests, and little or nothing about other natural resources. This fact underscores a growing compartmentalization of thought. Earlier authorities like Harold Groves or Jens Jensen or Richard T. Ely would never have excluded forest taxation from the field of public finance. While this says something about overspecialization at the Brookings Institution, it may also warn us about our own potential separatist tendencies. Forest economists and forest businessmen, like others, may live too much in their own particularistic world, thinking their problems are different from others', and their industry unique. The purpose of this conference is to combat particularistic tendencies on our part, and, accordingly, the purpose of my remarks is to survey forest taxation from the viewpoint of a general tax economist. I speak neither as an enemy nor as a special friend, but as a citizen and an economist who is interested in the overall efficiency and equity of our society.

How should the forests be taxed? All, I surmise, would agree they should be taxed on the basis of parity and equity with other industries and resources. But, with parity in respect to what? There is no substance to "parity" until we define the base. And, unfortunately, almost everyone, ourselves included, tends to define the base in the manner most advantageous to himself. Let us, however, without prejudice, survey alternative bases for taxation and simply tick off the arguments pro and con. In order to begin on familiar ground I will begin with the arguments which forestry people are likely to have heard the more.

THE PROPERTY TAX ON STANDING TIMBER (excluding land values)

Arguments Con The Property Tax on Standing Timber

This tax is said to weigh with differential severity on forestry because it is levied annually on a crop which ripens only periodically. The annual cash outflow cumulates with compound interest to a high

---

\*Professor of Economics, University of California at Riverside.

percentage of the value of stumpage at harvest. It has been alleged that if immature timber were actually assessed on the ad valorem basis no one could make a profit by restocking cutover land.

Even if some might afford the long cash drain, the front-end loading drives the less wealthy people out of forestry since the tax must be paid over decades before stumpage is ripe for cashing-in.

Property tax liability forces, or at least actuates, premature cutting. Some jurisdictions used to offset this by allowing a wholesale discount for large owners with slow cutting programs, but this wholesale discount has been eliminated in several jurisdictions. A forest owner subject to property taxation could never afford to hold timber long enough to realize the culmination of mean annual increment.

Since property taxation is local, the rates vary among taxing jurisdictions, forcing non-uniformity of forest management practices.

Cruising timber for assessment purposes is costly relative to the tax revenues raised and is likely to be inaccurate.

Intensive forest management is discouraged, especially in the early stages of the growth cycle. Full stocking is penalized by heavier taxes, and early stocking is also penalized.

The tax is unrelated to benefits received from local government. Trees do not go to school and forestry is capital-intensive and makes heavy use of migratory workers whose children are not schooled in the jurisdiction where the tax base is located.

The owner has to pay taxes each year with no guarantee that towards the end of life other taxes may not be added. Thus, pay-as-you-go is no guarantee you won't have to pay more taxes later.

#### Arguments Pro The Property Tax on Standing Timber

Persuasive as those arguments may be, they do not entirely close the case. There is, surprisingly, much to say in favor of standing timber as a base for property taxation.

Uniformity is one principle. Capital in other forms is subject to property taxation. Timber, indeed, after conversion to houses is subject to property taxation. The uniformity argument says that capital in trees should earn the same return as other capital has to earn to justify its keep -- to wit, enough to pay interest on the investment plus property taxes on the base of value. Not to tax trees would be a subsidy. It would be a subsidy to a capital-intensive industry specifically for being capital-intensive. This is socially unwise because capital in this form has a lower employment multiplier than capital in most other forms. Capital combines with and employs labor basically when it turns over, and capital in standing timber turns over about as slowly as any capital you can think of.

The annual accrual in value of growing timber is and should be regarded as current income, even though not converted to cash flow. This is the familiar doctrine of Haig and Simons, accepted by most, although not all, economists. It is also the accepted criterion for success in business, that is to maximize the wealth of the enterprise as opposed to its cash flow.

Owners with severe cash flow problems probably should not be in forestry to begin with. Some of them can solve their problem by borrowing on the increased value of their standing timber, deducting both their interest payments and property taxes from other income. Or, they can sell to those many people whose cash flow problem is how to dispose of surpluses rather than how to scramble for cash. The woods are full of professionals in their peak earning years who need and actively seek just such outlets. There is also the sale and leaseback technique. In addition, forest owners have the capability, potentially, of normalizing their operations to steady-out the cash flow. This is something that building owners normally cannot do -- building owners who are frequently assumed to suffer less than forest owners from cash flow problems.

Exemption from property taxes would not help solve cash flow problems much anyway; it would simply change them to another form. It would increase the capital value of immature forests and forest land and increase acquisition costs. The exception is that it would give a one-time capital gain to the present owners, but you can argue that in respect to any land use. That is, it is easy for anyone to say he would be better off if his taxes were abated, but so what. Here, we are discussing relative tax burdens among different land uses.

There is a long historical record of landowner behavior under property taxation and it is not as catastrophic as its critics' forecasts for the future. Small private owners subject to material property taxation have paid these taxes by practicing leaner, more economical forest management. They have not, it is true, approached the culmination of mean annual increment in their rotation lengths. But, no economist recommends doing that anyway, any more than he recommends building a 200-story building to bring every site to its highest and best use. Culmination of mean annual increment is applying capital to forest land well beyond the optimal point where marginal cost of capital equals marginal gains from additional increments of capital.

Public agencies holding timber exempt from property taxes have responded to this freedom from economic pressure by institutionalizing obsolescence in their doctrines and dogmas. Their thinking is sawlog-bound, insisting on long rotations and concepts of quality based on demand patterns of the past. They have ignored the marketing end of the business, the rapid advance of pulping and chipping technology with its new premium on shorter rotations. They have forgotten that growing timber is a means to consumer satisfaction and let it become an end in itself. It is from this highly particularistic point of view that the strongest attacks are leveled against property taxation.

The property tax supplies steady revenue to local government.

Cash flow problems are minimal because in the early years the tax base is extremely low because of the low investment value of immature timber. This refutes the frequent allegation that the property tax treats buildings better than it does trees. The property tax on buildings is front-end loaded and frequently produces serious, even fatal, cash flow crises at the beginning of life. The impact of early property taxes is further reduced by their being expensable for income tax purposes, even though the income they generate is not to be taxed until harvest time.

The property tax on a pay-as-you-go basis gives the owner full equity in standing timber. This is in contrast with taxes which are deferred to harvest which lets the government build up an equity in standing timber. On the pay-as-you-go basis there is at harvest time no distortion of owner incentives, no clash of interest between the owner and the government. There is no "locked-in effect" as with an income tax or a yield tax.

The old Fairchild report, once thought to have shot down the property tax on standing timber, has itself been pretty well demolished for its faulty methodology.

The property tax bears relatively heavier on low-site land than high-site land because of the naturally shorter optimal cycles on high-site land. This is, on balance, a good thing because the development of low-site land usually entails expensive public subsidies.

#### THE PROPERTY TAX ON LAND (excluding standing trees)

Many forest economists have touted a property tax based on the capacity of forest sites as the best of all tax bases. Ellis Williams is the latest of these. As Williams points out, the movement for using site productivity as the forest tax base is substantially independent from the analogous one for using site value as the exclusive tax base in all land uses. Many of the arguments, however, are substantially the same.

#### Arguments Pro the Site Productivity Base for Property Taxes

Where site productivity is the exclusive tax base there is no tax penalty on full stocking, nor yet on early stocking. On the contrary, the tax falling on bare land right after harvest exerts a great leverage to restock cutover land immediately.

This tax base applies more pressure to the better sites and no pressure to marginal ones because there is no site productivity to serve as the tax base. Yet, these marginal sites are often ones that should remain unused. Thus, the tax would act to curb "forestry sprawl," to keep down roading costs and hauling costs. Heinrich von Thunen, the classical father of location theory, would presumably have loved this tax

because of its emphasis on forcing higher sites to their highest use. In von Thunen's scheme of land use, he had forests close to the city because of high hauling costs. More recently, William Hyde at Resources for the Future, and Ledyard and Moses at Northwestern, have given us profound analyses of the importance of encouraging intensive forest management on better sites and discouraging the overuse of remote marginal sites.

Nonuniformity of property tax rates among local jurisdictions becomes less of an issue under this tax because it contains no bias against forests in the counties of better location where normally tax rates are higher. To the extent that there is a bias in this, it is in the right direction; that is, of encouraging more intensive management of the better-located sites.

The revenues generated for local government are steady as a rock under this tax. Not only are they independent of harvest timing, they are independent of stocking levels.

There is no pressure to premature cutting. As timber stands approach maturity, the value of standing timber becomes much higher than site value so that tax pressure is nugatory. The pressure is all at the front-end when there is nothing there but site value, and the pressure causes rapid restocking. Like the tax on trees, the land tax is deductible for income tax purposes, moderating its effects.

There is no inherent bias against capital-intensive land use. There is a psychological pressure generated against long rotations because the opportunity cost of land is made explicit, but this is not a bias so much as it is clarification of market signals.

Like other taxes, this one is capitalized into lower site values. But, in this case, site value is itself the tax base, so that capitalization lowers the base. Thus, the pressure on owners is offset by a lower interest on equity. The bottom line is that the tax converts an implicit opportunity cost into an explicit cash outlay. This is, on balance, an advantage to less pecunious buyers because they have credit rationing problems from which wealthier buyers are exempt.

Like the tax on trees, this tax is pay-as-you-go with no build-up of government equity in mature timber. This eliminates conflicts between the public and private interest in time and intensity of harvest of mature timber.

A growing and vexing problem of forest taxation is the proper treatment of lands whose highest and best use is evolving into something other than commercial forestry. Usually this alternative use is recreation. Ad valorem land valuations give the owner of cutover land advance warning against restocking for commercial timber purposes. Another alternative is legislation which bases land valuations on forest productivity only. This, however, raises a host of difficulties which I discuss on the con side.

Sometimes, mature timber becomes part of the recreational resource. Site productivity taxes, with exemption of standing trees, remove any fiscal pressure to cut mature timber, leaving owners the option of holding it to integrate with the recreational enterprise if that is their judgment of what the market wants.

If the site productivity concept is carried a step further, it removes from the tax-base recreational buildings as well as all the capital used in commercial forestry: private forest roads, log decks, camps, portable mills, fences, and all kinds of miscellaneous capital which is very hard to assess and is now treated nonuniformly.

If the policy is carried one step further, and made totally general, it would mean the exemption from property tax of the best customers of the forest products industry. Forest interests have generally lined-up against proposals to exempt urban buildings from property taxation. But, the reasons for this are not clear to me. The sellers of saw logs would seem to be the greatest potential beneficiaries from the building boom that would inevitably ensue.

#### Arguments Con the Site Productivity Base for Property Taxes

The tax is front-end loaded compared with any other tax alternative. It bears the same on freshly cut-over land as on land under mature timber.

A much higher tax rate would be required to raise the same revenue as the present property tax which includes standing timber. It must be admitted that one attraction of this tax base to foresters has been the unspoken thought that it would, in fact, raise less revenue from forestry and constitute preferential tax treatment. This rather stacks the cards in its favor unfairly from the viewpoint of a general economist concerned with uniform and equitable tax treatment. From the latter viewpoint, it is approximately correct to say that the site value tax rate would have to be about ten times higher than the present ad valorem rate in order to raise the same revenue. The number ten-percent should not be memorized and cited as the correct figure because the correct figure varies over a wide range with the standard rotation in an area, the level of site productivity, and so on. In the southeastern states where rotations are shorter and timber culture, therefore, is less capital-intensive, a much lower rate would suffice. At any rate, I have an unpublished manuscript called, "Taxes on Yield, Property, Income and Site," which develops the mathematical formula for finding tax rates that would raise equal revenues from different bases. One may plug into these formulas different interest rates, different rotation lengths, and so on.

Because of the higher rates, the accuracy of assessed values becomes more critical and a much higher standard of assessment professionalism would be necessary.

If this tax policy is not general, that is if standing timber is exempt but capital in other forms in other industries is still taxed, it

would draw marginal land into forestry. To offset this we would have to raise the rate on a special class of land identified as "forest land." The classification of land would necessarily be bureaucratized and, therefore, somewhat arbitrary at the fringes and intensely irritating to those who do not secure the classification they believe they deserve. It would also pose a large problem of continual reclassification at the margins as the nature of demand for forest land constantly evolves.

In the absence of classification and preferential treatment, this policy would subject forest land to valuations based on recreational demand and amenity demand, and, in some areas, on agricultural demand.

Some jurisdictions have addressed this problem by legislating that forest land assessments be based entirely on capitalized income from commercial forestry, thus screening out other influences on value. British Columbia, for example, has its "tree-farm tenures," a classification which owners enter voluntarily and which protects them from assessments based on nonforest demand. On the other hand, it limits their ability to cash-in on nonforest demand by selling out at the time of their choosing. With the explosive growth of recreational demand, there are thousands of acres in British Columbia tree farms whose assessed valuation is less than one percent of market value. The provincial government naturally wants a cut of the gain if the owner converts to recreation after having enjoyed the low tax status for several decades. But, the province doesn't quite know how to go about it, so nothing is happening. California, which exempts second-growth timber from the property tax, has recently passed its Z-berg Act, basing timber-land assessments on capitalized timber income alone. It has yet to face up to the re-entry and recapture questions which will, inevitably, arise. Other California interests have evidently yet to awaken to the fact that this complex of measures constitutes preferential tax treatment for the forest industry. When and if they do, it may be anticipated there will be some reaction.

## THE YIELD TAX

### Arguments Pro the Yield Tax

The yield tax is heavily loaded at the back end. Taxation is deferred until liquidation, minimizing cash flow problems.

Tax deferral reduces the present value of taxation, thus reducing the real forest tax load (unless the tax rate is set very high).

The risk of price fluctuations is shared with the Treasury. So are risks of fire, blight, and insects. The tax collector gets nothing until the product has been sold.

The tax adds nothing to annual carrying costs of mature timber and, therefore, permits leisurely harvesting. The tax is virtually neutral in respect to the timing of harvest because it is a percentage of the stumpage. The after-tax receipts of the owner grow, therefore, at the same percentage rate as the before-tax receipts.

From the Treasury's viewpoint, a one-time yield tax on old growth is very lucrative, and would have no disincentive effects. If old growth took three hundred years to mature in the forest, most of those years being exempt from property taxation, then a yield tax serves to compensate the Treasury. This is not so advantageous, of course, from the viewpoint of the owners of old growth.

### Arguments Con the Yield Tax

The popularity of the case for yield taxation, like that of site productivity taxation, rests partly on the unspoken assumption that the rate will not be raised enough to compensate for the exemption of standing timber from the property tax. I have calculated that it requires a yield tax rate of 38 percent on stumpage value to compensate for a decline of 1 percent in the property tax rate on standing timber. My calculation is made on the assumption that we are comparing otherwise identical jurisdictions; one of which relies on property taxation and one of which relies on yield taxation. David Klemperer has made another calculation regarding the transition from a regime of property taxation to one of yield taxation. He comes up with a substantially lower equivalent rate. However, his rate is based on the assumption that mature timber, which has been paying property taxes for all its life, is also subject to the full rate of yield taxation, thus, in effect, being taxed twice, once under each system. His answer applies to the transition period and my answer applies to the long-run equilibrium.

Some have expressed surprise that the equivalent rate turns out to be as high as 38 percent. I arrived at this figure using an assumed life span of fifty years and an assumed discount rate of 7 percent. The yield tax rate has to be higher to allow for the fact that it is collected only once every fifty years instead of once each year. It is less than fifty times higher because the tax base in the first three decades is much smaller than in the fiftieth year under the property tax. A third factor in the equation is the compounding of property tax revenues to the fiftieth year. My calculation is available on request.

As a local tax, the yield tax imposes high instability on local government revenues. This can be eased considerably by shifting the tax source to the State level, with local governments getting regular subventions. Instability is, then, pooled at the State level. However, this doesn't really reduce instability, it rather sloughs it on to others. In the process, it considerably reduces the owner's incentive to normalize rotations in order to create greater stability in his own enterprise and the local economic base.

The Fisc (sic) builds up a large equity in growing timber which distorts incentives badly in the later years. Since the tax base is stumpage, harvest costs are substantially deducted, which alleviates the high-grading problem. However, investments in timber stand improvement within a few years before harvest are not deductible. Let's say an

investment of \$100 in TSI ten years before harvest is expected to increase stumpage revenues by \$200. Doubling your money in ten years works out to an annual return of about 7 percent compounded. But, after the 38 percent yield tax, \$200 is reduced to \$122 after taxes. This works out to a rate of return of 2 percent compounded annually, a rate much too low to interest any investor. The way the arithmetic works out, the yield tax contains a strong intertemporal bias against short investment cycles, as in the example just given. One can best convince himself of this by taking out his compound interest tables or hand calculator and working out a number of examples.

A yield tax will cause some high-grading in harvest. Theoretically, the deduction of harvest costs from the tax base should prevent this. In practice, however, the yield tax base is the scale at the edge of the woods. The woods are not uniform, they contain some bad logging chances with gullied land and steep slopes. When the log reaches the scale there is no way to determine its individual harvest costs: all are treated the same. A 38 percent yield tax rate would certainly result in substantial high-grading on nonuniform land.

The pro argument that a yield tax does not reduce the percentage growth rate of the owner's investment is a faulty argument for the neutrality of the tax. This is because property taxes levied on other capital do lower the rate of return for other capital. A tax on timber in order to be neutral must be uniform, which is to say it must lower the rate of return on timber by the same amount as taxes lower the rate of return on other capital. An investment in urban buildings, for example, must return to the owner both a competitive interest rate and a property tax rate in order to cover its carrying charges. Under the yield tax, growing timber would only have to yield its owner a competitive interest rate. This would result in uneconomical diversion of capital from urban buildings into standing timber. In the lingo of economists, the argument for yield tax neutrality is based on partial equilibrium analysis when it should be based on general equilibrium analysis.

A yield tax, like all local taxes, is capitalized into lower land values. This, in turn, removes the pressure to restock cutover land. That is, if the soil expectation value of bare land has been reduced to zero after taxes, the owner has no economic incentive to restock it. He has always the alternative of letting nature restock it. This process is much slower and leaves the land asleep, like Rip Van Winkle, for twenty years before it gets back to work. This is the price we pay for the otherwise attractive feature of tax deferral or back-end loading. Comparing it with the forest site productivity tax, the latter also is capitalized into lower land values, but compensates by applying an annual tax charge to actuate owners to restock immediately.

The yield tax is biased among sites of different characteristics. This is because of its built-in bias against shorter investment cycles. It is, therefore, biased against those lands which respond better to intensive management practices, and where timber grows faster by nature or which is adapted to faster-growing species. Again lapsing into economists' lingo, there is an extensive margin for the application of

intensive management and there is an intensive margin, which is to say the marginal increment of management input on the better sites. As between these two margins, the yield tax biases management away from the intensive margin. When I say "bias," I mean the impact of the tax is differentially severe on the intensive margin. This is because of the shorter investment cycles involved. The result might be called "invisible high grading" because the abortion of potential TSI results in the absence rather than the presence of something. Or, in the colorful hyperbole of "dear Alben" Barkley, we might say that the tax is harder on "crickets" than on "stallions;" but unlike Vice President Barkley, we would have to allow for the possibility that his crickets might be worth more than some of his stallions.

Capitalization of yield taxes into lower site values at the front end of rotation cycles, coupled with its "locked-in effect" at the end of cycles, creates an unambiguous bias against shorter cutting cycles. Comparing this with the property tax on timber, the latter is also capitalized into lower land values, creating a similar bias against early stocking, but at the end of cycles the property tax actuates earlier cutting. Thus, the intertemporal bias of the property tax is self-tempered, while that of the yield tax is entirely one way and, therefore, more extreme.

The yield tax's "stretch-out effect" on cycles also reduces other taxes which are levied on payrolls at the beginning and the end of rotations when labor is applied. While the owner may say "so what," the Treasury has to make up the revenue some other way. In addition, the less frequent application of labor to forest land contributes its small bit to the national unemployment problem, and more specifically to unemployment in sylvan areas. While working people pay taxes, unemployed people are public charges, which can only result in increased pressures to get tax revenue from forest owners, among others.

The intertemporal bias of yield taxation militates against modern trends towards shorter cutting rotations. It weakens forestry in its uphill battle against obsolescence, a disease which is bound to afflict any industry characterized by long investment cycles.

While the yield tax is deductible for income purposes, the value of deductibility is not to be compared with that of property taxes because the yield tax deduction is synchronized with the receipt of income, while the property tax deduction precedes it by decades.

## THE INCOME TAX

The income tax resembles the yield tax much more than it does the property tax, so the pros and cons are basically similar. I will not repeat most of them, therefore, here but concentrate on the differences between the income tax and the yield tax.

### Arguments Pro the Income Tax

The income tax differs from the yield tax in that costs are deductible. Timber stand improvement ten years before harvest, for example, would be fully deductible (even though not expensable). This factor removes the worst bite of the bias against short investment cycles and the "invisible high grading" that is caused by a yield tax. When one works out the arithmetic, one discovers that the intertemporal bias is not entirely removed, but it is significantly abated.

Again, the deductibility of harvest costs on the basis of actual outlays eliminates the high-grading effect of a yield tax. The bad logging chance which is marginal before taxes remains marginal after taxes.

The timber owner's risks are more completely shared by an income tax since the Treasury shares in his costs as well as his gains.

The income tax, being levied at the State or Federal level, is uniform over wide areas. The concept of income being common to all industries, the income tax is or can be made uniform and nondiscriminatory among different industries as well so that allocational bias is a minimum. Of course, those presently enjoying preferential tax treatment are understandably less than ecstatic about the prospect of uniformity, but to the generalist it is a significant value, and, when you get to know the real suffering of individuals who suffer not only poverty but discriminatory tax treatment, I do not see how in good conscience one can fight against uniformity.

### Arguments Con the Income Tax

The income tax rate is very high and must be in order to provide uniformity. In addition, the income tax rate required to raise the same revenue as a yield tax must be at a substantially higher figure. This high rate leads to strenuous contortions motivated by tax avoidance. The deductibility feature leads easily to padding expenses and gold-plating of capital equipment. In the nature of things, it is harder for a tax auditor to identify the goldplating on capital than it is for him to identify the consumption elements in payroll, resulting in a capital-intensive bias.

The "uniformity" of income taxation proves to be illusory owing to the personal nature of the tax. Every individual and firm has his own internal income tax circumstances, so that, in effect, everyone's timber investment is treated differently.

While individuals may be treated differently, broad geographical areas are treated substantially the same. This is not as good as it looks because their required public costs are very different. This results in substantial cross-subsidy to the high-cost areas.

The income tax as it is presently written is preferential towards income from timber culture, primarily through capital gains treatment of sales revenue coupled with current expensing of property taxes and interest outlays against ordinary income. The fact that costs are recognized for tax purposes long before the income to which they contribute is inherently preferential; and, in addition, the full costs are deductible whereas only half the income is recognized. Some other industries, like farming and oil and gas exploration, receive equally or more preferential treatment. But, most income is taxed more heavily. This results, of course, in overallocation of the Nation's limited capital stock to timber culture. There are, in addition, serious questions of interpersonal equity.

Within the timber growing enterprise itself there are serious distortions since "property costs" -- that is, interest and property taxes -- are expensable while labor costs applied to regeneration have to be capitalized. There is a tax-induced propensity to grow timber with a greater input of time and a lesser input of labor at the front end.

Vertically integrated firms have an incentive to shift profits from the mills to the woods in order to maximize the amount of income receiving capital gains treatment. The incentive is to let more value be added on the stump and less by processing in the mill. This again misallocates resources and, in addition, makes the timber business more capital-intensive on the whole and gives an invidious advantage to vertically integrated firms. Vertically integrated firms have the additional advantage of being able to use appraised value rather than actual sales value for stumpage valuations. Sellers of timber in the open market are even in jeopardy of being denied the capital gains privilege, although most of them do qualify by use of the "pay-as-cut" contract. Vertically integrated firms are also more certain to have ordinary income available from which to deduct expensable interest and property taxes on timber holdings.

I surmise that most of you are sympathetic towards preferential tax treatment for timber. Going on from that premise, it would be constructive to have that preference given in the form of expensing the costs of intensive management and timber stand improvement instead of in the present package which has a heavy capital-intensive bias and is only compatible with that one particularized notion of "good forestry" which equates good forestry with long rotation cycles. Industry lobbyists have formed a political judgment that capital gains are easier to get and retain if expensing of TSI is not sought. Now, however, the capital gains treatment is being eroded anyway while numerous extensions and expansions of the expensing privilege and the investment tax credit privilege are growing. It may well be time, therefore, for industry delegates to Washington to review that political judgment. That, of course, is a judgment to be made by those more wily in the ways of Washington than I. As an economist, I can only say that the economic case would be much stronger. And, as a citizen, I can say that the moral case is stronger, too.

I hope that this brief survey of alternative tax systems will be helpful as we plunge ahead into the details of different tax policies.

## Historical Development of Federal Income Tax Treatment of Timber

William C. Siegel\*

The federal income tax has been with us for nearly 65 years. Special provisions pertaining to timber depletion have been part of the Internal Revenue Code for almost 60 of those years and rules concerning taxation of timber income for nearly 34 years. Yet, there still appears to be considerable confusion and misunderstanding about application of the Code to timber transactions and to increases in timber value. This confusion is particularly prevalent among those outside the forestry and timber growing community. But it also exists -- perhaps to an extent greater than we would like to admit -- among many nonindustrial owners of forest properties and even in the minds of many professional foresters.

As most of us in the forestry sector realize, however, virtually all income derived from the increase in value of standing timber is eligible for federal capital gains treatment once certain basic requirements have been met. If the gain is a long-term capital gain, the effective tax rate will be significantly lower than on ordinary income. Most of us are also aware that timber income is subject to an allowance for depletion. But the point is often overlooked that -- except for these special stipulations -- the general provisions of the Revenue Code apply to timber owners and operators just as they do to those in other businesses.

Now is an appropriate time to assess the role of the federal income tax on the nation's forest resources. Intense controversy has surfaced in recent years about the validity of the traditional justifications for the Revenue Code's timber provisions. During the last decade, in particular, a number of concerted drives have been mounted -- both in and out of Congress -- to eliminate these provisions from the Code. For instance, the timber capital gain preference was one of four commercial activities singled out by the Treasury tax reform studies of 1968.<sup>1</sup> And within Congress, the Mills-Mansfield Bill<sup>2</sup> of 1972 would have repealed Section 631 of the Internal Revenue Code, which is the heart of the special provisions for timber capital gains. From all indications, such efforts will intensify in 1978 as a prelude to the President's tax reform package now scheduled for presentation in 1979. Thus, income tax treatment of timber income is of intense interest to the forestry community at the present time.

To attain a better understanding of the issues involved, it may be helpful to trace the historical development of the federal income tax

---

\*Project Leader, Forest Resources Law and Taxation, Southern Forest Experiment Station, New Orleans.

with respect to timber transactions. For example, what steps have led to the enactment of special statutes? What changes have occurred along the way?

### The Years 1913 to 1943

First, let's focus on the years from 1913 through 1943. The sixteenth amendment to the United States Constitution, ratified on February 25, 1913, established the constitutional basis for a federal income tax. Subsequent rapid enactment of the 1913 Revenue Act, which became effective on March 1 of that year, implemented the tax. Thus began the continuous series of income tax laws which evolved into the Internal Revenue Code of 1954, under which the tax is presently administered.

Congress was modest in its first demands on the taxpayer. The tax rate was one percent for both individuals and corporations. Individual exemptions were \$3,000 for single taxpayers and \$4,000 if married. Contrast these provisions with those of today.

Since timber is a natural resource, it is a depletable rather than a depreciable asset. The depletion deduction provides for the tax-free recovery of the cost or other basis of the timber as it is cut. A deduction for timber depletion has been allowed since the beginning, although no specific provisions for it appeared in either the 1913 Revenue Act or in the Revenue Acts of 1916 and 1917 that followed. Timber depletion was allowed solely by the authority of treasury regulations issued under the respective acts. It was authorized on the basis of cost from 1913 through 1915. Beginning with 1916, it was allowed on the timber's value as of March 1, 1913, if the timber had been acquired prior to that date, and on cost for subsequent transactions. In 1918 the United States Supreme Court, in the case of *Doyle versus Mitchell Brothers Lumber Company*,<sup>3</sup> confirmed the intent of the regulations under the 1917 Act, which had had no specific authority prior to that time.

The Revenue Act of 1919 was the first legislative action to provide specifically for timber depletion, it merely reiterated the regulations promulgated under the 1917 Act.

All revenue acts from 1919 through 1942 contained substantially the same provisions with respect to timber depletion, and the regulations under these various acts did not materially change. During this period, income tax rates were relatively low and, in general, depletion was determined on an average rate basis -- that is, the cost or other basis was divided by the volume estimate to get the average unit rate. In those days, little attention was paid to species or tree size.

With the exception of the depletion allowance, timber owners and operators during the years of 1913 through 1943 were subject to the same federal income tax treatment as other taxpayers. Standing timber during those years was recognized as a capital asset. Therefore, when it was

sold outright in a lump-sum transaction, the sale was considered to be a disposal of a capital asset -- provided that the timber had not been held by the owner for sale to customers in the ordinary course of his business. Beginning in 1922, if these requirements were met, and if the owner had held the timber for the required length of time, any profit was treated as a capital gain at lower rates. There was no specific language in the Revenue Code or regulations dealing with timber under these circumstances, nor is there any today, nor is any necessary.

During the years prior to 1944, however, if a landowner cut his timber himself and then sold it, or else used it in his business, he had to pay taxes at the ordinary income tax rates on whatever gain resulted. Such transactions were not given the benefit of capital gains treatment. For example, the owner who cut his own trees and then sold the logs to a sawmill was taxed at a higher rate than if he had sold the trees outright on the stump and let the purchaser come on his lands to do the cutting. Also, the sawmill owner who owned standing timber and cut it for use in his mill had to pay the higher ordinary income tax rates on the timber's increase in value. Thus, as a practical matter, such a mill owner might have been better off had he sold his timber outright, as a capital asset, and then bought timber from another landowner for use in his mill.

Federal income tax rates and stumpage prices were both relatively stable during the three decades prior to World War II. Thus there was little serious concern in forestry circles during these years over the income tax. The situation, however, began to change in the 1940's. The corporate income tax rate was 15 percent in 1938. By 1940 it was 24 percent, in 1941 it was 32 percent, and in 1942 it became 40 percent. And these rates did not include the excess profits tax. Stumpage prices also began to climb rapidly. Douglas fir sold for \$2.50 per thousand board feet in 1938, reached \$5.00 by the mid-forties and was about \$16.00 by 1950. Southern pine stumpage was \$6.00 in 1939, became \$9.00 to \$10.00 by the mid-forties and reached \$27.00 by 1950. Similar increases occurred in other species.

As tax rates climbed, timber owners found that outright sales worked to their distinct advantage. This tended to encourage liquidation rather than long-term management. The situation grew more serious when the Bureau of Internal Revenue took the position in 1941 that disposal of timber at an agreed price per unit of measure involved "retention of an economic interest" by the owner. In other words, such a disposal did not constitute a sale for capital gains purposes. Similar reasoning was later applied by a 1943 ruling of the Revenue Service<sup>4</sup> which stated that proceeds received under a timber cutting contract, as opposed to a lump-sum sale, were to be treated as ordinary income. Thus, if a timber owner tried to manage his lands properly and marked the trees for cutting, with the purchaser paying on a unit basis as the timber was cut and removed, the proceeds were generally treated as ordinary income. Here again, the timber owner who wanted to dispose of his timber under a cutting contract was penalized as opposed to one who made a lump-sum sale.

## The Years 1944 to 1953

Congress, under the pressure of demand for timber during the Second World War, responded to the growing complaints of inequity. Section 117(K) was thus added to the Internal Revenue Code by the Revenue Act of 1943, which Congress passed over President Roosevelt's veto. This legislation placed an owner who cut his timber himself, or who disposed of it under contract, on the same tax basis as an owner who sold his timber outright. Such cutting or exchange was now treated as a sale or an exchange of a capital asset.

The house of Representatives version of the bill<sup>5</sup> provided no such differential treatment for timber income. The bill reported by the Senate Finance Committee,<sup>6</sup> however, did propose to amend Section 117 in this respect. The legislation passed the Senate with this provision intact and the conference committee reported favorably.<sup>7</sup> The act then passed in both houses on February 7, 1944 and was sent to the President for signature. President Roosevelt, however, returned the bill unsigned. His veto was ascribed in large part to the new timber provisions and the veto message included this statement:<sup>8</sup>

"The lumber industry is permitted to treat income from the cutting of timber, including selective logging, as a capital gain rather than annual income. As a grower and seller of timber, I think that timber should be treated as a crop and therefore an income when it is sold. This would encourage reforestation."

Senator Barkley subsequently resigned as Senate majority leader in protest over the veto and commented on the floor of the Senate as follows:<sup>9</sup>

"I do not know to what extent the President is engaged in the timber business. I do know that he sells Christmas trees at Christmas time. They are no doubt of easy growth and short life, and I have no doubt that the income from the sale of them constitutes annual income not only to him but that such income would constitute annual income to any other persons engaged in like enterprise. But, Mr. President, to compare those little pine bushes with a sturdy oak, gum-poplar, or spruce which requires a generation of care and nurturing to produce in the forest, and from which no annual income is derived until finally it is sold, is like comparing a cricket to a stallion."

It is clear that Congress in 1944 intended for capital gains to result under the two situations already described -- when the taxpayer was not primarily in the timber business. These are mentioned in the Senate Finance Committee Report.<sup>10</sup> It is not so clear, however, that Congress intended at that time to extend capital gains treatment to the timber industry as a whole -- that is, to those corporations and partnerships that held timber primarily for sale to customers or as a part of their inventory. The effect of Section 117(K) was to also include these taxpayers under its umbrella. Treasury regulations<sup>11</sup> were subsequently issued and took the position that transactions qualifying under the

statute would be treated as a capital gain or loss regardless of whether the timber was includable in inventory or whether it was held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business.

The regulations thus gave capital gains treatment to both dealers and nondealers, provided they could meet the provisions of Section 117(K). And this has also been the position of Congress during the ensuing years. Timber provisions of the Revenue Code remained substantially unchanged for the next decade, with only eight revenue rulings pertaining to timber being issued between 1943 and 1953.

### The Years 1954 to 1963

In 1954, however, general revenue revision hearings were held by Congress. These produced the Internal Revenue Code of 1954, which superceded the 1939 Code. The legislation, as originally passed by the House of Representatives, tightened-up the provisions for current deduction of timber growing expenses. The stipulation affected that portion of the management expenses that could be allocated against timber actually cut during the year. These expenses could not be offset against current income as in the past but would have to be subtracted from the capital gain. The House report listed such costs as property taxes, fire protection, insurance, lease administration, timber measurement, and interest on timber loans. The Senate, however, rejected this provision and its version was accepted by the Conference Committee.

Section 117(K) of the old Code was reenacted substantially intact as Section 631 of the new Code. Several significant changes were made, however:

(1) The term "timber" was defined to include evergreen trees sold for ornamental purposes that are more than six years old when severed from the roots. This provision extended capital gains treatment to Christmas trees -- that is, those trees of "easy growth and short life" derided by Senator Barkley in 1944.

(2) The date of disposal of timber was defined as the date of cutting, except that where payment is made to the owner under the contract before the timber is cut, the owner may elect to treat the date of payment as the date of disposal.

(3) For the purposes of "disposal with a retained economic interest," the term "owner" was defined as any person who owns an interest in timber, including a sublessor and a holder of a contract to cut timber.

Thus Section 631, as read in conjunction with Section 1231, provides capital gain treatment as follows: (1) timber cut by a taxpayer who owns it or who has a contract right to cut it -- Section 631(A); and (2) timber disposed of by an owner under a contract by virtue of which he retains an economic interest in the timber -- Section 631(B). If a

taxpayer is unable, however, to meet the provisions of Section 631, he may still qualify for timber capital gains under Section 1221 if his timber has not been held primarily for sale to customers or is not includable in his business inventory.

The 20-year period from 1943 through 1962 saw no major moves for fundamental changes in the timber capital gains provisions. From time to time, it was proposed that planting costs be allowed as deductions from ordinary income rather than having to be capitalized through inclusion in the basis for depletion. Such proposals, however, did not gain widespread support. This was due partly to the belief that recognition of timber as an ordinary asset when planted might well jeopardize its status as a capital asset under Section 1221 or as business property under Section 1231. A move in the opposite direction by the House Ways and Means Committee -- that is, to require the capitalization of certain expenses previously allowed as deductions from ordinary income -- also gained little support.

#### The Years 1963 to 1969

In 1963, President Kennedy's tax message, which resulted in the Revenue Act of 1964, proposed to deny to corporations capital gain treatment for timber income and to limit such treatment for individuals to \$5,000 annually.<sup>12</sup> The President also proposed, as a partial offset, that reforestation costs by both individuals and corporations be deductible from ordinary income rather than having to be capitalized.

The Administration's position met widespread opposition. The President's suggestions with respect to timber did not appear in the House version of the bill. The House bill, instead, classified timber income as a so-called "Class B" capital gain, according it the same tax treatment that it was presently receiving. The Senate effectively deleted this proposal when it rejected the complex capital gains package offered by the House. The Revenue Act of 1964, as finally passed, did not alter the essential features of the special timber provisions under Sections 631 and 1231.

Following the 1963 hearings, the situation became relatively inactive for a number of years. More recently, however, pressure has again been building up for reform of the federal tax structure as a whole. This, in turn, has focused attention on the treatment of capital gains, including timber capital gains.

In 1967 and 1968, a number of tax reform studies were undertaken by the Treasury Department. These, with accompanying recommendations, were forwarded by the new administration in early 1969 to the House Ways and Means Committee and to the Senate Finance Committee. The proposals themselves did not cover specific industries such as timber, although one complete chapter of background information on timber taxation was included.

The Tax Reform Act of 1969 that followed made no changes in the specific Revenue Code provisions pertaining to timber. Neither the House nor the Senate versions had contained changes in the tax treatment of timber income. The Act, did, however, increase the capital gains tax rates for all taxpayers. It also implemented the so-called "minimum tax on preferences" which has the effect, in certain situations, of taxing the otherwise untaxed portion of capital gains. The 1969 Act increased the rate on corporate capital gains from 25 to 30 percent and the maximum for individuals, including the preference tax to 36 1/2 percent.

### The Years 1970 to Present

Timber capital gains have continued to come under scrutiny since 1969. In 1972 Emil Sunley's study, entitled "The Federal Tax Subsidy for the Timber Industry" was submitted to the Joint Economic Committee of Congress. In that same year, the Mills-Mansfield Bill<sup>13</sup> would have repealed Section 631. And in 1973, Congressional hearings were again held on tax reform measures, including possible modification of timber capital gains. The Corman bill of that year<sup>14</sup> would have repealed the special tax provisions for all capital gains, including those for timber.

This now brings us to the Tax Reform Act of 1976. Again, no major legislative changes were made in Section 631. The House version, however, would have sharply restricted the current deduction of timber expenses by including timber growing as a farm operation in that portion of the Act devoted to farm tax shelters. It is paradoxical that such an inclusion was considered, since timber growing is specifically excluded from the definitions of farming in all other sections of the Revenue Code where favorable benefits are provided to farming.

The 1976 Act, did, however, increase the holding period for all capital gains, including those from timber. It also eliminated, for holding period purposes, the previous requirement that certain timber be treated as sold on the first day of the calendar year in which it was cut. Additionally, the Act stiffened the "minimum tax on preferences" in a number of ways.

### Conclusion

In conclusion, it should be pointed out that some degree of controversy surrounds every tax. And the timber provisions of the Internal Revenue Code are certainly no exception, as we have seen. Numerous attacks and proposals for change have been advanced. But Congress, in periodic reviews, has thus far reaffirmed its original 1943 decision. That the controversy will continue, however, is a foregone conclusion. History in this particular subject area, and in the general capital gains area, is not going to become static. It will continue to be made --

if not by legislative mandate, at least judicially and administratively. If support for Section 631 is to be substantially strengthened, mere rhetoric alone will not be sufficient. It will take more quantitative documentation of the social benefits that have resulted. This will be particularly important as Congress looks for new revenue sources in the ensuing years.

## Footnotes

<sup>1</sup>House Committee on Ways and Means and Senate Committee on Finance. Tax Reform Studies and Proposals, U.S. Treasury Department, Volume 3, 91st Congress, 1st Session (Committee Print 1969).

<sup>2</sup>H. R. 15230, 92nd Congress, 2nd Session, Section 112, 217 (1972).

<sup>3</sup>Doyle V. Mitchell Brothers Lumber Co., 247 U.S. 179, 38 S.C. 467 (1918).

<sup>4</sup>Bureau of Internal Revenue Field Procedure Memorandum 249, February 17, 1943.

<sup>5</sup>H. R. 3687.

<sup>6</sup>S. Rep. No. 627, 78th Congress, 1st Session (1943).

<sup>7</sup>H. R. Rep. No. 1079.

<sup>8</sup>Congressional Record, 78th Congress, 2nd Session, February 22, 1944, Page 1959.

<sup>9</sup>Congressional Record, 78th Congress, 2nd Session, February 23, 1944, Page 1965.

<sup>10</sup>Ibid, Footnote 6.

<sup>11</sup>Treas. Regulation III, Para. 29, 117, T. D. 5394 (1944).

<sup>12</sup>Hearings on the Tax Recommendations of the President Before the House Committee on Ways and Means, 88th Congress, 1st Session, at 25; 57-58; 151; 388-419 (1963).

<sup>13</sup>Ibid, Footnote 2.

<sup>14</sup>H. R. 1040, 93rd Congress, 1st Session, Section 102 (1973).

## Impact of Tax Reform on Timber Taxation

Meade Whitaker\*

At the time this topic was chosen, there seemed to be at least a reasonable chance that we would have not only the 1976 Tax Reform Act<sup>1</sup> to talk about but possibly a 1977 Act. It is now clear that there will be no general tax reform enacted this year. Whether the Administration will advocate major surgery on the Internal Revenue Code<sup>2</sup> next year is as yet uncertain. At this writing it appears that H. R. 6715, the Technical Corrections Act of 1977, correcting and clarifying parts of the 1976 Act, will be carried over to 1978. Thus, our primary focus will be on the 1976 Act, much of which, one year after enactment, remains confused and obscure. One generality may be made; there are few, if any, taxpayers who can claim to be unaffected by TRA 1976.

The timber industry is fortunate in that the adverse changes directly affecting the bread and butter of timber taxation, such as capital gains, are not too serious, while many of the other adverse provisions close so-called loopholes which taxpayers engaged in forestry and timber activities should encounter infrequently. Incorporated members of the timber industry have little to be concerned about in the 1976 Code amendments and in the case of individual, partnership and trust holdings of timberlands, the effects do not seem to be as adverse as they appear to be for many other types of real estate holdings. Thus, for both the incorporated and the unincorporated taxpayer, timberlands continue to be a favored investment.

The 1976 Act is too long and complex to cover in any detail in any single paper. Thus, I have selected for treatment the capital gains changes and those tax shelter provisions which should be of interest to forestry operators and investors, concluding with a brief summary of portions of the estate and gift tax changes.

### Capital Gains

Holding Period. Capital gains is, of course, of major concern to any owner of timberlands. In common with all other capital assets, the holding period for timberlands was increased by the 1976 Act to nine months for the year 1977 and to one year for subsequent years.<sup>3</sup> The increase in the holding period applies to outright sales of timber or timberlands, whether governed by §1221 or §1231 of the Code, as well as to the election by the owner of timber under §631(a), or its disposition

---

\*Partner, Hemmendinger, Kennedy and Whitaker, Washington, D. C.

with a retained economic interest under §631(b).

These changes apply to tax years commencing respectively subsequent to December 31, 1976, and after December 31, 1977. Obviously there will be some transactions which overlap the change in the effective date of the holding period. Act §1402(c) has a transitional rule which purports to be applicable primarily to "installment obligations;" that is, where the taxpayer has elected installment treatment under §453, but the statutory language is far broader than that. It appears to provide the customary "binding contract" exception, so that if a binding contract of sale or disposition was entered into in 1976, payments received pursuant to that contract should be subject to the six month holding period whenever received. The same thing would, of course, be true for contracts entered into during 1977. Fiscal year taxpayers will have to be very careful since the nine months period applies to tax years commencing subsequent to December 31, 1976.

A quirk in the operation of the transition rule should be pointed-out. If timber were acquired by a calendar year taxpayer on February 10, 1977, for example, the nine month's holding period would apply. If disposed of subsequent to November 10, 1977, the taxpayer would have the benefit of long-term capital gains treatment. But, if the property were held past December 31, 1977, it would then become subject to the one year holding period and would have to be held until February 10, 1978 in order to take advantage of the capital gains provisions. In other words, during the period January 1, 1978 to February 10, 1978, the property would have reverted from long-term gain to short-term gain status. Inevitably, there are technical traps for the unwary in any transitional rule.

Section 631(a). As suggested, the capital gains changes made by the 1976 Act were not all bad for timber. It will be recalled that §631(a) previously applied to timber owned, or as to which the taxpayer had held a contract right to cut, for a period of more than 6 months prior to the beginning of the tax year. While this language may possibly have made some sense from the standpoint of convenience in the administration of the statute, it imposed, in effect, a longer holding period under §631(a) than under §631(b). The 1976 Act deleted this language from §631(a) so that for the nine months and then the one year period, §631(a) is triggered by the date of cutting, not the first day of the taxable year.

Other Capital Gain Changes. Under §1211 prior to the 1976 Act, capital losses of an individual could be offset against ordinary income on a two-to-one basis up to \$1,000 of income per year. This was liberalized by increasing the \$1,000 to \$2,000 for 1977 and \$3,000 thereafter.<sup>4</sup> The 1976 Act expanded somewhat the scope of §1239 which denies capital gain treatment to sales of depreciable property between related parties.<sup>5</sup> Transactions between commonly controlled corporations are now included, and constructive ownership rules apply. Finally, in a change which may be of more importance to owners of timberlands, the period of replacement of involuntarily converted property which avoids recognition of income on the conversion was increased from two years to

three years after the first year in which the gain is realized.<sup>6</sup>

### Tax Shelter Limitations

The 1976 Act added a number of provisions to the Code designed to limit or prevent what the Congress conceived to be misuses of tax deductions in a variety of tax shelter techniques. These include provisions which are intended to limit loss and interest deductions, to require capitalization of certain expenditures, to require use of the accrual method of accounting in some farming operations, and a number of amendments to the partnership provisions. For our purposes, the changes may be placed in two arbitrary categories: those in which forestry and timber are specifically excluded, and those which have no such exclusion. As a general comment, it appears that the provisions in the latter category, such as interest deduction limitations, probably will not be of great significance to the timber industry. Thus, timber came off very well. That does not mean, however, that the timber industry can in the future safely venture into tax shelters without risking legislative attention.

Timber expressly excluded. Probably the most significant of the tax shelter changes was the addition to the Code of §465 made by Act §204, the "at risk" Section, along with its counterpart, Act §213 which adds the "at risk" concept to Subchapter K, the partnership provisions. (Section 704(d)). The staff of the Joint Committee on Taxation of the U.S. Congress has described the "at risk" problem in the following language:

"Congress believed that it was not equitable to allow individual investors to defer tax on income from other sources through losses generated by tax sheltering activities. One of the most significant problems in tax shelters was the use of non-recourse financing and other risk-limiting devices which enabled investors in these activities to deduct losses from the activities in amounts which exceeded the total investment the investor actually placed at risk in the activity. The Act consequently provides an "at risk" rule to deal directly with this abuse in tax shelters."<sup>7</sup>

Section 465 limits a taxpayer's deductions for losses generated by certain activities to the aggregate amount at risk with respect to those activities. The activities which are included are farming, exploring for and exploiting oil and gas resources, exploiting motion picture films and tapes, and equipment leasing. The limitation applies to all taxpayers other than corporations, including Subchapter S corporations and personal holding companies. Fortunately, we need not concern ourselves with any further detail as to this Section. The only part of the Section which could possibly affect the timber industry is that group of activities collectively described as "farming." Section 465 looks to §464, added by Act §207(a), for definitions. The latter expressly defines "farming" to exclude forestry and the growing of timber. Section 464(e) (1),<sup>8</sup> while defining the term "farming" in very broad language, expressly provides that "trees (other than trees

bearing fruit or nuts) shall not be treated as an agricultural or horticultural commodity." Section 464<sup>9</sup> applies to farming syndicates and requires such farming syndicates to deduct expenses for feed, seed, fertilizer, etc., only when used or consumed, to deduct the expenses of certain poultry over their useful life and to capitalize certain expenses of groves, orchards, and vineyards. Again, we need not here be concerned with this addition to the Code by reason of the express exclusion contained in §464(e) (1).

One other limitation on farmers, added by Act §207, also explicitly excludes timber operations. Farmers, both individual and corporation, have long enjoyed the ability to use the cash receipts method of accounting even though it is a prohibited method of accounting for most incorporated businesses which, of course, must keep inventories.<sup>10</sup> Consequently, corporations engaged in farming enjoyed a rather special benefit. The 1976 Act<sup>11</sup> added the new §447 to the Code which specifies use of the accrual method of accounting for a corporation engaged in the trade or business of farming, or for a partnership in that business if it has a corporate partner. There are a number of exceptions from the scope of the requirement, but, for us, the most important one is that it does not apply "to the raising or harvesting of trees (other than fruit and nut trees)".

Definitions of farming. The Code now contains a number of differing definitions of farming, some of which, as noted above, follow basically the philosophy of the regulations under §175, applying to soil and water conservation expenditures, and excluding tree farming from the definition of farming. However, new §2032(A) of the Code, added by Act §2003, is intended to provide owners of farms and certain other real property owners with an election to value their lands for estate and gift tax purposes on the basis of the use existing on the date of the decedent's death, rather than the highest and best use to which the property could be put. The intent of this Section, obviously, is to allow estates which include farm lands having an existing potential for residential or commercial development to defer estate tax on the difference between current use value and highest value so long as use as farm land continues. The definition of farming purposes in this provision includes "the planting, cultivating, caring for, or cutting of trees." Thus, tree farming receives the benefit of this special valuation provision but is excluded from the adverse effects of practically all of the other provisions of the Code which attempt to tighten-up on farming abuses. Thus, the Code now officially recognizes that the timber industry is engaged in a species of farming.

Great care will have to be taken in watching future legislative changes in the Code as well as regulations to make certain that these fine distinctions are not inadvertently missed or ignored. In addition, the industry should be very watchful to avoid giving the tax-writing committees in the Congress any basis for feeling that some of the exceptions now enjoyed by timber to the tax shelter farming restrictions should be changed.

Restrictions without forestry exception. Among the tax shelter limitations which apply to certain categories of taxpayers, and have no exception for those engaged in forestry activities, are the provisions of Act Sections 201, 202, 208, 209, and 213. The first of these adds new Section 189 to the Code which requires the amortization of real property construction period interest and taxes incurred by individuals, Subchapter S corporations, and personal holding companies. The Section is effective in 1976 with respect to construction of non-residential real property with later effective dates for other types of improvements to real property.

Section 1250, which provides for limited recapture of depreciation taken on depreciable real property, was tightened up to some extent by Act §202. Act §208 added new subsection (g) to §461 which is designed to require that pre-paid interest be deducted with respect to the periods to which it applies. This amendment, together with the amendment of §1240, applies to all taxpayers generally, whether or not incorporated.

By contrast, §163(d), as amended by Act §209, which imposes a limit on the deduction of investment interest, applies only to taxpayers other than corporations. The 1976 Act significantly broadened the scope of §163(d).

Regarding partnerships, §179 of the Code, the additional special depreciation deduction, was amended by Act §213(a) to impose the \$10,000 limitation at both the partnership and the partner level. Finally, Act §213 applied other tax shelter limitation provisions to partnerships by amending Sections 704, 706, 707 and 709. The inclusion in §704 of the at-risk theory is the most important. This amendment to §704(d) does not, however, apply to "any partnership the principal activity of which is investing in real property" (other than mineral property). Unfortunately, there is uncertainty as to the application of this Section, intended to be corrected by the pending Technical Corrections Act of 1977.<sup>12</sup> Hopefully, neither passive investment in, nor active management of, timberlands will be subject to §704(d).

Mini-tax & Maxi-tax. The 1976 Act has increased the effective tax rate on net long-term capital gains by changing the manner of computing the minimum tax on tax preference items<sup>13</sup> (Mini-tax), and the maximum tax on personal service income<sup>14</sup> (Maxi-tax). Sales of timber or timberlands may yield net long-term capital gains in any of the most common types of timber sales transactions:

- (i) §631(a) and (b) "the cutting or the disposal of timber with a retained economic interest," and
- (ii) timber sales subject to §1221 or §1231 of the Code.

The changes in the Mini-tax and Maxi-tax result in taxing these capital gains at rates approaching 50 percent for individual taxpayers in the highest brackets, rather than at the supposed maximum marginal rate of 35 percent for capital gains. Corporate capital gains from timber sales,

however, are not subject to the Mini-tax and Maxi-tax changes of the Act.

Individuals, in computing their adjusted gross income, may deduct 50 percent of net long-term capital gains. However, in 1969 Congress subjected the deducted 50 percent to an additional tax, the "Mini-tax" on preference items. The 1976 Act increased the Mini-tax rate from 10 percent to 15 percent. More importantly, however, it increased the number of taxpayers subjected to the Mini-tax by lowering the minimum sum of tax preferences sufficient to cause Mini-tax liability. This was accomplished by lowering the Mini-tax exclusion from \$30,000, plus 100 percent of "regular" income taxes paid in the year in question plus the sum of all "regular" income taxes paid in prior years which had not been used to offset tax preferences, to \$10,000 or 50 percent of "regular" income taxes paid in the year in question, whichever is higher. The changes of the Act in the Mini-tax may be summarized as follows:

Item	Old Law, For Tax Years Beginning Prior to 1/1/76	New Law, For Tax Years Beginning Later than 12/31/75
Tax Rate	10%	15%
Exclusion	\$30,000 <u>plus 100% of taxpayer's tax liability computed without regard to Mini-tax (hereinafter "regular" tax liability)</u>	\$10,000 <u>or 50% of "regular" tax liability, whichever is higher</u>
Carryforward	Additional exclusion up to all "regular" tax liability not used to offset tax preferences in previous 7 years	No additional exclusion carryforward

For an individual taxpayer in the highest (70%) bracket with more than \$10,000 in total tax preferences, the effect of the Mini-tax as amended is to raise his effective tax rate on capital gains from 35 percent to 39.875 percent.<sup>15</sup> It is interesting to note that for lower bracket taxpayers the increase caused by the Mini-tax is even more dramatic, raising the effective marginal capital gains rate for a 50 percent taxpayer from 25 percent to 30.6 percent and for a 40 percent taxpayer from 20 percent to 26 percent.<sup>16</sup> Tax preferences items will have a greater proportional impact on lower bracket taxpayers because tax preferences are reduced by one-half of the regular tax liability. Obviously, the regular tax liability of a lower bracket taxpayer is a smaller dollar amount.

The 50 percent preference element of all capital gains has an additional and greater effect on those individual taxpayers able to

take advantage of the 50 percent maximum tax on personal service (earned) income,<sup>17</sup> that is, individuals with sufficient earned income to be taxed at a marginal rate in excess of 50 percent without regard to the other income. The interaction of tax preferences on the Maxi-tax under the 1976 Act increases the effective tax rate on capital gains for such individual taxpayers in the highest bracket from 35 percent to 45 percent.

The Maxi-tax limits the marginal rate on all personal service income to 50 percent. Thus, the Maxi-tax is actually a shelter for earned income from higher rates to which it might otherwise be subject. However, in 1969 Congress determined to render those transactions yielding tax preferences less attractive to highly compensated taxpayers by reducing an individual's earned income sheltered by the Maxi-tax by an amount equal to a taxpayer's tax preference. From 1969 - 1976, the first \$30,000 of tax preferences were excluded from this offset. For tax years beginning after December 31, 1976, the Act removed the \$30,000 exclusion. Thus, for an individual in the 70 percent rate but for the Maxi-tax, each dollar of capital gain, yielding \$0.50 in tax preference, will remove \$0.50 from the shelter of the 50 percent Maxi-tax and subject it to the 70 percent tax rate. This 20 percent increase on one-half of the capital gain constitutes an effective marginal rate increase of 10 percent on each dollar of capital gain, thus raising the effective marginal rate for capital gains for this 70 percent bracket taxpayer from 35 percent to 45 percent.

It should be noted that the only change of the 1976 Act on the interaction between the 50 percent of capital gains, which is a tax preference, and the Maxi-tax, was the removal of the \$30,000 exemption from the tax preference offset to the Maxi-tax. Thus, prior to the Act, 70 percent bracket taxpayers taking advantage of the Maxi-tax suffered this 45 percent effective marginal rate for capital gains. The Act, by eliminating the \$30,000 exclusion, simply subjected a much wider group of individual taxpayers to this higher effective capital gains rate.

Thus, for individuals in the 70 percent bracket, the combined effect of the Mini- and Maxi-taxes under the Act is to increase the effective tax rate on capital gains from 35 percent to over 49 percent. As has been shown, 10 percent of this 15 percent increase is a result of the elimination of the \$30,000 exclusion to the tax preference offset to the Maxi-tax. The remainder of the increase is a result of changes in the Mini-tax.

Corporate capital gains attributable to timber are excluded from these effective increases. However, corporations are ineligible for the Maxi-tax under any circumstances so any changes in the Maxi-tax will have no effect on any corporation's tax rate.

Corporations are subject to the Mini-tax. For corporations, 37.5 percent (18/48) of net long-term capital gains is tax preference income. Corporations in general are subject to the increased Mini-tax rate

from 10 percent to 15 percent and the substantial reductions in exclusions from the Mini-tax explained above. However, in a series of special Sections, the Act effectively exempts corporate timber income from the increases in the Mini-tax. Code §56(d) provides for a reduction of all corporate tax preferences attributable to timber gains by one-third and further reduction of \$20,000. Also, the Mini-tax reduction for regular taxes paid is to be reduced by either one-third or the preference deduction described above. In effect, the adjustments compensate for the general minimum tax rate increase from 10 percent to 15 percent by reducing the corporation's total tax preferences attributable to timber income by one-third and then subjecting the lower total to a 15 percent rate. This gives the same result as subjecting the normal base to a 10 percent rate. The additional reduction in timber preferences by \$20,000 (two-thirds of \$30,000) was intended to compensate corporations with timber preferences for the loss of the \$30,000 exemption.

Section 56(e) retains for corporations with timber income the additional exclusion accomplished by the seven year carry-over of "regular" taxes not used to offset tax preferences. To the extent that a corporation's "regular" income taxes attributable to timber exceed the items of tax preference in a taxable year, they may be carried-forward for up to seven additional years. The amount of the carry-over that may be deducted in a subsequent year is limited to timber tax preferences in that year, reduced by the timber preference reduction described above, minus the "regular" tax deduction for the year which also must be reduced by the regular tax adjustment above. The intent is to permit the carryforward of timber-related "regular" taxes that are not used in the current year and limit the use of that carryforward to that part of the minimum tax that is attributable to timber-related capital gains income.

Taxpayers attempting to take advantage of this carryforward will first have to determine how much of their corporate income tax is attributable to timber income. This allocation obviously must be made for years prior to 1976 as well as future years, in order to determine how much of a corporation's existing "regular" tax carry-over remains available for use in 1976 and subsequent tax years. The allocation is to be made under regulations to be issued.

Estate and Gift Tax Changes. One cannot refer to the 1976 Tax Reform Act without recognizing those parts which are perhaps the most drastic and inexcusably complicated additions to the Tax Code, the Carry-over basis rule and a tax on generation-skipping transfers. My purpose in mentioning the estate and gift tax changes here is simply to highlight these developments in order to set the stage for this afternoon's discussion. In fact, the entire Symposium could easily be spent on estate and gift tax and carry-over basis. For our purposes, however, it is sufficient to outline very briefly what Congress did in this area last year.

You will recall that under the prior law the gift tax rates were three-fourths of the estate tax rates, and in addition, property disposed of by gift was not included in the gross estate for estate tax purposes, thereby reducing the estate tax bracket. Also, the gift tax paid was excluded from the gross estate. Thus, there was a considerable preference given to lifetime gifts as opposed to testamentary disposition. The 1976 Act has changed all of this. First, there is a single unified rate schedule and credit for gift and estate taxes in an effort to equate the two, but at the same time, the new unified credit which replaced the \$30,000 lifetime gift tax exemption and a \$60,000 estate tax exemption provides substantially higher exemptions. When fully phased-in by 1981, the unified credit will equal exemptions of \$175,625 as contrasted with \$90,000 under prior law. The gift tax and estate tax marital deductions were also increased substantially, the gift tax deduction being \$100,000 on the first \$100,000 of gifts and one-half for gifts above \$200,000, while the estate tax deduction is one-half of the adjusted gross estate, subject to a minimum of \$250,000. The gift tax marital deduction, to the extent used, reduces the estate tax marital deduction. The effect of these changes in some brackets is to increase, and in others to decrease, the combined estate and gift tax liability as compared to the pre-1977 law. Whether deemed to be good or bad, however, these changes are reasonably understandable. Not so with respect to the carry-over basis.

It will be recalled that prior to the 1976 Act, for purposes of determining gain on a sale or exchange for income tax purposes, the basis of assets passing through an estate received a step-up to the estate tax value. Thus, unrealized appreciation in estate assets, the difference between the decedent's basis and fair market value on the valuation date, escaped income taxation completely. The Treasury Department and the tax-writing committees of Congress, among others, had been worrying about this escape from taxation of unrealized gain for a number of years. Two basic approaches have been suggested, one being to tax the unrealized gain on the death of a decedent, and to continue the step-up in basis, and the other being to provide a carried-over basis rather than a stepped-up basis for income tax purposes, notwithstanding the fact that the assets are taxed for estate tax purposes at fair market value on the valuation date. Either solution to this loophole in the law causes complications. The 1976 Act opted for carry-over basis with provisions which are so complex as to render the statute almost unworkable. The theory is, of course, fairly simple. The heirs and beneficiaries receive property from the decedent with the decedent's basis, rather than a new basis as of the estate's valuation date. Thus, unrealized appreciation to the date of the decedent's death will be taxed on eventual sale. As a matter of phase-in, the 1976 Act gives all property a fresh start as of December 31, 1976, so that it is only unrealized appreciation in value occurring since that date which is subject to the carry-over basis rule.

For purposes of these rules, timber and timberlands are no different from any other property, but this change in the law creates

entirely different and new economic and planning factors which individuals must take into account. Under prior law, timberlands were an exceedingly attractive investment for individuals with no need for current income and a desire to build up valuable assets to pass on to later generations. The carry-over basis rule obviously will have a material effect and must be taken into account by any individual considering the acquisition of timberlands as a long-term investment. Ultimately, the carry-over basis provision may have a significant impact on the attractiveness of the holding of timberlands subject to long-term timber cutting contracts. It is perhaps too soon to assess the overall impact of this change, especially since there are some changes which will probably be made to the estate and gift tax provisions of the 1976 Act by the Technical Corrections Act of 1977, which has passed the House of Representatives and is now pending before the Senate. In addition, the much-heralded tax reform proposals of the Carter Administration may or may not recommend a substitution of some form of taxation of the unrealized appreciation at death and the elimination altogether of the carried-over basis provision.

A final aspect of the estate and gift tax changes which should be mentioned is the addition of a new type of transfer tax on transfers of property through trust or similar arrangements between generations, a technique which in the past has been used to eliminate the taxation of inherited property in each generation. In its simplest example, a parent might set up a trust with income payable to his son for the son's life and the remainder distributable to the son's children on the son's death. Under prior law, the trust assets would not be includable in the son's estate unless the son were given substantial powers over the trust property, thus, skipping one generation for estate tax purposes. Under the new law, subject to a special exception, the trust property would be deemed to have passed through the son's estate with a transfer tax, similar to the unified estate tax, payable at that time. There is a special exemption which permits generation-skipping transfers to the extent of \$250,000 in assets for each child. There are, again, sufficient complications in this relatively simple concept for us to spend the rest of the Institute in discussion, but this brief reference will be sufficient to lay the predicate for this afternoon's discussion.

#### Pending Tax Reform

Elsewhere in this program, the Administration's current proposals for Tax Reform are to be discussed. Capital gains changes were expected to be a part of those proposals. It is comforting to note in this connection that Congressman Ullman, Chairman of the Ways and Means Committee, was recently quoted<sup>18</sup> to the effect that he expected no change in capital gains treatment as to the timber industry. Mention has already been made of H.R. 6715 and its "Technical" corrections, many of which have real substance, but are justified as carrying out the interest of Congress in the 1976 Act, and most of which are certainly needed. The carry-over basis problem has generated legislative

proposals ranging from outright repeal<sup>19</sup> to a two-year postponement<sup>20</sup> to substantial amendment.<sup>21</sup> The latter approach in most respects has the support of the Treasury Department. This last provision seeks to eliminate criticism of complexity by increasing the minimum basis adjustment from \$60,000 to \$175,000. The theory, as explained by Deputy Assistant Secretary Lubick,<sup>22</sup> is that estates with more than \$175,000 of unrealized appreciation will represent only 2 percent of the population, apparently too small a population to generate concern.

There is, however, one aspect of tax reform which is certain to greatly escalate an already difficult problem. The critical financial condition of the Social Security System requires additional employment taxes promptly. The House of Representatives and the Senate are ready to go to conference to iron-out legislative differences.<sup>23</sup> But, apparently, neither the Congress nor the Administration is willing to face up to the fact that these higher payroll taxes will make even more critical the issue of classification of individuals as employees or as independent contractors. This has been a problem with loggers and pulp wood dealers in the past, and can be expected to be a greater one in the future, since the impact of the payroll tax will have an even greater competitive effect. It is to be hoped that next year's tax reform will find a better solution than the present "hit and miss" efforts at definition.

### Conclusion

The one inescapable conclusion with respect to tax reform, not merely the 1976 Act but almost every tax act to and including the 1954 Internal Revenue Code, is that simplification has played no part in Congressional thinking. The timber industry is exceedingly fortunate to have been spared, as an industry, real grief from the 1976 Act, although every individual timber owner and most partnerships will suffer from tax complications caused by the Act. The industry, along with taxpayers generally, is now at least threatened with the complete elimination of the capital gains provisions. The justification for this step is simplification, but, if history is any judge, few, if any, business taxpayers will realize any simplification from tax reform.

## Footnotes

<sup>1</sup>Public Law 94-455, sometimes herein referred to as the "1976 Act" or "TRA 1976". References to specific provisions of the 1976 Act will be indicated as "Act § \_\_\_\_".

<sup>2</sup>Internal Revenue Code of 1954, hereafter referred to as the "Code". Unless the context otherwise requires, all references to Section numbers or the Section symbol § refer to Sections of the Code.

<sup>3</sup>Act §1402.

<sup>4</sup>Act §1401.

<sup>5</sup>Act §2129.

<sup>6</sup>Act §2140; Code §1033(g).

<sup>7</sup>General Explanation of the Tax Reform Act of 1976, prepared by the Staff of the Joint Committee on Taxation, December 29, 1976, p. 35.

<sup>8</sup>The second sentence of §464(e) (1) reads as follows: "For purposes of the preceding sentence, trees (other than trees bearing fruit or nuts) shall not be treated as an agricultural or horticultural commodity."

<sup>9</sup>Act §207(a).

<sup>10</sup>Regs 1.446-1.

<sup>11</sup>Act §207(c).

<sup>12</sup>H.R. 6715.

<sup>13</sup>Act §301, amending §§56-58.

<sup>14</sup>Act §302, amending §1348.

<sup>15</sup>The additional 4.875 percent tax is computed as follows:  $(0.50 - (0.5 \times 35)) \times 0.15 = 0.04875$ . This computation reflects that each additional dollar of capital gains income yields \$0.50 in tax preferences, which is taxed at a 15 percent rate after it is reduced by one-half of the additional "regular" income tax liability of \$0.35 caused by the additional capital gain. The equation does not reflect any increase in the taxpayer's additional \$0.35 "regular" tax liability which would be caused if the taxpayer had sufficient personal service income to be able to take advantage of the 50 percent Maxi-tax. As explained on pages 13-14 infra, tax preferences offset personal service income which would be subject to the 50 percent Maxi-tax and throw that income into a higher bracket. The only benefit of the additional tax paid as a result of losing the benefit of the Maxi-tax rate is that it increases the "regular" tax liability and thereby slightly mitigates the effect of the Mini-tax.

<sup>16</sup>Using the same methodology as in the previous footnote, the increased effective rates caused by the Mini-tax are computed as follows:

50% taxpayer:  $(0.50 - (0.5 \times 0.25)) \times 0.15 = 0.0562$   
40% taxpayer:  $(0.50 - (0.5 \times 0.20)) \times 0.15 = 0.0600.$

<sup>17</sup>The Act changed the terminology of §1348 from "earned" to "personal service" income when it added to the category certain types of retirement income.

<sup>18</sup>The Washington Post, October 6, 1977, p. A-1.

<sup>19</sup>S. 1954.

<sup>20</sup>S. 2227.

<sup>21</sup>S. 2228.

<sup>22</sup>Statement submitted to Senate Finance Subcommittee on Taxation and Debt Management on October 27, 1977.

<sup>23</sup>H.R. 9346.

The I.R.S. Viewpoint on Administration  
of the Timber Provision of the Internal Revenue Code

Chris Nelson, Jr.\*

When considering the viewpoint of the I.R.S. concerning administration of the Income Tax laws, I like to reflect on the statement found each week in the Internal Revenue Bulletin, from which I quote.

"The function of the Internal Revenue Service is to administer the Internal Revenue Code. Tax policy for raising revenue is determined by Congress.

With this in mind, it is the duty of the Service to carry out that policy by correctly applying the laws enacted by Congress; to determine the reasonable meaning of various Code provisions in light of Congressional purpose in enacting them; and to perform this work in a fair and impartial manner, with neither a government nor a taxpayer point of view.

At the heart of administration is interpretation of the Code. It is the responsibility of each person in the Service, charged with the duty of interpreting the law, to try to find the true meaning of the statutory provision and not to adopt a strained construction in the belief that he is 'protecting the revenue.' The revenue is properly protected only when we ascertain and apply the true meaning of the statute."

As a representative of I.R.S., and after 11 years in the National Office, I will say without hesitation that the I.R.S. viewpoint is that the timber provisions of the Income Tax Laws should be applied in a fair and impartial manner.

So much for the viewpoint. Now, very briefly, here are some facts about the organization and functions of the I.R.S. The National Office is located in Washington, D.C. Its functions are confined to executive direction, nationwide policy formulation, and statistical controls. The work of the Internal Revenue Service is completely decentralized, so that a taxpayer usually has little occasion for direct contact with the National Office.

The mission of the National Office is to develop broad nationwide policies and programs for the administration of the Internal Revenue

---

\*Senior Forester, Internal Revenue Service, Washington, D. C.

laws, and to direct, guide, and coordinate the endeavors of the Internal Revenue Service.

There are seven Internal Revenue regions, each composed of several Internal Revenue districts. The Regional Commissioners are responsible for policy and program execution and evaluation, and for supervising their staffs and the District Directors. They have full authority to carry out these responsibilities.

The District Director's Office is the one with which the taxpayer has contact. The collection activities, the examination and audit of all returns (except alcohol and tobacco taxes) and all functions related to the assessment and collection of taxes are vested in the District Director's Office.

The Office of the Chief Counsel is a unit of the Legal Division of the Treasury Department. The Chief Counsel is an Assistant General Counsel of the Treasury Department, and serves as a member of the Commissioner's executive staff.

The Chief Counsel's Office furnishes legal advice to the Commissioner in matters pertaining to administration and enforcement of the Internal Revenue laws. There is also a Regional Counsel, subject to the general supervision of the Chief Counsel, in each of the seven Internal Revenue regions.

The Internal Revenue Code is a veritable maze of provisions, including more than a quarter of million words. Despite perennial efforts by Congress to reform, reduce, adjust, amend, or simplify the Code, it seems to continue to grow in bulk and complexity. Fortunately for some, however, the few provisions of the Code that apply specifically to income from timber transactions have remained essentially unchanged since 1954.

This does not mean, however, that all of the problems related to taxation of income from timber have been solved and that the position of the Service on all timber related issues has been clearly established. Far from it. The fact that during the last three years at least 14 Revenue Rulings having to do with timber have been published in the Internal Revenue Bulletin, points up the fact that timber related issues are still very much alive. Furthermore, there are at least 10 Revenue Ruling Projects having to do with timber issues that are in process in the National Office at the present time.

Revenue Rulings represent the conclusions of the Service on the application of the law to a specific set of facts. In those that are based on positions taken in rulings to taxpayer or Technical Advice to Service field offices, identifying details and confidential information are deleted to comply with statutory requirements.

The Internal Revenue Bulletin is the authoritative instrument of the Commissioner of Internal Revenue for announcing official rulings

and procedures of the Internal Revenue Service and for publishing Treasury Decisions, Executive Orders, Tax Conventions, Legislation, Court Decisions, and other items of general interest. It is published weekly and may be obtained from the Superintendent of Documents on a subscription basis. Bulletin contents of a permanent nature are consolidated semi-annually into cumulative bulletins, which are sold on a single-copy basis.

Eleven years ago, I left private industry in Texas and went to Washington, D.C. as a forester for the Internal Revenue Service. Until then, I had never been confronted with an income tax problem, other than when preparing my own personal income tax return.

Upon assuming the duties of my new job with the I.R.S., about the first thing that happened was the auditing of my income tax returns for the three open years. This was a new experience, and incidentally, one in which I learned about Revenue Rulings. The examining agent questioned my method of computing business automobile expenses and showed me a Revenue Ruling to prove his point. The Revenue Ruling left me defenseless, so I paid the deficiency of about \$65.

If an issue is not clearly covered by the Income Tax Regulations or by a published Revenue Ruling, then it would be improper to say that the Service has a "position" on the issue. Revenue Rulings are usually based on facts in Letter Rulings and Technical Advice Memoranda.

A Letter Ruling is a written statement to a taxpayer issued by the I.R.S. National Office that interprets and applies the tax laws to a specific set of facts. Since such a ruling determines the tax effects of a proposed transaction, the taxpayer can structure it to comply with the tax laws, and, by resolving issues in advance, help avoid future controversy. While Letter Rulings can be a guide to I.R.S. thinking, they are not legal precedents and may not be relied upon by other taxpayers.

Technical Advice Memoranda provide written guidance from the I.R.S. National Office to its District Offices, on request, in connection with an audit, or a claim for refund or credit.

Letter Rulings and Technical Advice Memoranda issued after October 31, 1976 have been open to public inspection since March 15, 1977, in the Freedom of Information (FOI) reading room of the I.R.S. National Office. To insure taxpayer confidentiality, the name and address of the taxpayer and other identifying information is removed from any material disclosed.

At the present time there are 24 forestry positions in the Internal Revenue Service. Two of these are in the National Office, Corporation Tax Division, and 22 are field positions under the Audit Divisions of several district offices.

The field foresters assist, when requested to do so by the examining revenue agent, in auditing the tax returns of taxpayers that report significant income or deductions generated by forestry operations or timber transactions.

These foresters must have some industrial experience and a working knowledge of timber operations in general. They must understand industry accounting practices and its terminology and vernacular. And, most importantly, they must be able to properly relate the language of the timber provisions of the Internal Revenue Code and the Income Tax Regulations to the many and ever-changing practices of the forest industries. They learn that examiners of income tax returns showing gains or losses from the disposition of standing timber or the conversion of standing timber to marketable goods are confronted with problems not found in other income tax returns. This is true, not only because timber is a unique kind of property, but also because the Internal Revenue Code provides, under certain circumstances, for special treatment of such gains or losses. The circumstances are described in sections 631, 1231, and 1221 which provide for long-term capital gains, and sections 611 and 612 concerning deductions for cost depletion.

Timber is one of the several natural resources subject to the allowance of a deduction for depletion. The others are mines, oil and gas wells, and other natural deposits. The classification of timber as a natural resource is somewhat incongruous because under modern forest management millions of acres of land have been artificially reforested by the application of sophisticated and expensive seeding or planting procedures. It remains a fact, however, that by far most of the wood that goes into lumber, plywood, paper pulp, poles and piling, and the like comes from forests that were generated naturally, with little or no help from man.

The I.R.S. forester learns that for purposes of the Internal Revenue Code, -- except for the special provision including Christmas trees -- the word timber means the wood in standing trees that is available and suitable for exploitation and use by the forest industries. Timber is the only one of the natural resources that is renewable and that naturally increases or decreases in quantity from year to year. The word timber as used in the Code has the same meaning as stumpage, as the word is commonly used by professional foresters and forest industry people. To the forest industry or forest owner, stumpage is the wood that is recoverable from the forest upon severing the trees from the land. In other words, stumpage is the recoverable wood in the trees while they remain "standing on the stump." After the trees are severed, the wood is no longer stumpage, and it also ceases to be timber for income tax purposes. Significantly, when the tree is felled, the severed portion is changed from real to personal property.

For Federal income tax purposes, an owner of timber is one who has the exclusive right to cut the timber, along with the right to use the products of the felled trees for its own account.

Ownership of timber for section 631 purposes may be acquired in one of four ways:

- (1) By acquiring the fee simple title to the land.
- (2) By leasing the land for a long period of time for the purpose of cutting and growing timber on it.
- (3) By contracting with the timber owner for the right to cut the timber in return for payment of a royalty to be paid according to the number of units of timber actually cut under the contract. This is called a timber lease or a pay-as-cut contract.
- (4) By purchasing the timber outright. Timber cutting rights purchased outright are paid for without regard to the number of units of timber actually cut (felled). An agreed-upon lump-sum consideration must ultimately be paid whether the timber is cut or not.

Where the beneficial ownership of timber is transferred by timber lease -- as distinguished from a lease of the land -- the transferor (lessor) is said to have retained an economic interest in the timber. This is important for depletion and for section 631(b) purposes.

An owner of timber may derive income from it by cutting, selling (or exchanging), or leasing it. Each kind of transaction is unique and has special income tax consequences for the owner.

An owner may cut his own timber (or engage someone else to cut it for him) and derive income by selling the wood or using it in the making of wood products such as lumber and paper pulp. Any gain or loss realized from sale of the wood or wood products is ordinary gain or loss because the wood or products are held primarily for sale, or are stock-in-trade of the owner. The owner may, however, elect under the provisions of section 631(a) of the Code to treat the cutting of timber as a sale of the timber and realize long-term capital gain on the hypothetical sale.

A sale of timber occurs when an owner conveys to another party, for a lump sum price, the right to enter the premises, sever certain designated timber, take possession of the wood and haul it away. The intent of the parties is that the cutting and removal will be accomplished promptly, and a termination date consistent with that intent is stated in the instrument of conveyance. An important feature of a timber sale is that the agreed upon price must be paid regardless of whether the timber is actually cut by the purchaser. The purchaser's rights of cutting and removal stop when the termination date is reached.

A timber lease is most generally known as a pay-as-cut timber agreement or contract. It is not a sale or exchange of property, consequently it cannot generate long-term capital gain unless the requirements of section 631(b) are met.

Gain or loss realized on the sale of standing timber is long-term capital gain or loss only if the timber in the hands of the seller is a capital asset as defined by section 1221 of the Code. If the timber is property used in trade or business as defined by section 1231, gain or loss on the sale must be netted with other section 1231 gains and losses, and if the gains exceed the losses, the net gain would be long-term capital gain. Generally, this means that if the holding period requirement is satisfied, and if the seller was not holding the timber primarily for sale to customers in the ordinary course of his business, then any gain on the sale is a long-term capital gain.

A typical forester generally will not be as knowledgeable of accounting systems and methods as the revenue agent to whom the case is assigned. The I.R.S. forester will, therefore, depend heavily on the information given by a taxpayer on the tax form designed especially for the forest industry. This special form is known as the Forest Industries Schedule, Form T (Timber). Taxpayers who report gain or loss from timber transactions are required by the Income Tax Regulations to fill-out and file Form T with the income tax return.

Form T has been revised this year to, hopefully, make it more comprehensible, and to include some important items, such as amounts expended for reforestation, that were not asked for on the old Form T.

Copies of the new Form T are now available from the District Offices. There are also some available here that may be picked up after this session.

Disagreements between taxpayers and the I.R.S. field forester usually occur over questions of fact. The factual question is most often one regarding the fair market value of timber -- usually for section 631(a) purposes. Since the taxpayer's tax liability usually decreases as the fair market value increases, it is not surprising that opinion differences arise.

In estimating the fair market value of their timber, taxpayers tend to emphasize the fact that FMV is the highest price an informed purchaser would pay. On the other hand, an IRS Forester may tend to emphasize the fact that FMV is the lowest price an informed seller would accept.

The amount in either case would, of course, be the same.

Another issue of current interest is whether losses of timber from bark beetle epidemics may give rise to deductions from ordinary income as casualty losses under section 165(c) (3) of the Code, and section 1.1231-1(e) (3) of the Income Tax Regulations.

Revenue Ruling 57-599 holds that a loss arising from the death of trees as a result of insect attack does not constitute an allowable deduction as a casualty loss. However, two memorandum decisions of the Tax Court, Nelson v. Commissioner, T.C. Memo 1968-35; and Black v.

Commissioner, T.C. Memo 1977-337 have allowed a casualty loss for loss of ornamental or shade trees.

In both of these cases, pine trees on residential property died as the result of a bark beetle attack, and the court held that the trees were destroyed as a result of a casualty within the meaning of section 165(c) (3) of the Code.

It is very important to note, however, that the Nelson and Black cases involved losses of shade or ornamental trees on nonbusiness residential property. Admittedly, a dead shade tree is a worthless shade tree. But if the tree contains merchantable timber, such timber does not become worthless immediately upon the tree's death. So long as the dead timber is salvable, it cannot be said that it is worthless.

A related Revenue Ruling, Rev. Rul. 66-9, recognized that timber fit for salvage following hurricane damage could not be the subject of a casualty loss due to destruction by the hurricane.

In general, the timber in trees killed by bark beetles is eventually rendered worthless by insects and fungi that feed on the dead wood. The question then arises, is the timber destroyed by the bark beetle attack, which may be a casualty, or by the secondary wood destroyers that do not act swiftly enough to meet the test of suddenness required for a casualty?

These are some of the things that must be considered in weighing the possible impact of the Nelson and Black decisions.

New and unresolved timber tax issues continue to arise. For example, the Service has no published position on the question of whether mother trees in a superior tree seed orchard are depreciable property subject to the investment tax credit.

New issues seem to be getting more and more difficult to resolve. But, they must be resolved, and the answers must be yes or no, seldom maybe.

A little more than a week ago, I returned from a meeting of all the I.R.S. foresters. For three days we deliberated timber tax problems and issues -- most of which are not yet the subject of a Revenue Ruling. In three days we discussed perhaps twelve important problem areas, in the 30 minutes scheduled for this subject today, we have mentioned three. Obviously, there is not enough time for a more comprehensive discussion.

## The Landowner Through a Lawyer's Eyes

William K. Condrell\*

Soon after the U.S. Congress enacted a national income tax, our lawmakers realized that a distinction had to be made between ordinary income (wages, salaries, rents and profits) and the increase in value of long-term capital assets. As in other countries dependent on private investment for economic growth, our Congress recognized that to do otherwise would so restrict capital mobility that innovation, productivity, and national growth would suffer.

In 1921, a formula was adopted for taxing the gain realized when a capital asset is transferred. Although some countries have excluded such gain from taxes altogether, the U.S. has at least softened the burden. Present law provides that the long-term capital gains of individuals are taxed at one-half the rate applicable to ordinary income, i.e., the effective capital gains tax rate for individuals varies from 7 to 25 percent on the first \$50,000 of capital gain and 35 percent on gain in excess of \$50,000. The long-term capital gains rate for corporate taxpayers is 30 percent, compared with the generally applicable rate of 48 percent on ordinary corporate income. Both individual and corporate gains are subject to an additional "minimum tax" assessment.

The theory behind this tax treatment was that if an investor left his money in an asset for a period of time specified by law, he was "rewarded" for the long-term risk taken and was allowed to keep a larger share of the growth in value he had helped to create than would a speculator in short-term gambles. Among other factors, the justification for the lower capital gains tax rates rests on three assumptions:

- (1) that the investor sacrificed the option of spending his initial investment on something which might have given immediate satisfaction (travel, a new car, etc.) in exchange for something of tangible long-term importance to the economy. In this respect, he saved rather than consumed, and his savings, or investment, provided the capital in facilities necessary for jobs and higher productivity.
- (2) that he took the risk of possible losses if the investment failed to measure up to reasonable expectations or if there was an economic downturn; and

---

\*General Counsel, Forest Industries Committee on Timber Valuation and Taxation, Washington, D.C.

- (3) that all of the eventual "gain" from the sale of the property would likely not be true economic gain, but would instead reflect the higher replacement costs resulting from inflation which occurred over the period the asset was held.

Thus, if a special capital gains rate were not applicable, there would likely be an economic disincentive for such investments since there is no early return from them either in terms of economic return or personal satisfaction. Even with capital gains, however, it is possible that the taxpayer will end up with less "capital purchasing power" than was represented by his original investment.

For as long as the U.S. has had a capital gains tax system, standing timber has been recognized as a capital asset and, as such, eligible for capital gains treatment when sold. Prior to 1944, however, the capital gains laws were very narrowly applied to timber -- in a way which discouraged sustained-yield management and made timber owners reluctant to reinvest in reforestation.

If the timber owner liquidated an entire stand of timber for a lump-sum price or through outright sale, thus demonstrating no intention to renew the stand for future timber sales, the proceeds were then subject to the capital gains tax rate. If, on the other hand, the owner sold only selected trees from the stand, replanted or otherwise managed the timber property for future yield, or harvested the timber asset gradually as it matured for manufacture in his own mill, the proceeds (or the gain in value in the latter case) were subject to ordinary income tax rates. The rationale for the different treatment was that timber being managed for sale and regeneration was "stock in trade" rather than a capital asset.

It doesn't take much analysis to conclude that such a disparity in the treatment of a capital asset, based largely on the method of disposal, was at odds with the avowed national policy of encouraging the perpetuation of productive timberlands. This form of taxation actually discouraged regeneration of trees after harvesting and was one of the major causes of the discredited "cut and get out" philosophy of early timber harvesting.

In 1944, Congress, stimulated in part by the realization that well-managed private timberlands were vital to the economy and environment, eliminated the tax bias against sustained-yield management by making the capital gains treatment apply to timber transactions compatible with good forest management practices. This action is incorporated in the tax code as Section 631(a) and (b) (previously Section 117(k)). Under these provisions, the method of valuing timber for tax purposes differs to facilitate IRS administration and supervision. Except for this difference, however, investors in timber are now on relatively equal footing no matter how they dispose of their timber assets. The owner can reseed or replant a harvested area, sell or selectively harvest

only the marketable trees while leaving the residual stand for future production, or manage the timberland to help provide a continual raw material supply for a manufacturing facility operated by the timber owner -- all without suffering the adverse tax consequences prevailing before 1944.

For a perspective on the capital gains tax as it applies to timber, let's compare it briefly with a more typical form of capital investment -- not because it is directly comparable to the capital gains taxation of timber, but because it illustrates the capital gains tax in a more widely understood application.

When a taxpayer buys an apartment house, he has acquired a capital asset. The purchase price is the "tax basis" upon which future capital gain or loss is determined. If the owner adds a new wing to the building, the cost of that construction is added to the capital account and increases the tax basis. The owner's operating expenses (painting and other maintenance costs, janitorial services, property taxes, depreciation, mortgage interest payments, etc.) are all deductible each year from income derived from the apartment house, or from some other source of ordinary income. If the property is sold a few years later, the seller is taxed at the capital gain rate on the difference between the "tax basis" (original cost plus any ensuing capital improvements in the property) and the selling price.<sup>1</sup>

As we noted above, capital gains tax treatment is applied in this situation because the investor had to forego personal consumption to provide the capital with which to provide a needed economic commodity, to assume the risk of possible losses, and to see his economic gains somewhat diminished by inflation.

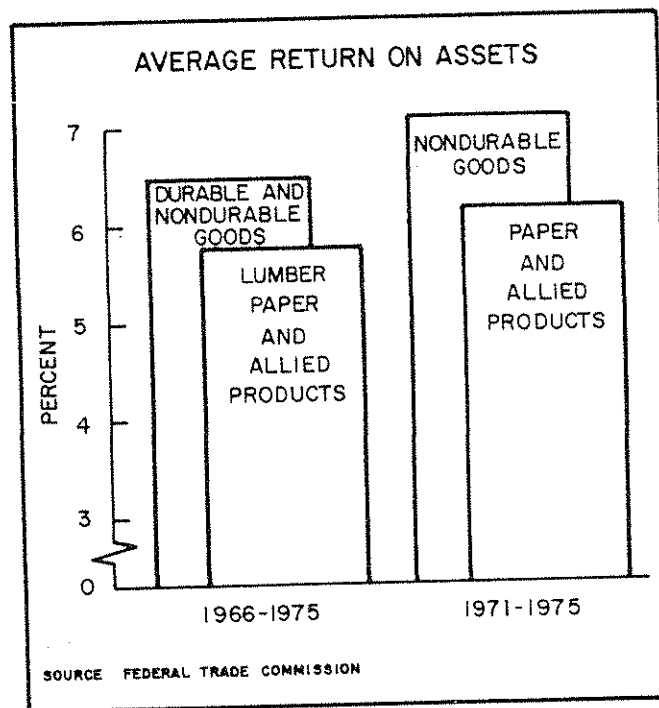
Generally, this concept is applicable to timber growing. If the investor buys property which already has standing timber, the cost of the timber at the time of purchase is his tax basis. If planting is required, the cost of site preparation and planting is capitalized, and this represents an addition to the basis of the timber assets. The expenses of maintaining the timber investment are treated much like the comparable expenses of the apartment house owner. Property taxes, interest costs, forestry consulting fees, fire protection and the like are deductible in the year in which they are incurred.

There are, however, some substantial differences in the tax treatment of timber. Unlike the other investor, the timber owner is not eligible for annual depreciation deductions; the depreciation or cost recovery factor for timber (called cost depletion) cannot be deducted until the timber is sold or harvested and thus is not even a close cousin to what is known as percentage depletion. Similarly, other provisions of federal tax laws applying to forest owners are not lenient. Timber owners are somewhat restricted as to what they can deduct as operating expenses and what must be capitalized and recovered over a period of many years as the timber is cut. They are also confined as to the kinds and amounts of casualty losses that are deductible for tax purposes.

It is also important to note that the capital gains rate applies only to the gain in value of the standing tree. Any gain subsequent to harvest -- from manufacturing, for example -- is treated as ordinary income. That is why the average effective tax rates of forest industry companies is substantially above the capital gains rate and is also well above the average of other resource-based industries.

The application of capital gains treatment to timber, in addition to its character as a capital asset, is particularly appropriate given the nature of the forest industry, as well as the current and future demands placed on that industry. Understanding how timber taxation relates to the present and future supply of wood and wood fiber begins with an understanding of the distinctive characteristics of this natural resource.

Seedlings take from 30 to 75 years to produce timber for lumber and plywood and 20 to 30 years for pulpwood. Anyone who has undertaken the task of nurturing a new forest from seedlings to maturity would be astounded by the claim that an investment in timber is no more long-term than investments in such other enterprises as railroads, ship-building, and utilities. There are few private enterprises, if any,



*Return on timber investment is very volatile because of fluctuations in demand and price. In most years, return is below other comparable industries.*

characterized by as long a period of illiquidity as the timber industry.

Historically, low rates of return on timber also have discouraged investments in timber growing. Return on investment has been far below the average of other industries. Federal Trade Commission reports indicate the return on lumber, paper and allied products for the period 1966-1975 was 5.8 percent compared with a return of 6.5 percent for all durable and nondurable goods produced. Using the five year period through 1975, the average return on paper and allied products was 6.2 percent compared to a return for other nondurable goods of 7.1 percent. Even with capital gains tax treatment, the industry is barely holding its own and these figures show overall income and assets of these companies, not just the portion related to the growing of timber.

Studies by universities and government agencies, however, show comparable and, too often, even lower rates of financial return on investment from timberland operations alone -- and this is true in all regions of the country and in all categories of ownership.

PREDICTED RATES OF RETURN  
ON TIMBER INVESTMENTS  
(AFTER TAXES)\*

AREA	RATE OF RETURN
North Central and Eastern	1.0 - 4.2 %
Southern	0.7 - 8.3 %
Rocky Mountain	1.1 - 6.5 %
Pacific Coast	
Redwood	1.1 - 3.6 %
Douglas Fir	1.1 - 4.1 %

*\*Measured on most suitable investment opportunities  
including conversion to other species*

SOURCE: U.S. FOREST SERVICE  
DIVISION OF FOREST ECONOMICS & MARKETING RESOURCES  
NOVEMBER 10, 1975  
Unpublished data as adjusted for federal taxes by staff of Forest  
Industries Committee on Timber Valuation and Taxation

*Studies show low rates of return (in every region of the country and in virtually all timber species). The range of returns indicated reflects varying species climatic and site conditions. The studies demonstrate the marginal feasibility of long-term investments in forest planting and management.*

It is also significant that commercial insurance against fire, insect, and disease losses is not available to timber owners. Unlike most assets, timber's value can be adversely affected by uninsurable risks -- weather, insects, disease, and fire -- during its prolonged exposure over decades of growth. For example, in 1976, fires destroyed over 5 million acres of forested area; and it was estimated that forest insects killed millions of trees and defoliated or infected millions of additional acres. In 1973, killing, defoliation, and infestation by certain insects, expressed in a variety of terms by the Forest Service, was estimated as follows:

Douglas Fir tussock moth.....	one billion board feet
Mountain Pine beetle.....	four million trees
Western Spruce budworm.....	3.5 million trees
Southern Pine beetle.....	47 million acres
Gypsy moth.....	1.8 million acres
Spruce budworm.....	2.5 million acres

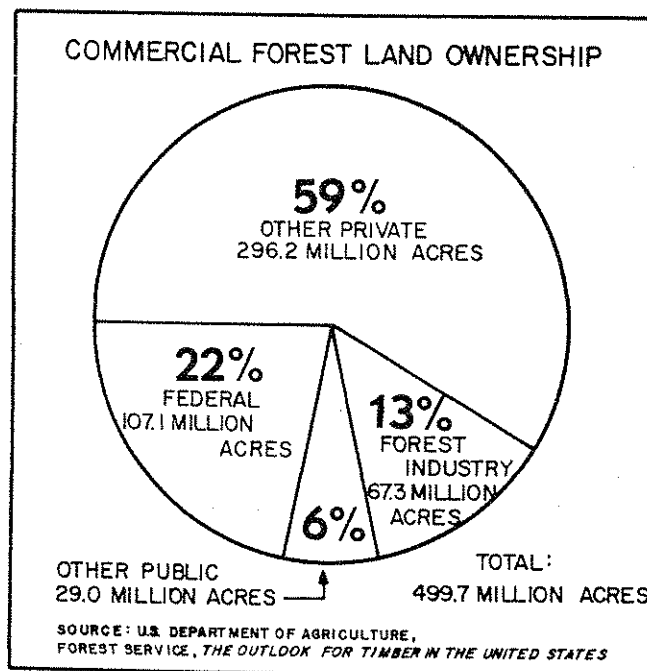
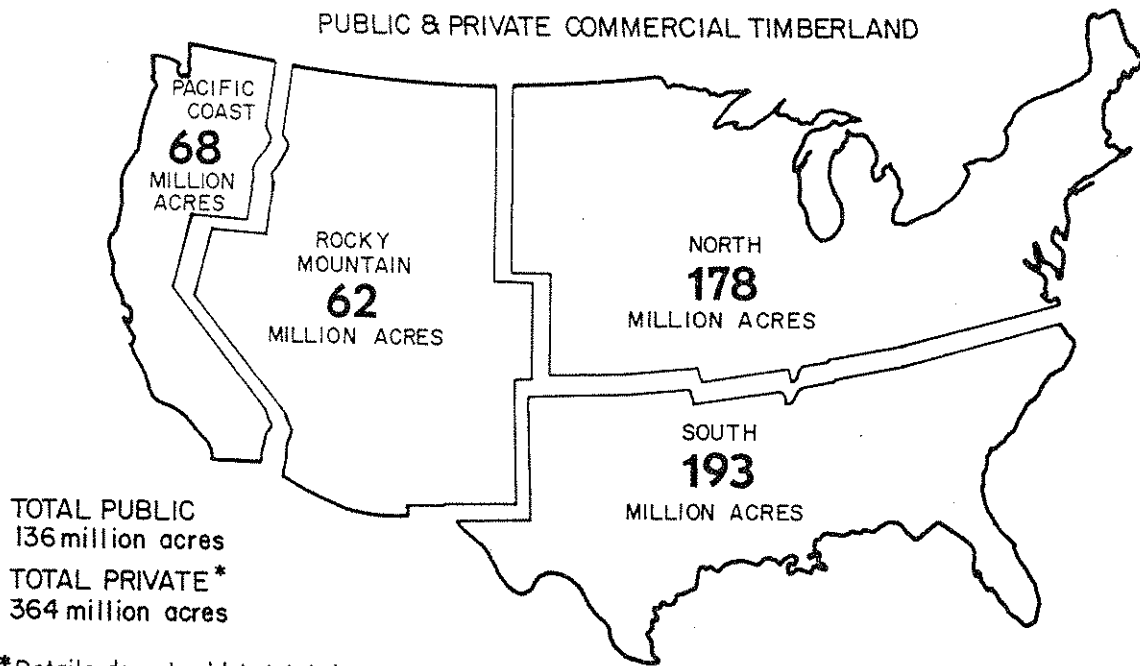
In addition to calculating these risks, the timber owner must also assume the availability of a profitable market several decades in the future, an assumption not always supported by the economy. Thus, timber growing does not offer many incentives from an investment standpoint. If timber investments are not, at the very least, treated equitably in relation to other investment opportunities, capital for forest management will flow to other opportunities with greater certainty of return, fewer risks, and shorter pay-back periods.

Nonetheless, trees are an integral part of our ecological cycle and supply an incredible number of benefits to every citizen. Among those benefits: recreation, a habitat for wildlife, watershed protection, and a seemingly endless variety of paper and wood products which shape our very lives.

Moreover, the forest is an important sector of the U.S. economy. Forest entrepreneurs -- whether the small private owner or industrial -- are found in every section of the nation. Approximately 4 million private individuals own 59 percent of the U.S. land suitable for commercial timber production. Another 13 percent is owned by industries engaged in forest products manufacture. The forest industry employs over 1-1/2 million people, representing 8.6 percent of the U.S. work force.

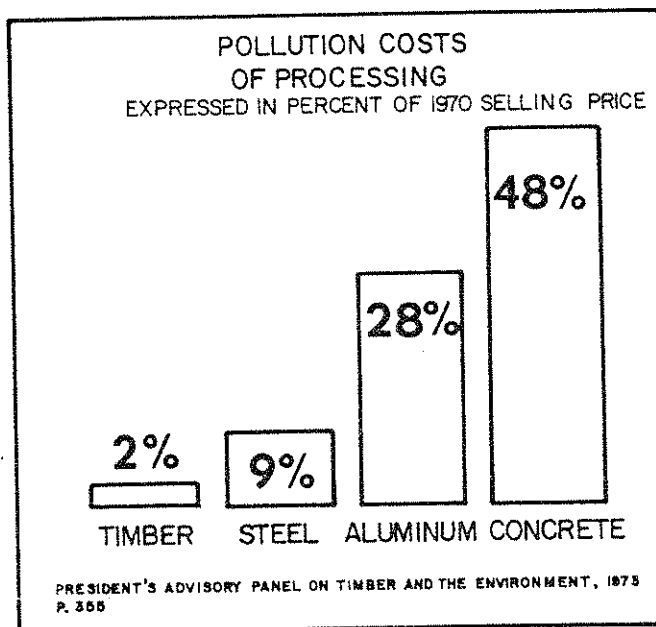
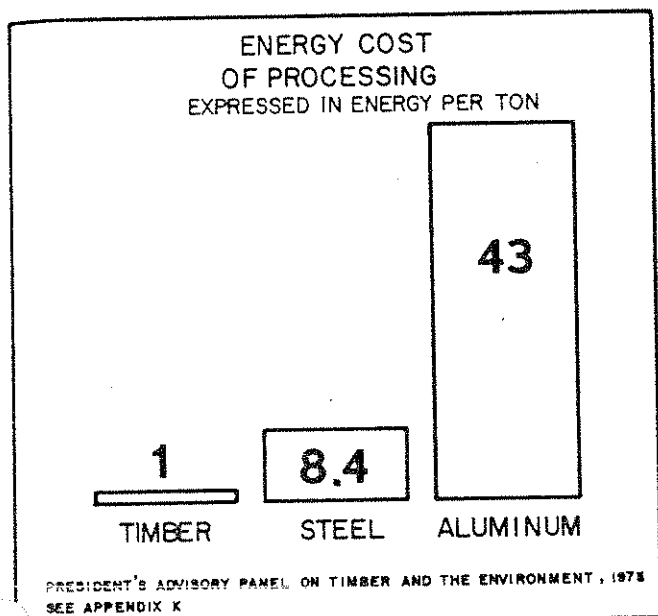
There are sound reasons, aside from economic ones, for encouraging the development of our timber resources. Nature is not producing any more fossil fuels to provide us with cheap energy to process wood substitutes. Timber products, on the other hand, are processed with lower energy requirements than other materials and with relatively little adverse environmental impact. Processing steel for construction takes 8.4 times as much energy as timber, while aluminum takes 45 times the energy required for processing timber. Wood substitutes also create more air, water, and solid waste pollution than wood products.

## PUBLIC &amp; PRIVATE COMMERCIAL TIMBERLAND



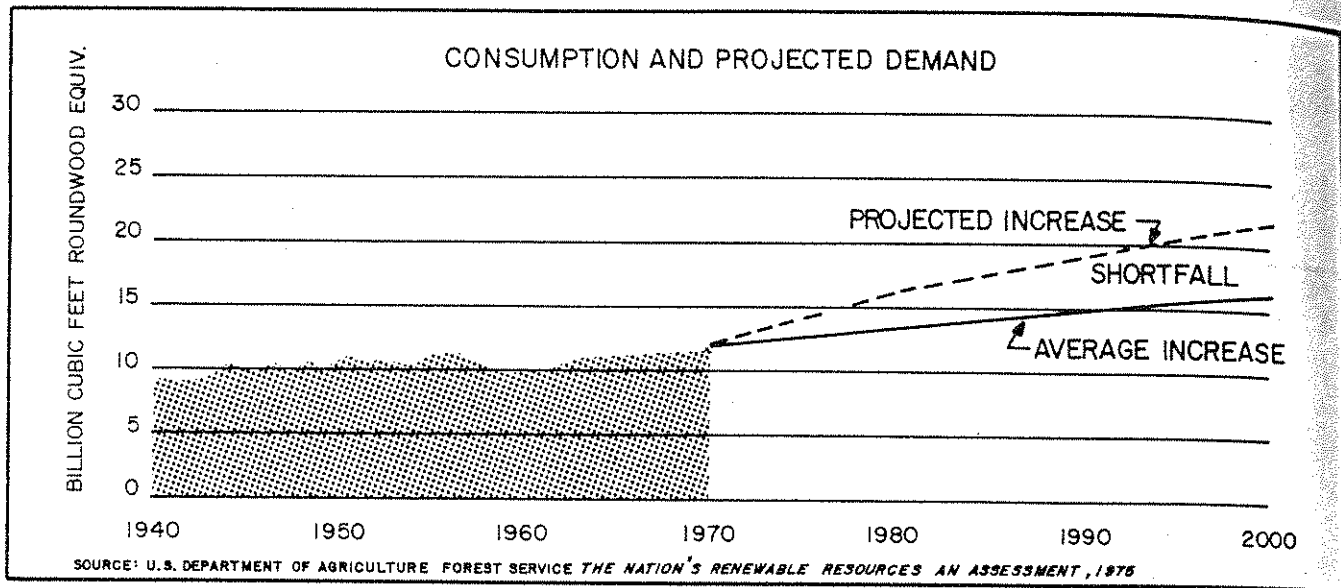
Approximately 4 million private individuals own 59% of those U.S. forest lands suitable for commercial timber production. Only 13% is owned by industries engaged in forest products manufacture. The remaining 28% is in public ownership.

In addition, much of wood fiber can be recycled, and what is not is biodegradable and returns to the earth.



Beyond the present economic and environmental advantages of timber production, the U.S. Forest Service predicts the demand for wood and paper products could nearly double by the year 2020. Supplies of wood must increase by 40 percent just during the 1970's to meet the national housing goal set by Congress. Levels of production experienced over the last several decades would indicate a substantial shortfall. Government studies indicate that, unless present levels of forest management are increased to the levels now being practiced by the better industrial and government forest operations, consumer requirements for wood products will, within 20 to 30 years, exceed total timber production.

This means that every acre of productive forestland will have to grow even more wood in order to meet the ever-increasing needs, to avoid further pressure of prices and to maintain timber supply. Foresters and forest managers do not have to be told what to do to meet these needs. They have the know-how to get a new forest growing up to five years faster than nature.



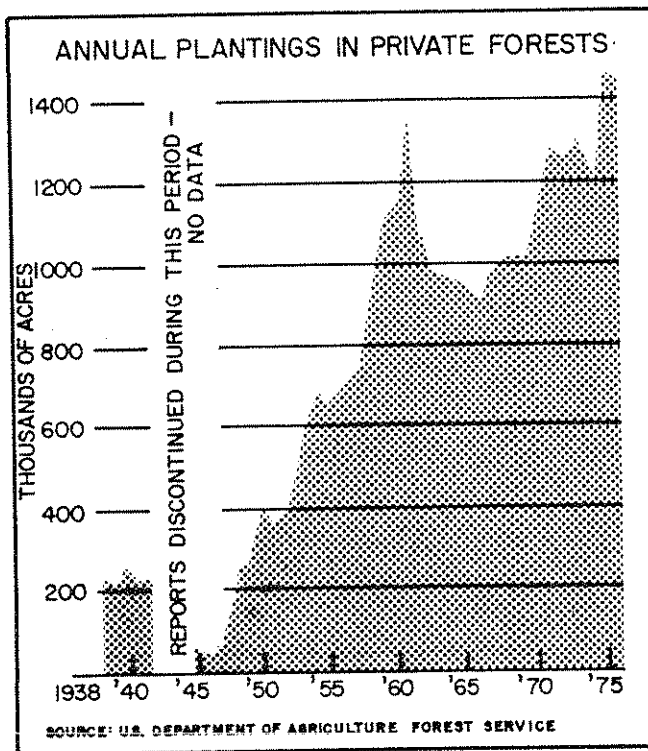
*Consumer demand for forest products has been rising over the past 30 years but is expected to increase even faster between now and the year 2000.*

Superior seedlings grown in nurseries plus thinning, soil enrichment, protection from natural enemies, and other forest management techniques developed in recent years make this possible. But these techniques are expensive and require enormous capital investment. They call for complex equipment, vast manpower, and difficult logistics, all multiplied by many years of work before a return on investment is possible. As we noted above, such a return is often small and subject to great risk.

Against this background, Congress and/or various committees of Congress have reviewed the impact of Section 631 capital gains treatment on numerous occasions -- specifically in 1954, 1959, 1963, 1969, 1971, 1973, and during the 1975-1976 tax reform hearings. The value of timber capital gains in terms of both tax equity and economic benefits has been consistently reaffirmed with each revenue law revision.

The result of the 1944 provisions was predictable and a great step forward for the American forest (sic). The application of capital gains taxation for timber has been the cornerstone of a dramatic revival in the regeneration of privately owned timber. With this incentive came an infusion of capital investment in forestry programs, a high rate of reinvestment of revenues from timber harvesting into regeneration of new forests, and increasingly intensive application of scientific methods of growing trees faster and better.

Prior to 1944, this country harvested seven billion cubic feet more timber than it grew annually -- a substantial net loss. Since then, we have grown an average of over three billion cubic feet more



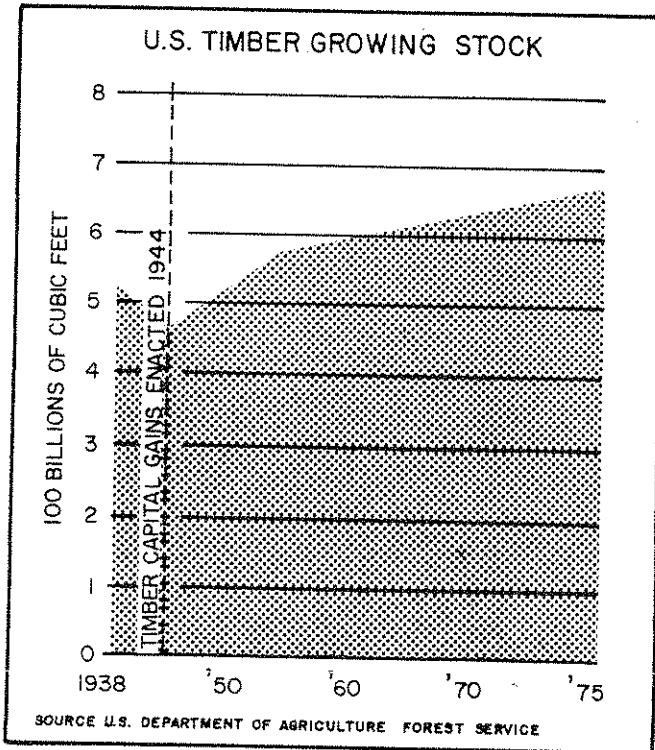
*The dramatic effect of anticipated capital gains treatment of proceeds from timber growing is illustrated by the number of acres of private land\* planted to trees since the tax incentive was enacted in 1944. In 1970, six acres were planted in trees for every one acre in the period preceding World War II.*

\*Adjusted to exclude new plantings generated by the Soil Bank Program

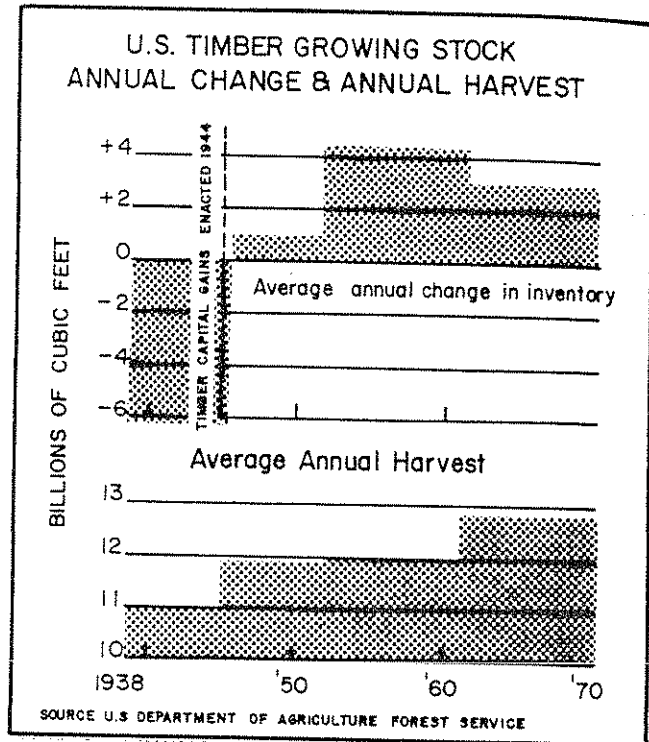
than we harvested every year -- a substantial net gain. Tree planting, just one method of forest regeneration, has increased dramatically.

From fewer than 50,000 acres planted during 1945, capital gains incentives have helped encourage planting on an average of one million acres every year since 1960. In 1970 alone, six trees were planted for every one planted in all the years before World War II. And these figures don't include other forms of forest regeneration such as seeding and enriched natural methods.

As a result, the decline in the nation's timber resources has been reversed and the U.S. timber growing stock has been increased steadily. By 1975, that stock reached nearly 700 billion cubic feet -- over 200 billion cubic feet more than in 1944.



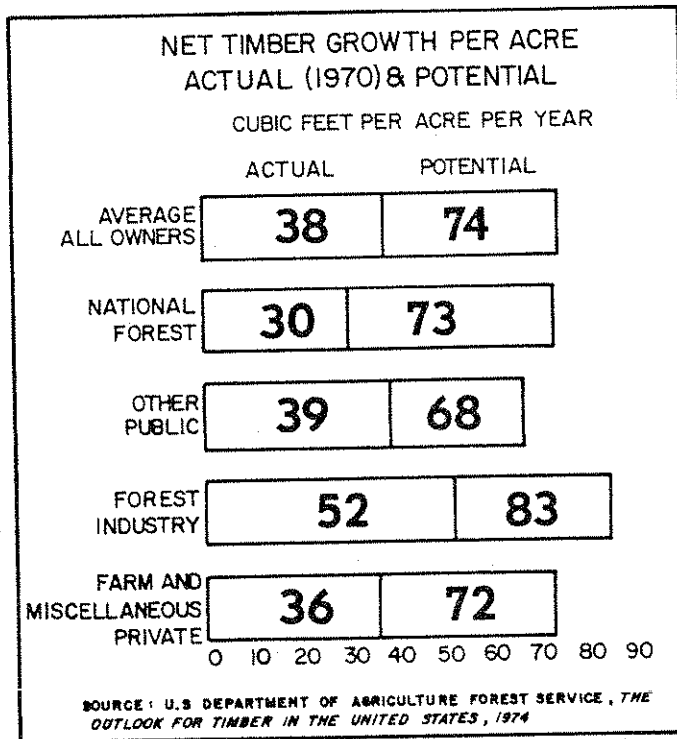
Prior to 1944, the growing stock in United States forests declined at an average rate of 7 billion cubic feet per year. Since that time, the volume of growing wood fiber has increased until today it is approximately 175 billion cubic feet more than in 1944. This dramatic difference was made possible in large measure by the capital gains incentive for increased investments in reforestation and timber-stand improvement, as well as by increased government and industry cooperation in better forestry management.



It is only in the last 10 years, as a result of greatly increased requirements for wood products, that the average annual increase in growing stock has declined. Although we are still producing more than we are harvesting, the trend emphasizes the importance of continued investment in costly forest management practices.

With greater industry stability and investment in new technology and equipment, a higher percentage of each harvested tree is utilized in making consumer products. Industrial forest land ownerships have been the most responsive to the capital gains incentive and are now the most productive in the nation. Farms and other small ownerships have also shown considerable improvement.

Greater economic stability exists in forest areas now than in earlier periods when sustained forest management was not economically



*There is potential for improvement among all sectors of forest ownership, but the highest rate of growth in cubic feet per acre has resulted from the high level of investment made by industrial owners in improved technology and intensive management.*

feasible. Employment is more dependable, local tax revenues have grown, and expanded investments in permanent manufacturing facilities have resulted. Communities, which in former days would have been hurt economically as timber was cut over, can now look forward to a continuing supply of raw material for local industries. Gone are the timber boom towns turned ghost towns.

Fair and equitable tax treatment for private forest owners is a vital part of the timber supply equation. If forest owners are confident that tax policies will continue to encourage long-term investment in regeneration of forests, more and more trees can be planted for the future.

In spite of the overwhelming evidence in the public record and in spite of the visual evidence in every region of the country that fair tax treatment of timber has contributed greatly to the nation's timber supply and the encouragement of professional forest management practices, there are some who, for one reason or another, single out timber capital gains for criticism. Fortunately, the economic and environmental arguments in favor of tax equity for sustained-yield management have been so conclusive that this criticism has been rejected by Congress.

Nonetheless, it would be well to examine some of the most frequently heard criticisms.

1. It has been said that capital gains represents a "tax subsidy" and that, as such, it exceeds the cost of direct assistance programs rendered by USDA and the Department of Interior to preserve and improve timber supplies. Analysis of tree growing incentive programs in the U.S. as well as in other countries demonstrates that tax treatment to reflect the long growing period and the risks inherent in timber growing is more effective than direct subsidy programs. Direct subsidies require high cost of administration and, while useful, have proven much more costly in timber output per dollar of revenue invested. The past success of the capital gains incentive gives some idea of size of the direct program which would be required: since 1944, over 26 million acres of private lands have been planted, compared to only 3 million acres in all previous years for which data is available.

While direct payments may be the best way at present to stimulate timber growth on the smallest and least productive land ownerships (as provided under the existing Forestry Incentives Program), other ways must be found to do this job better than it has been done to date. In any case, the present subsidies cannot be considered a substitute for capital gains treatment.

2. Another issue we hear about is the so-called "mismatching" of expenses and income in timber growing operations. This has to do with the deduction against ordinary income of the annual costs of maintaining timber assets -- assets which ultimately will receive capital gains treatment. In this respect, timber is treated no differently than other capital assets.

The fact that expenses of timber operations must be borne for so many years before there is an economic return provides the strongest argument for maintaining equal treatment with other forms of capital assets. The deductible expense of painting an apartment house, the investment advice one might require to manage an investment, or the maintenance expense of any other capital asset is comparable to the maintenance expense of a forest. Expenditures for fire and disease protection, rodent control, etc., should by no means be treated as a capital improvement, as is suggested by those who make the "mismatching" argument.

In this regard, cash flow is a major determinant. The longer the time to realize pay-back on an investment, the larger the amounts involved, and the greater the uncertainties surrounding the situation, the more difficult such risk commitment becomes. Nowhere are these factors more at work than in renewal of the forest and the related manufacturing investments of the forest industries.

Given the demand for forests and forest products of a growing population, renewal and improvement of the forest should have top priority. Obviously, this cannot be done by discouraging investment and risk-taking. For example, extrapolation of some of the "Third Forest" data for one high-growth state suggests that effective conservation of the nation's forests is a \$16 billion challenge.

As we noted above, it has been said that timber growing investment is no more long-term than investments in railroads, shipbuilding and utilities, or that the risk factors are any different. Quite to the contrary, there are few enterprises, if any, characterized by as long a period of illiquidity, high risk, and heavy investment as the timber industry. The other industries singled out for comparison have generally acquired a public utility nature, with one or more government programs available to bolster or sustain them (guaranteed markets, guaranteed rates of return, or heavy direct cash subsidies). And -- lest the critics forget -- capital investments in those industries are also subject to capital gains taxation.

And the fact remains that risks in timber growing are high; historic rates of return are below the average of other industries, leaving little margin of protection from the natural threats of fire, insects, disease, and storm; and, contrary to the views expressed by some critics, casualty insurance is not available to cover such losses.

3. Next we come to the classical argument that "market factors" should be allowed to work in the timber industry, whereby higher prices would be a substitute for capital gains treatment in securing increased timber supply. There are severe drawbacks to total reliance on the market to stimulate new forest production. This is due to the many year's lag time between increased market demand and fulfillment of the tree growing cycle. In the final analysis, it is timber harvesting which responds to market price, not timber supply. Harvesting can be accelerated temporarily to react to a peak in demand and price; but new supplies for the longer run can only be assured by increased planting and more intensive management. Prices would have to be unacceptably high for too long a time to make this an efficient method of compensation for the long investment period and the prolonged risks involved. The capital gains incentive works independent of price factors by assuring the investor that, regardless of market conditions or price, when the investment matures the return will be taxed at the favorable capital gains rates. While timber is the renewable resource, we must realize that a tree not planted represents potential timber growth that cannot be recovered.

4. Have you ever wondered if it is true, as is sometimes said, that the larger timber-owning companies receive the greatest benefit (in terms of dollars) from capital gains treatment. Well, it is true. The purpose of the incentive is to stimulate timber production, and it is natural that the distribution of benefits will be in proportion to the volume of production. A more meaningful indicator of the validity of the tax treatment would be the fact that amounts greatly exceeding the capital gains benefits are being plowed back into the resource by the major timber producers.

The question of who benefits has become a favorite game of the critics of timber capital gains treatment, presumably because there is some political magic in setting small against large companies, or individuals against corporations. But this speaker has never heard a tree farmer say that capital gains should be available to individual tree farmers but denied to corporations, large or small. Nor have smaller timber growers been heard to say that equitable tax treatment should not prevail for all growers, small and large alike. In fact, Congressional hearing records are replete with appeals from small growers and small forest products companies urging retention of timber capital gains for all.

It has also been mentioned that small companies (under \$50,000 of pre-tax earnings) do not benefit from timber capital gains because they are already subject to a lower corporate income tax rate (22 percent as opposed to 48 percent for earnings in excess of \$50,000). The reality is that there are few corporate timber-owning corporations below the \$50,000 category, but the fact that these companies are already paying less than 30 percent corporate capital gains rate does not at all diminish the justification for treating timber comparable to other capital assets for those companies with greater earnings.

In the application of timber capital gains to individual taxpayers, it has also been suggested that "small" growers benefit less than "large" growers because the prevailing capital gains rate (50 percent of the rate on comparable ordinary income) means less to those with lower incomes than to those with large incomes. A recent critic, for example, said:

For individuals, capital gains treatment means considerably more to taxpayers with high incomes than to those with low or middle incomes. For example, a taxpayer in the 20 percent bracket for ordinary income would, if he has timber capital gain, be taxed on that gain at 10 percent. Capital gains treatment, therefore, increases his after-tax timber income from 80 percent to 90 percent of his before-tax income, an increase of only 12 percent. In contrast, a taxpayer who pays 50 percent on ordinary income, pays only 25 percent on timber capital gains. The special tax provision thus increases his after-tax timber income from 50 percent to 70 percent of his before-tax income, an increase of 40 percent.

This argument is specious and is a direct challenge to our progressive income tax system. No matter how you slice it, individuals with large capital gains pay a higher rate of tax than those with lesser gain. The fact that the differential between the rates on regular income and capital gain is also greater in the higher brackets is inherent in the progressive income tax system. It makes you wonder if the critics might be suggesting, in order to increase the "benefits" of capital gains for those with limited incomes, that their ordinary income tax rates be increased to the point where their capital gains differential will be equal to that of high-income individuals. It is doubtful the affected taxpayers would welcome such help.

So it can be surmised that the "small vs. large" arguments have evolved more from the political needs of critics than from the realities of timber economics.

5. Have you ever heard it charged that the integrated forest products companies deliberately inflate the price of timber they purchase from other sources in order to squeeze additional advantage from capital gain valuation of their own timber? On the surface it seems plausible. But an accountant's sharp pencil will quickly show that the practice, if used, would be a costly exercise in futility. The extra cost of outside services can easily exceed the possibility of gain from such a practice. In the first place, it is the responsibility of IRS appraisers to monitor true market value for purposes of capital gains calculations, and many factors other than outside purchases by the taxpayer are considered. Thus, it is extremely unlikely that a taxpayer could "bid up" the price of his own timber by isolated outside purchases. Secondly, in the unlikely event the taxpayer was successful in fooling IRS 100 percent of the time, his purchases of inflated-value timber would have to be less than one-third of his total timber utilization before the first dollar of offsetting benefits would be realized. However, the companies who pay the highest price for timber generally do not fall within such a range. And every study of this matter has concluded that the companies paying the highest prices for timber are those who could not possibly benefit from raising the values of timber they may cut from their own lands.

6. It has also been suggested that timber capital gains treatment should not be accorded to timber companies which purchase public timber. Again, on the surface, this might seem a reasonable proposition. A closer look, however, leads to the conclusion that it is neither reasonable nor equitable.

Section 631 affords timber capital gains tax treatment to the purchaser of a contract right to cut timber whether from public or private ownerships. During the period of the contract, the holder of either type of contract assumes risks of loss through decline in value or through unexpectedly high operating costs. He should thus be entitled to capital gains treatment just as the holder of any other capital asset. And, as a matter of equity and tax neutrality, it makes little sense to deny the purchaser of public timber the same

benefits accorded to the purchaser of private timber. In addition, the purchaser of public timber, such as those in the Pacific Northwest where the Federal Government is the major timberland owner, must often develop his timber supply from a number of sources, and the elimination of competitive public supplies would severely hamper his operations.

In addition, timber capital gains is important to public timber buyers in that it helps them to develop new technologies and techniques for timber harvesting in public forests, thus avoiding environmental damage and providing a stable economic base to large sections of the country dominated by public timber ownerships.

7. In a surprising statement, one critic wrote recently that the Society of American Foresters does not have a clear policy in support of the timber capital gains provision. While the document known as the statement of policy of the SAF is intended to be general in form and not involved in specific legislative issues, it is clear from repeated testimony of the Society on several occasions before Congressional committees that the Society has a clear policy favoring timber capital gains and is strongly supportive of timber capital gains as a means of encouraging greater investments in the nation's private forest.

Relevant sections of past testimony are as follows:

1963 -- The [Council of the Society of American Foresters] emphasizes that revenues from increases in timber growth and value obtained through sale or cutting of timber should be eligible for taxation as long-term capital gains, rather than as income, if the system of taxation is to recognize the true economic nature of forest production. Moreover, such classification is of fundamental importance in encouraging and maintaining private investment in the management of forestlands.

1969 -- The treatment of revenue from timber harvesting as capital gains has been in effect since 1944 and has played a major role in encouraging the application of intensive forest practices on private lands throughout the nation. The Society of American Foresters, therefore, is pleased to have this opportunity to advise your committee professionally that the timber tax system which has served the public interest so well should be continued.

1973 -- The [Society of American Foresters] urges that tax treatment of revenue from the harvest of timber recognize the unusual risks associated with long-term investment in timber production. In the opinion of the society, the capital gains treatment of timber income is an effective technique to encourage investment in private forestry and thus help meet the nation's wood needs. We believe it should be continued.

From personal knowledge of the Society and its diverse membership, this speaker is confident that these positions were not arrived at lightly or without full consideration of the alternatives. Nor do they in any way disregard the other factors which are important in the promotion of sound management practices of the nation's private forests.

It is important to emphasize that the objections to timber capital gains treatment, as represented by the various arguments cited throughout this article, are not widely held. They do surface, however, and when they do answers should be forthcoming. For out of the process will hopefully come a heightened awareness of the role of taxation in the investment decision process, and its particular significance to the economics of timber growing and to the encouragement of improved silvicultural practices on private forestlands.

## Footnotes

<sup>1</sup>The concept of depreciation and recapture is omitted here since it is not relevant to the purpose of the illustration.

## The Land Owner Through a Forester's Eyes

Kelly C. Niemi\*

Taxation has become one of the major considerations in timber management. Aside from the cost of capital or holding, the cumulative tax burden exceeds every other direct capital cost including the cost of land, site preparation, planting and intermediate cultural practices. Naturally anyone owning timberland or managing it has become extremely concerned over increasing taxation.

The conventional measures of a tax are:

1. Adequacy
2. Elasticity
3. Equity - both vertical and horizontal
4. Neutrality

These measures can be applied to tax on timberland, timber, and timber income; however, extreme caution needs to be exercised. When using them, we are assigning empirical values to abstract decisions and in the final analysis we must weight each measure against the others all through the space of time.

The adequacy of a tax is its ability to meet the revenue needs of the many governmental services. All too often, the immediate revenue needs take priority over long-term impact. I would not attempt to judge how much timber tax would be adequate; however, the demand for tax revenue seems insatiable.

Elasticity is the ability of a tax system to change commensurate with the changing revenue needs. Elasticity is very closely related to adequacy and, in many respects, should be considered together. Elasticity really is a measure of long-term adequacy. Government policy which discourages investment in timber will have a deleterious impact on long-term tax revenues. Direct tax revenues on timber represent only a small part of timber's total contribution. As the timber is harvested, manufactured, and finally delivered to the consumer, labor inputs and other capital costs will have more than doubled its total value. Growing of timber is the first link in a long economic chain.

Equity becomes much more complex because it needs to be measured both vertically and horizontally. Vertical equity is a comparison

---

\*Forestry consultant and Executive Secretary, Washington Farm Forestry Association.

of tax burden between different types of businesses and incomes. Horizontal equity is between businesses of the same relative size and nature. Comparing the business of growing timber with other business enterprises is extremely difficult. First of all, growing timber is very capital-intensive and requires long waiting periods for returns of capital. All too frequently, outsiders look at the balance sheets of vertically-integrated multi-national firms and assume that this is the economic climate of everyone in the business of growing timber. In recent years, scarcity of timber has increased its price substantially. Those individuals and corporations that have purchased timber or timberland prior to these increases have realized returns greater than those which might be expected from future timber crops. Tax policy should consider its impact on the future; not what has happened in the past.

Capital Gains Tax on timber has an implicit inequity because its direct tax burden is less than the earned income of other businesses and wage earners. However, the philosophy of a capital gains tax is to encourage long-term investment. The rationale being that these long-term investments provide benefits to society greater than the short-term revenues.

The most significant quality of a timber tax should be its neutrality. Neutrality is the measure of action or change of action that a taxpayer may take when the tax is applied to his particular business. Taxes that discourage investment or encourage actions to avoid tax may cause more problems for society than their revenues contribute.

The growing of timber is a unique investment. Those who commit their capital in this enterprise are slaves to time, whether they be vertically integrated corporations or small woodlot owners. The optimum (sic) rotation period ranges from a minimum of 25 years in the South, to 50 years or more in the Northwest. Many factors go into making the capital commitment for these long periods of time. Foremost of these are the expectations of getting a just return. Many studies have been made to determine what type of a return one might receive by investing in planting trees and managing a forest. Washington's Productivity Study, Phase II, (an economic study) indicates very modest returns from timber management. This comes as no surprise to those of us in the timber industry. Fortunes have been made and there will continue to be substantial profits, but these come primarily from buying timber or timberland when it is cheap and selling on the up-swing in the market.

It has only been recently that stumpage prices began to reflect the cost of growing timber. In many cases, woodlot owners still cannot afford to grow timber at prices available to them.

In assessing a tax system, we need to look first at the impact on investment decision because that is where our future rests. For many years the hue and cry has been that we are going to run out of timber.

We are not going to run out of timber, but we may have far less than the needs of our modern society. Short-falls in timber supply would result in a reduced employment in the timber regions, higher prices for respective products, and a greater strain on the limited resources of substitute products. The recent energy crisis has awakened us to look at our resource supplied and consider which might be depended upon to supply our many needs. Timber is a renewable resource and could supply many of our energy and raw material needs. We need to be focusing more attention on our timberland and those factors which encourage intensive management.

Timber has been with this nation and an integral part of its economy since the first day the pilgrims set foot on Plymouth Rock. Our first export was timber to build ships. Even with the coming of the age of steam and steel, locomotives burned wood in their trek westward on ribbons of steel and wooden cross ties. Throughout the development of this nation, timber and wood products have been major elements. We were fortunate to be blessed with bountiful forests in the Northeast, the South, the Lake States, and in the West. The development of each of these regions was closely tied to its timber resources. There are very few areas of virgin forest remaining, most of these within national forests. Most of the private forest land is not currently producing to its optimum level. With demands for all forest products increasing, it seems almost a certainty that there will be short-falls in timber supply. National policy, in terms of regulation, economic development, and taxation, will have a profound influence on future investments in timber management.

Timber as a renewable resource is dynamic and has the capacity for many levels of production. It has been demonstrated many times and in many studies that production can be doubled under intensive management with current technology. Washington's Forest Productivity Study, Phase I, of 1975, shows that timber production on nonindustrial private lands in western Washington could be increased from approximately 120 million cubic feet to approximately 250 million cubic feet per year. If a minimum level of management were employed, relying on natural regeneration and employing no intermediate cultural practices, then total production would drop to approximately 80 million cubic feet or one-third the total under intensive management. This same study concludes that current harvest from all ownerships in western Washington could be maintained at one billion cubic feet at current management levels. More impressive, though, is the fact that harvest could be increased substantially utilizing intensive management primarily on private lands.

Intensive forest management is generally construed to mean artificial regeneration to a relatively high level of stocking [control], pre-commercial thinning, commercial thinnings, and fertilization. There is no finite level of management which would qualify as intensive, nor is there any real upper limit. Intensive management really is an exercise in marginal investment. Intensity of stand establishment, frequency and degree of intermediate harvest, and levels of fertilization all have an impact on the total harvestable timber. Each unit of input provides

its own return; additional units may provide a diminishing return. Research has shown that additional gain in timber production may be made by better species selection and genetic improvements. If we look at what has been done in corn and some of our annual crops, it would seem that the sky may be the limit in total timber production.

The decision as to what level of management the landowner might employ is dependent upon many factors. Paramount will be his expectation of receiving a return which will exceed his other opportunities. A vertically integrated firm may invest in timber in excess of economic returns on timber alone in order to supply its raw material needs. In effect, the profits from its manufacturing may be shared with those from its timber growing. Small landowners may accept returns below other investment opportunities because of other intrinsic or aesthetic reasons. The Washington Forest Productivity Study, Phase II (economic study 1977), indicates returns expectations of five percent or less using constant price and cost. Using a two-percent increase compounded annually in price and cost, one might expect returns of six to seven percent on high-site ground and intensive management. These are not particularly attractive returns on the investment dollar when one could buy tax-free government bonds that would yield as much or more without any risk. One might severely question what motivates a landowner to commit his capital resources into such a long-term investment. Certainly there are many risks. Regulations and taxation pose the greatest threat to forest investment decision. Small woodlot owners consider loss of control of their land through regulation and confiscation of just returns through taxation greater threats than natural causes such as fire, insects, and disease. If the trend over the last ten years were to continue, certainly these fears would be justified.

There are many taxes which have impacts on forest landowners. In most cases, the impact is the same regardless of the size of ownership. The one exception being the case of inheritance tax where corporation ownership is indirectly divided among the stockholders. Individual private landowners feel a more direct impact from inheritance taxes. Nearly every rotation of privately owned timber will be subjected to a direct inheritance tax.

Property taxes will also be a major concern to forest landowners. I would estimate that in the State of Washington approximately ten percent of the gross revenues from timber will be consumed by property tax. Then, the income tax takes a final crack at net revenues.

The question has been raised numerous times as to the incidence of timber taxes and whether timber owners can pass them on to other purchasers and ultimately to the consumer. Timber, like other farm crops, operates in a free market. Price for stumpage is a factor of supply and demand. The cost of growing timber is not a factor in price, only in the very long run. We in this nation were blessed with vast quantities of timber which initially were consumed at little more than the cost of harvesting. Increased demand and approaching scarcity

have driven prices upward. In most cases, these current prices do not reflect the cost of growing the timber. If we increase costs to the grower through regulation and taxation, can he continue to grow timber and compete in the world market?

Capital gains treatment of timber has come under fire in recent years from several directions. Certainly it has a profound impact both in the direct economics and investment decision in growing timber. Capital gains has become ingrained in the whole economic structure of the timber industry. To suddenly pluck it out would cause shock waves throughout this nation to all classes of ownership and even to allied and related industries. Capital gains has been criticized because a disproportionate amount of the tax benefit has gone to the large corporate ownerships. This is explained in part by the fact that much of the current harvest is from industrial lands. In the next decade and beyond, more harvest will have to come from nonindustrial ownerships. Another unfortunate point is that many small landowners have treated their timber income as ordinary income, either because of lack of information or misinformation. The impact of taxation is of both a direct and indirect nature. First of all, revenues that are consumed by taxes are not available for reinvestment in intensive management. Secondly, increasing taxes discourage investment of the marginal dollar which might otherwise be invested in intensive forest practices. The decision of whether or not to commit this investment is also heavily influenced by the landowners expectation of future returns and state and national policy. A healthy, stable economic political environment is the best incentive for investment. By committing money to high levels of planting and other intensive management, we, the landowners, are investing in the future. Tax policy that discourages this investment is borrowing from the future.

What impact would the removal of Capital Gains Tax have on current management practices and future timber supplies? First of all, there would be no uniform impact or reaction between landowner classes or even among owners in the same class. The immediate impact would be a reduction in net revenues to landowners. This reduction would reduce capital available for reinvestment and would also reduce the economic incentives for growing timber. A very important aspect, especially among the nonindustrial landowners, will be lack of confidence in getting a just return from their investment. This confidence in governmental policy should not be underestimated, for there are too many other variables and risks already.

There are alternative measures that may restore some of the incentive for investment. These include investment credit, expensing of qualified expenses, and allowances for losses. Timber taxes and other investment considerations become political footballs for each administration. Each rotation of Douglas Fir could have thirteen different presidential administrations between the time the tree is planted and when it is harvested.

How are we as land managers supposed to predict the economic and political environment under these conditions? It would be like trying to thread a sewing machine with the motor running. We are willing to commit investments that we may personally never see the final results (sic). Society should, through government, be willing to make equal commitments and concessions.

Looking back in retrospect, I recently harvested a tree, 50 years old, the same age as what I would anticipate future rotations to be. This tree had its beginning in 1927 during a period of economic growth and wild speculation. Two years later came the stock market crash and the ensuing depression. During this great depression, many of the timberlands around this nation changed hands because the owners could not afford to pay the taxes. Later, this nation was gripped in a world war that threatened its very existence. We can be thankful that the resources we had and the determination of our people enabled us to surmount this period. Since World War II we have been involved in other major conflicts and tests of our economic and political strength. We have endured, but not without a shaking of confidence. I am planting trees this year that I do not expect to be around to harvest, but I hope that my children or grandchildren can. What is in store for this nation in the next 50 years? What economic crisis will be faced individually or nationally? Will we even be able to own land and harvest timber?

The timber resources of this nation have helped us to surmount many trying periods. It is also one of the foundations of our standard of living. If we as a nation are to continue to grow and prosper, our timber resources will play an increasing roll.

Many projections have been made which indicate short-falls in our long-term timber supply. With increasing demand for wood and fiber products we may not be able to fill these important needs. There is hope, however.

There are new frontiers in forestry unlike the ones we've had in the past. Historically, scouts have come back and told of great resources farther west. Pioneers would sell their homes, hitch their oxen to wagons full of tools and head west to conquer new frontiers. Unfortunately, we have reached the ocean on the other side, have crossed the land and settled it. Where then is the new frontier?

The new frontier in forestry is not over the mountain or undiscovered lands. It is the land we are currently harvesting. We have the capacity and the technology to grow timber -- more timber than has ever grown naturally. The scouts for this new frontier are those who perform the research, both in growing timber and utilizing it better. The wagon and tools with which we settle this new frontier are the capital investments we as landowners must commit. The oxen to move these wagons may be represented by the confidence and willingness of the landowners to commit themselves and their hard-earned money. Truly

a pioneer spirit. The distance is great to our goal, but unlike being across the desert we must travel across time. There are many hazards and few water holes for these new pioneers. In the past this nation made great efforts to encourage the settlement of new frontiers. Our national policy seems to be turning from encouragement to testing how many wheels it can remove from the wagon and how heavy a yoke the oxen can bear.

## The Administration's Tax Program

Emil M. Sunley\*

When this session was being organized and I was asked to participate, it was anticipated that by now the President would have announced his tax program. It would then be my job today to discuss the impact of proposed changes affecting the timber industry.

The President on October 27 indicated that he will submit his tax program after Congress completes its work on both social security and energy. The tax program will be the major fiscal policy initiative of the Administration. The proper level of fiscal stimulus can only be determined after Congressional actions on energy and social security, after the expenditure side of the budget is set for next year, and after assessing the general state of the economy during the fourth quarter of this year.

I do not want to describe in detail what may or may not be in the tax program. There has been considerable speculation in the press on this. I should indicate, however, that we are staying about a week ahead of the press. For example, many of you have probably read that the Administration is planning to tax capital gains in full with a top marginal rate of 50 percent. That was last week's tax program. We are now planning to tax ordinary income as capital gains with a top rate of 100 percent.

What I want to do is to describe our tax reform objectives and to give an overview of the context in which our tax reform proposals will be made.

### Simplification

The major elements of the Administration's tax reform proposals have been developed with three objectives in mind. A primary objective of the tax program will be to provide simplification for individuals and businesses. Simplification requires that we make returns easy for the average person to fill out, make the law more understandable, and remove special provisions in the law. Too often in the past simplification has been sacrificed for other laudible objectives.

The Income Tax Code today, to the average American, is a mystery. About half of all individual returns are prepared by professionals.

---

\*Deputy Assistant Secretary of the Treasury for Tax Policy (Tax Analysis).

The IRS estimates that Americans spend about \$1 billion annually on tax preparation services. The Commission of Federal Paperwork estimates that the total cost to all individuals for filling out forms and keeping records amount to \$4.6 billion a year. For virtually every business, tax planning preparation is a major expense. For small businesses, tax paperwork costs over \$11 billion a year according to the Paperwork Commission.

Obviously, we didn't intend to create this result. Mostly, we had good intentions -- because we wanted to improve tax equity or to promote various social goals. We can no longer accept this complexity as a necessary price we pay for achieving important social goals.

The Tax Reduction and Simplification Act of 1977, provides the first step toward simplification for the average taxpayer. It increased the standard deduction for most taxpayers. The number of taxpayers who will claim the standard deduction this year will increase to 76 percent. Seven years ago, in 1970, only 52 percent of all taxpayers claimed the standard deduction. The Tax Reduction and Simplification Act also provides new tax tables that 96 percent of all taxpayers will be able to use. They no longer will be required to make separate calculations for the standard deduction, personal exemptions, or the very complicated general tax credit. All of these calculations will be buried in the tax tables.

A pruning of itemized deductions will simplify the tax return for those taxpayers who continue to itemize their personal deductions. The revenue gain from any proposed elimination or reduction of itemized deductions would be offset by general decreases in tax rates.

For the tax law overall, probably the most significant simplification would be the taxation of capital gains as ordinary income. As many of you know, full taxation of capital gains has been under consideration within the Administration. I would not want to speculate as to what capital gains changes will be included in the President's program. He has not made his decisions. Secretary Blumenthal indicated on November 21 that,

"We fully understand the important role that preferential tax rates for capital gains have played in encouraging capital formation -- especially for venture capital and new businesses. We will, of course, take this into account in designing reforms to reduce or eliminate unjustified tax preferences."

Although the Administration is most likely not going to recommend full taxation of capital gains, full taxation would make it possible to delete a large number of special provisions in the tax law and also to remove a major cause of litigation in the courts.

The threshold question of whether a particular transaction is eligible for the preferential capital gains treatment causes bewildering

complexity under current U.S. tax law. Starting with a basic definition of a "capital asset" that includes all property, the Internal Revenue Code then enumerates types of property that are excluded from preferential treatment. Many of these exceptions are vaguely defined and the courts and the Internal Revenue Service have strained with mixed success to find sensible, functional distinctions to segregate those assets entitled to the capital gains preference from those that are not. A Federal Court of Appeals recently expressed "deep disappointment at the failure of decisions to fulfill the goals of predictability and of principal decision-making and at the enormous expenditure of professional and judicial time in accomplishing nothing more than a debatable decision of a particular case."

### Equity

Our second objective is to improve the equity in the tax system. This will require that we change the laws so that they are fair, remove opportunities to gain from tax planning, tax individuals with equal incomes the same, and tax individuals with rising incomes at progressive rates.

We have a fairly progressive income tax system. Yet as a person moves up the income ladder, the more chances he has to avoid taxes, and very often, the sources of income and the uses of income -- not the amount -- determine how much tax he pays.

The Administration's program should improve horizontal equity among taxpayers who have the same level of income. Under current law, it is estimated that 85 percent of taxpayers with incomes of over \$200,000 pay effective tax rates of between 15 and 50 percent, and, within that range, the distribution of taxpayers is spread out fairly evenly. Under the Administration's tax program, I anticipate that the range in effective tax rates for taxpayers with incomes of over \$200,000 would be narrowed, with possibly 85 percent of them paying effective rates between 25 and 45 percent.

The tax system can be made more equitable in another dimension by making it neutral with regard to the taxpayer's choice of marital status or living or nesting arrangements. Under present law, single individuals rightly contend that if they were to marry someone with little or no income, their taxes would go down because they would be able to use the tax rate schedule for married couples filing jointly. At the same time, when husbands and wives earn nearly equal incomes, they rightly contend that they would pay less tax if they were not married and if each were permitted to use the rate schedule for single persons. For married couples in which one spouse is the source of all or almost all the couple's income, marriage generally provides a net tax benefit.

The Administration's program should reduce both the so-called marriage penalty and the so-called single penalty.

### Aid to Growth and Investment

Our third objective is to promote faster growth and investment. The tax program will provide incentives to expand productive facilities, to increase efficiency, and to produce.

Tax reductions for individuals will help stimulate the economy. It is important, however, to keep in mind the historic relationship of individual income taxes to personal income. For the years 1951 through 1977, individual taxes as a percent of personal income have remained in the range from 9.2 percent in 1965 to a high of 11.6 percent in 1969. This percentage relationship tends to increase year-by-year until a tax reduction is provided, then the percentage falls to something like the starting point and the increase begins again. Major tax reductions were provided in 1964, 1969, 1971, and 1975. If no tax reductions were provided in the period immediately ahead, individual income taxes as a percent of personal income would rise from 10.2 percent in 1976 to 13.6 percent in 1982 -- 2 percentage points above the previous high since 1945.

If the economy is to return to a high employment level, a strong growth of business investment will be needed. No other segment of the economy appears likely to take up the slack. Consumer spending has already achieved a relatively high level. The personal savings rate has fallen from about 7 percent in the last half of 1975 to about 4.75 percent in the first half of 1977.

State and local spending has been a stimulative factor in the past 20 years, but with population growth slowing and reductions occurring in school age population, it appears likely that the level of services provided by state and local governments will not rise in the period ahead.

The level of business fixed investment has not been satisfactory. There has been a slow-down in the rate of capacity growth in manufacturing from 4.6 percent over the period 1948-1968, to 4 percent from 1968-1973, to 3 percent from 1973-1976. Last year, capacity in manufacturing rose by less than 2.5 percent. This indicates a much-too-slow rate of growth in investment for the long run.

Nor has the level of investment in the current recovery been good. Real investment in machinery and equipment in the third quarter of this year was only 11.9 percent above the recession trough in the first quarter of 1975. In the last 5 cyclical expansions, on average, real investment was 23.1 percent above earlier troughs at this stage of the cyclical expansion. Similarly, real investment in nonresidential structures has lagged. In the third quarter of this year, investment in nonresidential structures was only 4.0 percent above the recession

trough, compared to 13.1 percent at this stage of the previous recoveries.

President Carter indicated during the campaign that he favored the elimination of the double taxation of corporate source income. We have studied various integration schemes. Although no decision has been made on the form of integration to be proposed, or even whether integration will be proposed, I anticipate that if it is proposed it will be the withholding or gross-up and credit form of partial integration. Shareholders would include in gross income the amount of dividends received plus a portion of the corporate taxes associated with those dividends. Shareholders would then claim a credit against their tax otherwise due for the portion of corporate taxes included in income. As I am sure many of you in this audience know, a number of questions must be answered as an integration plan is formulated. How should tax-exempt shareholders and foreign shareholders be treated? How should the foreign taxes paid with respect to foreign-source income of U.S. corporations be treated? How should business tax preferences, such as the investment tax credit, be treated?

In addition to the individual rate cuts and, possibly, partial integration, the Administration will make other tax proposals that will reduce the level of taxation on all forms of income from capital.

In closing, I should point out that new tax incentives for capital formation will reduce Federal revenues, and these revenue losses must be partly offset by the reduction or elimination of some of the narrow business preferences that no longer serve a useful purpose. Although existing preferences are often justified as necessary for capital formation, the President's program, taken as a whole, will not be anti-capital. I believe that the Administration's tax program will be responsive to the short-run and long-run needs of the economy. The immediate emphasis of the program will be on regaining full employment and correcting the imbalance between productive capacity and the labor force. Once those problems are resolved, the priorities turn to increasing savings for more investment and to limiting the scope of incentives which distort investment.

## The Perspective of Congress

Gerald D. Isaac\*

Just a few months ago most of us were expecting the Carter Administration to unveil a comprehensive tax reform package. The principal reform issue with direct implications for the timber industry is whether to continue the present treatment of capital gains. Other reform issues which should be of significant interest to you, however, are integration of the corporate and individual income taxes, investment credit, DISC, capital cost recovery and overall rate reductions.

It appears now that some of these issues, at least in any major form, will not be proposed in the upcoming package, and it is not likely that Congress will be eager to raise them of its own volition. It is only a matter of time, however, until they become the subject of legislative action. Some speculate that we won't see major reform before 1980. The emphasis for 1978 will likely be income tax cuts sufficient to offset social security tax increases and new energy taxes, plus some amount for economic stimulus.

I will discuss in some detail each of the issues I mentioned earlier; but first, I would like to make some general observations concerning Congress' present attitude toward taxes. There is considerable concern with the complexity of our tax system. Complexity not only in the Internal Revenue Code, but in regulations, administrative procedures, and judicial interpretations. Congress is concerned that complexity has become so serious that it is now affecting compliance with the law. According to IRS statistics, the compliance rate of certain groups of taxpayers is indeed falling. While this decrease cannot be attributed solely to complexity, it is believed that it is a major contributing factor.

Many members of Congress are increasingly questioning existing tax laws and the proposed changes on the grounds of complexity. While competing policy objectives often override, it is becoming apparent that simplicity in the law is gaining importance as a policy objective in its own right. Our staff is also more aware of the importance of simplicity, and more often looks for ways to simplify existing law and proposed changes.

Having espoused the merits of simplicity, I will now mention another matter of importance to Congress which is a significant source

---

\*Staff Analyst, Joint Committee on Taxation, U.S. Congress.

of complexity; the effective dates of changes in the law. A number of changes made by the Tax Reform Act of 1976 were applicable to the year 1976 even though the law was enacted quite late in the year. Some of these "retroactive" changes caused considerable outcry, and their effective dates were ultimately extended. It is likely that Congress will avoid such "retroactive" changes in the future unless there is a strong policy reason for them. Major reforms are likely to be applied prospectively, many being phased-in with transitional rules. While transitional rules involve considerable complexity, the alternative of immediate full application of major changes is almost a political impossibility.

### Tax Cuts in 1978

As I stated earlier, the President's tax cut package, which is now expected to be announced early in 1978, will most likely include tax reductions sufficient to offset the expected increases in social security taxes and the new energy taxes, plus some amount for economic stimulus. Guesses now range from \$10 billion to \$30 billion for the whole package. The exact nature of the reductions, that is, the way in which they will be accomplished, is now known only to the Administration. For me to speculate on their program at this time would be a mere guessing game. However, some broad observations can be made. Major reform items will most surely not be undertaken in 1978. The business community is wary of major reform -- and it has made this known, both to the Treasury and to Congress. It is unlikely, therefore, that there will be any major proposals dealing with integration of corporate and individual taxes, capital gains, capital cost recovery, or deferral of tax on foreign earnings in 1978. It is possible, however, that selected minor reform matters may be taken up. For example, depreciation on real estate may be examined, and certain tax shelter provisions may be the subject of legislation in 1978. And there is still sentiment for reducing some itemized deductions.

### Taxation of Timber

Now, to get down to the specific topic of this speech, I will discuss how certain of the major reform issues could effect the timber industry.

Capital gains is the item which first comes to mind when one thinks of special tax treatment for timber. Presently, as you know, the cutting of certain timber is treated as a sale or exchange for tax purposes and qualifies for capital gains treatment. In recent years, this benefit has been eroded with the enactment of the minimum tax, although timber was spared from the most recent increase in that tax. If capital gains is fully repealed, a proposal for a special exception for timber would likely meet much resistance. A special exception would introduce complexity, where one of the major selling points of repeal is simplification. It is recognized that the timber

industry has relatively long-term capital investment requirements, and that some method of reducing the tax burden in the early years of reforestation programs may be desirable. The present thinking is that a current deduction or credit for regeneration and restoration costs be allowed.

Akin, in magnitude, to repeal of capital gains is the proposal to integrate the corporate and individual income tax system. Basically, integration eliminates, wholly or partially, the double taxation of corporate earnings. Under present law, corporate earnings are taxed once to the corporation and again to the shareholder when distributed as dividends. A system of full integration would, in essence, attribute all of the corporation's earnings directly to the shareholders, and they would declare the income in their individual tax returns. The closest analogy we now have to such a system is the treatment accorded to certain small business corporations under Subchapter S of the Code. For many reasons, some economic, some technical, some political, full integration is not being seriously considered. Rather, a system of partial integration is more the favorite.

Partial integration proposals most often take the form of a "shareholder gross-up and credit." Under one variation of this type of plan, the corporation continues to report its own income and pay tax on it in the regular manner. When the shareholder receives a dividend he includes in his income not only the amount of cash received, but also the corporate tax allocable to the dividend (this is the gross-up part). He then claims a credit against his tax in the amount of the gross-up. Many variations of this basic scheme are possible. For example, rather than allocating the corporate tax to dividends and retained earnings on an actual basis, a fixed rate of gross-up and credit may be used. Under this method, the dividends are grossed-up by a fixed percentage, regardless of the corporate tax paid. Another method uses a variable rate gross-up, with the rate being selected in advance by the corporation. Each method offers advantages of its own while raising its own unique technical problems.

Common to all methods, however, is the problem of how to treat corporate preference income. Basically, the gross-up and credit applies only to distributions of corporate income subjected to tax at normal rates. To the extent that the corporation has tax-free income, or income subject to tax at less than normal rates, it has "preference income." Another way to view preference income is that it is the difference between economic income and taxable income. The question arises as to whether the corporation should be viewed as distributing preference income first, last, or pro-rata with other income. The economic effect of the plan is heavily dependent on this decision. If preferences are deemed to be distributed first, the integration effect does not begin to operate until all preference income is distributed. This may encourage an increase in distribution of corporate earnings in order to get down to creditable distributions. This plan may also favor higher-effective-tax-rate companies over those with lower rates on the assumption that higher-rate companies have fewer preferences.

If preferences are deemed distributed last, fewer technical problems are raised and there is not as much pressure to distribute dividends as in the first alternative. Treating preferences as being distributed pro-rata raises numerous technical problems and involves significant complexity compared to the other alternatives.

Congressman Ullman, Chairman of the House Committee on Ways and Means, has gone on record in favor of some sort of partial integration in 1978; perhaps in the form of a flat 10-percent gross-up and credit on dividends. Others in Congress, however, are concerned with the precedent and technical difficulties and are not sure it could be thoroughly studied in time to be included in the 1978 tax reduction. It is possible that Congress will call for a study of both integration and capital gains, perhaps through task forces of the Ways and Means Committee.

Other matters of interest to the timber industry include capital cost recovery and the investment credit. Some liberalization of the investment credit may be examined, perhaps including the extension of the credit to buildings and making the credit refundable. Under present law, it is limited by tax liability. Capital cost recovery is also a likely subject of inquiry. Asset Depreciation Range (ADR) may be re-examined, especially in light of its complexity. Some have argued that a form of rapid write-off should be made available to smaller businesses without the burden of extreme complexity.

Lastly, Domestic International Sales Corporations (DISC) are likely to be examined. Much has been written recently arguing the pro's and con's of DISC. In 1975 and 1976, the Treasury was active in discouraging Congressional efforts to repeal DISC. Now the Treasury appears to have taken a dimmer view of DISC. Repeal of DISC will, of course, affect certain timber exporters. Without debating the merits of repeal, it raises certain questions that need to be answered. For example, should previously deferred DISC income be recaptured; and if so, over what period. Proposals for recapture vary widely; some recommend a 10-year recapture period, while others recommend that the length of time the DISC has been in existence be used. Further, some concern is expressed over the effect of repeal on reported financial statement income. The Accounting profession was not unanimous about the requirement of providing for deferred taxes on deferred DISC income. Those who hold the view that deferred taxes need not be provided under present law, are now of the view that repeal of DISC will require immediate recognition of the taxes for financial statement purposes.

I've attempted to discuss just a few of the major reform proposals which affect the timber industry. It is surely not a detailed discussion, but perhaps it gives some perspective to Congress' present concerns.

## The Importance of Death Taxes to Forestry

Charles F. Sutherland, Jr.\*

In discussing the importance of federal death taxes to forestry, I was asked to concentrate on the effect of federal estate taxation on forest management. But a valid question that will probably be raised is, "Do federal death taxes on forest property pose any problems not found in other businesses?" What about the independent medium-sized neighborhood grocery business? Doesn't this owner have the same death tax problems? No, I think not. There are some special death tax problems associated with owning forest land as contrasted with owning other assets, in part caused by the nature of the asset and in part by the social institutions in the forest industry.

Let's look at some of the underlying factors that cause special death tax problems in forest management. First, annual incomes of forest owners are often low. Like farmers, many forest owners live poor and die rich. In a survey we made several years ago in Lane County, Oregon, of owners of less than 200 acres of forest land, 60 percent had a family income of less than \$10,000 per year. The cash flow from woodlands is usually low, as an owner uses good management practices to improve his forest. Since the owner's outside income is often low too, his or her ability to save and invest in more liquid assets is limited. Consequently, an owner's options in funding a death tax are more limited, making death taxes more likely to affect the management of the property.

Second, forest property owners often don't realize what a valuable asset they have until a death occurs and the heirs have to pay death taxes. In Oregon we are switching from an annual ad valorem property tax on all standing trees over 12 inches in diameter, to a 6.5 percent tax on timber when it is cut. The change will help owners of small woodlands because it reduces the annual cash flow problem. But the ad valorem tax did focus owners' attention on the value of their timber. Now forest owners will be less aware of the increase in volume and per-unit value of their resource. This may increase their inertia in planning for estate taxes. By contrast, the corner grocery store owner pays property taxes each year on the value of his land and building and in some states his inventory, so he's constantly reminded of the value of the business.

Education is an important factor, too. The store owner is likely to have a better education and to be more aware of the problems posed

---

\*Associate Professor, Forest Management, Department of Forest Management, Oregon State University.

by death taxes. In our survey in Lane County, one-third of our sample had an eighth grade education or less. The store owner is also an easier target for the insurance salesman, who will stress the need for planning for death taxes. And the store owner is more likely to have the income to pay the insurance premiums.

Fourth, forest property as an asset is often less liquid, and therefore it is more difficult to borrow money using it as collateral. In Western Oregon, the Federal Land Bank is the only private institution currently making long-term loans on forest land and timber. If money must be borrowed to pay a death tax but loans are not available, then either forest land or timber or both must be sold, materially affecting the forest management plan.

Fifth, for larger holdings, and depending on the local market for stumpage, forced sale of the timber to pay the taxes may depress the stumpage price offered by the buyers.

And last, older people own timber. Again, in our study in Lane County, 70 percent of the owners of less than 200 acres of forest land were over 50 years of age. Perhaps that is true in other businesses as well. Nevertheless, older people own forest property, so death tax planning assumes great importance for forest management.

#### Major Factors in the Tax Reform Act of 1976 Making It Easier for Forest Owners to Pay Death Taxes

What changes in the Tax Reform Act of 1976 have made it easier to pay death taxes?

First, the gift tax property exemption of \$30,000 and the death tax exemption of \$60,000 have been increased to a combined gift and estate tax credit of \$47,000 by 1981. At lower death tax brackets, that is equivalent to a property tax exemption of \$175,625 -- almost double the old exemption. But note that this is the first change in the amount of the exemption since 1939, so inflation is constantly reducing the real value of forest property passed on to succeeding generations. Because of inflation, the exemption actually exempts less land and timber each year and increases the death tax bite, making it that much harder to fund the tax. At a 6-percent inflation rate, it would take less than twelve years for the former exemption of \$90,000 to reach \$175,625. But, remember that it was 38 years before Congress made the first revision in the property tax exemption, so if the past portends the future, the equivalent property tax exemption of \$175,625 will soon be diminished by inflated property values and less and less forest property can be passed on to heirs intact. Good tax planning will be necessary to offset the inflationary effect on death taxation.

A second factor helping the death tax payer is that taxes may now be deferred if the estate meets certain qualifications. If the executor can show "reasonable cause," the IRS is permitted to defer death taxes for up to 10 years at a current rate of 7-percent interest. We must

wait to see how "reasonable cause" is to be interpreted before including this option in estate tax planning. However, if you own forest property as a closely held business and its value exceeds 35 percent of the value of the gross estate, your executor can elect to pay estate taxes at the current interest rate of 7 percent for up to 10 annual installments.

Another change in extending death tax payments allows the executor of an estate with an adjusted gross value of more than 65 percent in a closely held business, to defer the first tax payment for 5 years followed by up to 10 annual tax payments. Moreover, the estate qualifies for a 4 percent interest rate on the estate tax owed on the first million dollars of the closely held business. An extension is essentially a loan from the federal government. That should make it easier for forest owners who qualify to pay the estate tax.

A fourth factor reducing the death tax burden is the new provision that allows the executor to value the forest property at value in use rather than highest and best use. For forest land in Western Oregon, that can mean the difference between \$1,000 per acre for land valued at market price for recreation and \$250 per acre for the same land valued for its use as forest land. There is a long list of qualifications for this method of valuation. Furthermore, if your heirs intend to sell this property valued at use for estate tax purposes, their basis in the property will be lowered and the capital gains tax increased. So it may be better to pay a death tax on forest land based on market value and pay less subsequent income tax if the forest property is to be sold.

And fifth, the division of the estate between wife and husband is much more equitable for property acquired after January 1, 1977. This is important because so many married couples own forest property (and other property, for that matter) jointly, often to avoid the probate process, but they do not realize the significance of such a method of ownership. Prior to January 1, 1977, all property acquired in joint ownership in states without a community property law was included in the estate of the first spouse to die. Then the entire estate was taxed again when the second spouse died. You can guess at the tremendous estate tax paid under this system. Now the spouses can elect to have only half the value of a qualified joint interest includible in the estate of the first to die. That will reduce the estate tax on forest property considerably.

For those who have held their property in joint ownership prior to 1977, the old rules still apply. Under the estate tax rules prior to January 1, 1977, to demonstrate a share in the ownership and reduce the estate tax on a transfer of property between spouses, the spouse who inherits (usually the wife) must prove that by gift, inheritance, accumulations previous to marriage, or perhaps by virtue of her own income after marriage, she contributed to the purchase of the jointly-held property.

What Factors in the Tax Reform Act of 1976 Make it Harder for Forest Owners to Pay the Estate Tax?

There are several changes made in the gift and estate tax reform that make it more difficult to pay gift and estate taxes or to pay income taxes if the estate is sold to pay estate taxes.

A major advantage of gifting property to reduce death taxes has been eliminated. The gift tax rate prior to 1977 was three-fourths the estate tax rate, encouraging owners to gift assets at less tax cost than would be incurred at death. Under the 1976 Tax Reform Act, gift tax rates and estate tax rates have been increased and are now computed from the same table. Moreover, gifts are cumulated and increase the entry point in the uniform rate table for an estate.

The method for computing the donee's basis for inherited forest property has been revised too. The basis for property inherited prior to 1977 for income tax purposes was the value at the death of the donor. This eliminated a capital gains tax on appreciation in value of forest property between original purchase and the death of the decedent.

Under the Reform Act, the basis of estate property for income tax purposes -- should the heirs decide to sell their inheritance -- is the decedent's basis if the forest property was acquired on or after January 1, 1977. This will affect forest management because, if the new owners are forced to sell part of the forest property to pay estate taxes, they must increase the amount sold before income taxes because they will pay both income taxes and estate taxes if they fund the estate tax by selling forest land and/or timber. Furthermore, in states having a yield tax, the executor must add the yield tax liability to calculate the amount to cut.

For forest land and timber acquired prior to 1977, a "stepped up" basis is calculated. This is essentially the prorated value on December 31, 1976 of the straight-line appreciation in value between date of purchase and date of death. For property that is appreciating faster than an arithmetic progression -- and forest property is likely to be such property -- then the straight-line method of calculating a stepped up basis will probably produce a higher basis for the donee than would be justified by the actual market value on December 31, 1976. A higher basis will result in less capital gain if the heir decides to sell the property.

What Direct Effect will the Federal Estate Tax have on Forest Management Planning?

One factor in forest management planning I am concerned about (and I mentioned it earlier) is complacency, now that the exemptions have been increased. In the 1975 survey on estate tax planning of forest owners in Western Oregon I have referred to earlier, 39 percent of the 131 respondents indicated that they had no will. I am concerned that

the equivalent property exemption of \$175,000 plus the marital deduction of \$250,000 for an adjusted gross estate of up to \$500,000 (for estates over \$500,000, the marital deduction is one-half the adjusted gross estate) may cause forest property owners to think that their property will escape estate taxes. But there are two problems associated with this reasoning.

One I mentioned previously: it won't take too long before inflation pushes property values (especially forest property values) over the exemption. And remember, only the first passing of an estate from one spouse to another has an equivalent property tax exemption of \$425,600 plus. When the remaining spouse dies, the equivalent exemption is only \$175,600.

Second, I am certain that many owners underestimate the value of the forest property they own. Of nineteen cases where values for forest property were disputed by the Oregon State Department of Revenue in 1975, only one was for overestimating the value. The rest underestimated the market value by 23 to 90 percent of the department's estimate of value.

I have added the value of land and trees per acre for Douglas-fir for Site II for full stocking in Oregon for age classes varying from bare land to 60-year-old timber. Dividing that figure into the equivalent property tax exemption for a tax credit of \$47,000 plus a marital deduction of \$250,000, I find that approximately 1770 acres of bare forest land could escape death taxes on a spouse-to-spouse transfer if that were the only asset in the estate. But, if his forest stand is 60 years of age, only 34 acres would go untaxed. When the second spouse dies, only 14 acres of forest land stocked with 60-year-old timber will escape taxation. Of course, if there are other assets in the estate, even less forest property will avoid death taxation.

Next, let's look at the effect federal estate taxes have on the financial analysis of a forest property. I think of the estate tax as a random, progressive tax on wealth. In forestry, wealth translates into trees and land, so let's see what effect an estate tax has on the present value of forest land under certain assumptions. Assume that the estate tax is calculated for a 120-acre even-aged stand of Douglas-fir for Site II for each age class. I have calculated the taxable estate for each age class assuming that the forest land and/or timber comprise the entire estate. The values were then discounted to year zero by an interest rate of 6 percent.

In this example, the estate tax reduces the profitability of timber production sometime after the 30th year in the rotation. We seldom consider the death tax in this context, yet actuarial tables could help us predict when death taxes are likely to be incurred and could be included in our analyses of present value just as we now do with property and income taxes.

Age	Value/Acre	Taxable Estate	Estate Tax on a Transfer Between Spouses	Present-Value Estate Tax Total	Per Acre
0	\$ 240	\$ 28,800	\$ 0		
10	590	70,800	0		
20	1,090	130,800	0		
30	1,644	197,280	0		
40	4,026	483,120	18,398	\$1,788	14.90
50	6,592	791,040	73,277	3,978	33.15
60	10,547	1,265,640	157,943	4,788	39.90

Now let's look at how the estate tax may affect the cash flow of regulating a 600-acre forest. Regulation means taking the forest as it is now and arranging harvest schedules so that eventually the amount harvested each year equals the growth; in this example, for a 60-year rotation. Assume the following distribution of acres by age class:

Age	Acres
0	0
10	225
20	75
30	0
40	75
50	75
60	<u>150</u>
Total	600

For this property I have calculated a total estate value of \$2,592,900 with an estate tax due of \$416,974 if the entire property passes from spouse to spouse.

Gross Estate	\$2,592,900
Administration Expense	- 20,000
Adjusted Gross Estate	<u>2,572,900</u>
Marital Deduction	1,286,450
Net Taxable Estate	1,286,450
Tax	463,974
Less Tax Credit (1981)	- 47,000
Tax Due	<u>\$ 416,974</u>

$$\$416,974 \div \$10,307 \text{ (value of 60-year timber/acre)} = 40 \text{ acres}$$

Assuming no other sources of funds to pay the estate tax in this simple example, the executor would need to cut 40 acres of timber in the 60-year age class to pay the estate tax.

If we compare this 600-acre forest, when 40 acres of timber have been removed to pay death taxes with the same forest where death taxes were funded from other sources, there are some significant differences.

#### Value of the Harvest by Decade

Decades	No Timber Removed to Pay Death Taxes	Forty Acres of Timber Removed To Pay Death Taxes
1977-86	\$1,231,710	\$1,100,730
1987-96	944,420	782,130
1997-06	967,980	725,250
2007-16	932,330	1,118,640
2017-26	884,810	1,115,100
2027-36	1,235,420	1,209,390
2037-46	1,355,780	1,332,770
2047-56	1,355,780	1,335,780
2057-66	1,355,780	1,335,780
2067-76	1,355,780	1,335,780

Data calculated by use of a model TREES developed as part of the Oregon Timber Resources Study.  
(Beuter, et al, 1976)

Both cutting budgets eventually stabilize at the same dollar level when tax payments are raised by cutting timber, but the fluctuation in cash flow is greater and equilibrium is reached later for the 600-acre unit that is cut.

If we discount these values by using 6-percent interest, there is an approximate \$180,000 difference in present worth. Thus, there is not only an immediate decrease in value due to the estate tax, but another long term decrease in the value of the forest asset due to the subsequent effect on future harvests. Note that this calculation ignores the payment of income taxes on the timber that is cut and also a harvest tax for property taxes, if applicable.

Of course the cost represented by the decrease in present worth of the forest harvests must be compared with the cost of any alternative method of funding the tax.

#### How Can We Reduce Death Taxes on Forest Property?

First, let me emphasize that tax planning should be done by experts and for large estates, preferably by a team of experts. The team should include an estate tax lawyer, an accountant, an estate tax planner, and perhaps a trustee, if one is to be used. I am not an estate tax planner, however, there are some techniques that I have been exposed to that can be used to reduce the total gift and estate tax on forest property.

For example, a gift between spouses has an unlimited deduction for the first \$100,000 and a deduction of half for gifts over \$200,000. This is one way to divide an estate to reduce the death tax on property that is jointly held. One spouse (usually the husband) simply gifts a share in the jointly-owned property to the other. Then, only that portion owned by the first spouse to die is taxed in his or her estate.

An annual gift-tax exclusion of \$3,000 per donee is still available under the Tax Reform Act of 1976. So you can give anyone \$3,000 per year tax-free if you wish. This can be doubled to \$6,000 per donee if your spouse agrees to split the gift; therefore, forest owners can pass considerable property to their offspring by using the annual gift tax exclusion.

Even if an owner must pay a gift tax on forest property, it may be advisable to gift certain types of property. For example, if property is likely to appreciate in value, it might be wise to pay a gift tax early on a relatively low property value and eliminate later higher values in the estate and thus reduce death taxes.

The experts have all kinds of trusts and other legal methods of avoiding death taxes. Let me illustrate one commonly used testamentary trust for transferring an estate with a minimum tax. It is called a marital deduction trust and is best explained by following the example shown below:

Principal wage earner dies in 1977 and leaves an estate of \$300,000 to the spouse.

Estate	\$300,000
Less Marital Deduction	- 250,000
Taxable Estate	\$ 50,000
 Tax on \$50,000	 = \$ 10,600
Less Tax Credit	- 30,000
Estate Tax Due	0

Surviving spouse dies in 1981 and leaves an estate of \$300,000 to the children.

Estate	\$300,000
Less Marital Deduction	0
Taxable Estate	\$300,000
 Tax on \$300,000	 = \$ 87,800
Less Tax Credit	= 47,000
Estate Tax Due	\$ 40,800

Now let's go through the same process, only this time we have a lawyer set up a marital deduction trust.

Principal wage earner dies in 1977 and leaves an estate of \$300,000, but this time the estate is split into two portions -- \$120,000 to a trust and \$180,000 to the surviving spouse.

Estate	\$300,000
Less Marital Deduction	- 180,000
Taxable Estate	\$120,000
Tax on \$120,000	= \$ 29,800
Tax Credit	30,000
Estate Tax Due	0

In this case, \$120,000 is placed in a trust and \$180,000, the amount equal to the marital deduction, goes tax-free to the surviving spouse. The spouse may use the income from the trust and may even invade the principal under certain conditions.

When the surviving spouse dies (in 1981), the estate held in trust (\$120,000) goes directly to the children without paying estate taxes. Assuming \$180,000 is still owned by the surviving spouse at death, a tax of \$48,400 would be owed less a tax credit of \$47,000 for an actual tax of \$1,400 on the \$300,000 estate.

Estate tax planning pays!

#### What are Some Alternatives for Funding the Tax?

If an owner plans carefully to have liquid assets to pay the estate tax, the forest property can be passed to succeeding generations without affecting its management.

We have previously discussed some of the alternatives for paying the estate tax. The executor can borrow the money from a private or federal source or the owner can set up a sinking fund and save for the tax. But these methods are either costly because of the interest charged or the income tax paid on the amount saved, or are uncertain because the property owner isn't able to predict how long he or she will live. Furthermore, any savings is included in the estate and taxed too.

A third method is to buy life insurance, or rather to have one or more heirs buy life insurance, on the forest owner's life. If an heir owns the life insurance policy on the forest owner's life and pays the premiums, then the insurance is paid to the heir, is not included in the forest owner's estate and under current law is income-tax free. The forest owner may even indirectly help pay the premiums by gifting \$3,000 annually to the heir.

The heir then uses the insurance money to either loan the money to the executor to pay the tax or buys a portion of the property, and the funds from the sale are used to pay the tax.

I have touched briefly on a very complicated subject, and frankly, I have told you more than I know. If you are advising forest owners on forest estate taxation, I would strongly suggest that you send them to experts in the field. It is a very complicated subject.

## References

Hess, Sidney and Bertel Westlin, Estate Planning Guide, Commerce Clearing House, Inc. 1977. 644 pages.

\_\_\_\_\_, Explanation of Tax Reform Act of 1976. Commerce Clearing House, Inc. 1976. 272 pages.

Nichols, Dale E., An Investigation of Inheritance Taxes and Forest Ownership in Western Oregon. Master of Forestry Paper, 1976, School of Forestry, Oregon State University, Corvallis, Oregon. 129 numbered leaves.

## The Ad Valorem Tax on Forest Property

Norman R. McDonell\*

Woodland in the recent past has increased greatly in value, due to the supply and demand of forest products. Taxing this land at its estimated full value, often based on influences of "other uses," has a tendency to discourage [people from] growing timber which, in turn, will prove injurious to the public interest.

That statement has the ring of one made today; yet, it paraphrases a quotation printed February 16, 1819, in the Connecticut Courant of Hartford.<sup>1</sup> It gives emphasis to the fact that arguments about property taxes on timber started early in our history -- and they continue.

Destruction of timber was a significant factor in our early history. Much of that destruction was by fire. In the 158 years since the Connecticut article, we have learned to control wildfire; we haven't learned to control the inexorable increase in taxes, nor have foresters been able to agree on the impact of taxes on forest management.

My assignment today is to look at the arguments for and against the property tax on timber. The diversity of geographic areas and disciplines represented at this seminar caused me to be struck with the difficulty and challenge of meaningfully dealing with that subject, not because of lack of arguments, but rather the incredibly complex nature of the property tax, that makes transfer of practice, experience, or conditions from one region to another very risky.

My discussion will be in four segments: first, a brief overview of the property tax; second, a look at the arguments for and against the property tax on timber; third, a discussion of some changing viewpoints; and fourth, conclusions and possible trends.

### Overview

#### Revenue

Last year the property tax nationwide yielded a total of \$60.2 billion, up 11 percent over 1975.<sup>2</sup> The tax is a prime revenue source for local government, constituting 85 percent of local tax revenue.<sup>3</sup> Its importance varies greatly from state to state, and amongst the 50,000 local government entities that rely upon it.

---

\*Manager, Property Taxes -- Timber, Weyerhaeuser Company, Tacoma, Washington.

### Historic Acceptance

Forest owners' long interest in the property tax is rooted in the fact that it is a product of our early rural society, and forest properties constituted a major portion of the property tax base. What happens to the property tax has always had a major impact on forest owners, particularly after the concepts of forest management for the purposes of growing timber began to be practiced.

Acceptance by taxpayers of the property tax in the U.S. over a period of more than a century and a half was in part attributable to these key factors:

1. Tax levies were often low;
2. The tax revenues were used for limited local services;
3. Land ownership was closely related to the individual's tax paying ability; and,
4. Years -- sometimes decades -- passed by with little change in assessments.

While the property tax remains the mainstay of local government, many of the factors upon which it was predicated have changed significantly; enough so that its acceptability as an equitable method of taxing some types of property is being seriously questioned.

### Revenue Pressures -- Reappraisals -- Taxpayer Reactions

Urbanization has brought lots more people with demands for services that cost money, often with little industrial tax base. This has created pressures for increased revenue, and has substantially increased property tax levies in most jurisdictions. Often, the revenue is now used more for people-related activities than for property-related local services. Computer technology has been adapted in many jurisdictions to adjust annually the valuations of property. The combination of pressures for revenue, inflation, and frequent value changes has caused the property tax to be the center of major taxpayer reaction, and ultimately, legislative action in many states.

Initial acceptance of the property tax by nearly all segments of our society as a legitimate method of raising revenue has changed to rejection or cries for relief or outright rebellion. Taxpayers in the cities, the suburbs, and the rural areas have been equally vocal. Homeowners, utilities, businesses, industries and forest owners have joined the chorus in a number of states. A review of the volumes of property tax legislation enacted in the United States over the past 10 years brings one to recognize that the original target of uniformity in ad valorem (according to value) taxes, which once correlated with ability to pay, has been replaced by an astounding array of special provisions. To list a few: homeowner's exemptions, current-use assessment laws, classification, new construction exemptions, differential rate provisions, inventory exemptions, circuit breakers, yield taxes, and other relief programs.

In spite of the multitude of special revisions, we may only be in the second act of a three-act performance. From California to Massachusetts, the press is full of public outcries against the property tax. The recent nationwide poll has been widely quoted: 33 percent of the respondents named the property tax as "least fair." In the west, where reappraisals now come with the frequency and welcome of the common cold, 45 percent of the respondents found the tax "least fair."

The property tax, a locally administered tax, varies immensely from state to state, both in administrative efficiency and also in tax levels, and often the variations are true from county to county. A common thread woven through the myriad of variations is that voter resistance to property tax increases is often more closely related to the amount of change than to the level itself -- up to a point. Taxpayers in relatively low property tax jurisdictions generally resist sharp increases in tax as do taxpayers in a high-tax area. However, the intensity and persistence of the cries of anguish increase geometrically when the effective tax rate begins to exceed about 2.5 percent of full value. When it goes over 3.5 percent, as in Los Angeles, look out, particularly when combined with inflationary increases in value that now have reached 2 percent per month in some areas.<sup>4</sup> This means that counties on a four-year reappraisal cycle must increase values 75 to 100 percent to keep up with the spiral. Where annual reappraisals are the practice, this translates to a 25 percent annual increase. Despite the theoretical arguments, tax rates seldom decline with large valuation increases, and if they do, it's certainly not for long. Thus, in actuality, valuation increases quickly translate into tax increases.

#### Arguments For and Against Property Tax on Timber

How does all this relate to the property tax on forest land and timber? I believe it relates in at least one very important way: the impact of the improved administration and higher tax rates, when applied to forests, has created a major disincentive to forest investments.

A forest land owner who must make investment decisions now, with the anticipated return 30 to 50 years in the future, cannot help but take a pessimistic view of anticipated property tax burdens over that period, based upon recent experiences. In addition, unless an owner has a large enough ownership in a condition to provide an annual income from the property, his property tax payments must come from other income sources. This puts extreme pressure on owners to prematurely harvest timber and thereby reduce their annual timber tax burden.

These factors have contributed to complete changes to forest yield taxes in the three pacific coast states, where timber had been taxed under the ad valorem system since statehood.

With that background, I will summarize some of the common arguments for and against taxing timber under the property tax system, and comment on how events have altered my view of those factors.

Pro

1. The tax is, in theory, a tax upon all wealth, real and personal, tangible and intangible, that produces exchange value.<sup>5</sup>
2. Timber receives the same tax treatment as all other property and isn't singled out.
3. The property tax is a direct tax levied annually, at a uniform rate, within a taxing district.
4. The property tax assessment, valuation, levying and collection procedures are long established.
5. The tax is usually subject to local administration with some local control on the level of tax and use of the revenues.
6. The appeals procedures are well established.
7. Tax revenue flows to local government are relatively stable.

Con

1. Locating individual forest tracts can be more difficult than residential or commercial property, causing administrative costs to be high.
2. Inventorying forest tracts to give appropriate recognition to differences in site quality, timber types, species, volume, quality, age class, etc., is technically beyond the scope of many assessors.
3. Valuation is difficult because of the problems of finding sales representative of the tracts being valued, and of properly analyzing the sales to identify the value elements. Two particularly difficult problems are the separation of land value from the value of timber or reproduction, and the consideration of "other use" pressures, most often in the form of scattered sales for recreational purposes.
4. The annual tax on the timber inventory, particularly on forests without annual income, is a disincentive to the long-term investments necessary in forest management.
5. The property tax on timber has often been acceptable in the past because it was poorly administered. Under a fully administered property tax, some modification of the classic "ad valorem" definition must be made, or the resulting annual tax burden on the forest can cause liquidation to reduce the tax.

### Discussion

My first involvement in the timber tax area was in 1954. Throughout the '50's, timber growers maintained a belief in the west that the property tax was workable, that the advantages outweighed the disadvantages.

The conclusion of many eminent foresters, decades earlier, that eventually the system would have to be changed was fended off by the tendency to be more comfortable with what we thought we understood -- the status quo. In 1913, the subcommittee on forest taxation of the Fifth National Conservation Congress, Gifford Pinchot, Chairman, published a report on forest taxation in the United States. It concluded that the property tax on timber --

"remains tolerable only so long as good management is no object or while the tax rate or the ratio of assessed to real property is extremely low."<sup>6</sup>

By the late 1950's, the industry in the West was beginning to face the realization that it couldn't live with a fully administered property tax at "market value." Market value is interpreted by the taxing authorities as the value of stumpage in the market for immediate harvest with application to the total merchantable inventory.

The property tax as administered in states with aggressive appraisal procedures and high tax rates was producing tax effects that were increasingly causing owners to liquidate timber and not make further investments in forest management.

A conclusion by the Pinchot committee nearly 50 years earlier had come true. They commented:

"By failure to recognize that the growth produced is a crop, distinct from the land, grown at the owner's effort and expense and returning no revenue until ripe, the law now compels the repeated annual taxation of the owner's effort to an extent very likely to amount to confiscation."<sup>7</sup>

Intensive legislative reviews in the Pacific Coast states led to legislation providing for the valuation of land on the basis of use, and substitution of the yield tax for the annual property tax on timber.

Why have a majority of the timber owners who had long opposed being set apart in a yield tax structure now become supportive of that system? In a nutshell, it's the tax level. As long as the property tax was being administered in a way that resulted in tax burdens that owners could live with, there was no reason to change. The advantage of staying in the same "class" as other taxpayers far outweighed the risk of being set apart in a separate class.

Once the implication of the fully administered property tax became understood, there was no question that a change must occur and the risk of separation be assumed. It hasn't been an easy process; the mechanical

problems or correlating a revenue flow from a yield tax to the budgeting and levying procedures under a property tax are difficult but not insurmountable. You'll be hearing more about this from other speakers.

### Conclusion

As we look at the traditional arguments for keeping timber under a property tax, we find that time and events have diminished them, if in fact there ever was a justification. The case for staying in the same class as other taxpayers has been eroded by the plethora of special treatment categories. The local control issue still exists, but to a lesser extent, as state revenue bodies exert more authority over property valuation procedures, and in some states assume complete jurisdiction over timber. The belief that "if timber stays under the property tax it is not subject to charges of preferential treatment" won't wash. Appraisals by assessors based on values indicated by other uses will drive vast acreages of forest land to the margin -- with little if any incentive for the owner to re-invest in growing timber, and with little likelihood that the land can in fact be converted to a higher use. This means that if timber remains under the property tax, modifications have to be made to recognize the uniqueness of timber growing as a business venture. Such modifications are identified by some as "special treatment," the very thing that the property tax system supposedly avoids.

With revenue demands driven by population growth, urbanization, and inflation, we should expect the taxpayer turmoil surrounding the property tax to intensify. As we consider the tax system for timber and forest land which will best serve the broad public interest, we must try to measure impacts on forest management and re-investment in a rapidly changing environment, as well as the obvious need for fairness in respect to other taxpayers.

Footnotes

<sup>1</sup>Fred Rogers Fairchild, Forest Taxation in the United States. USDA miscellaneous publication no. 218 (Oct., 1935), page 342:

"Wood land of late years has risen much in value, owing to fuel being a necessary of life, and the improvident destruction of timber. To tax this description of land at its estimated full value, equal with the most productive kinds of other lands, would not only be taxing a necessary of life, but it would have a tendency to discourage the growth of timber and fuel, which would operate extremely unfavorable upon the middling and poorer classes of people, and prove injurious to the public interest."

<sup>2</sup>Wall Street Journal, Sept. 7, 1977.

<sup>3</sup>Financial Outlook for State & Local Government to 1980. Tax Foundation Inc., Research Publication No. 28.

<sup>4</sup>Ronald E. Giannini, "The Real World of Computer-Assisted Appraisal Systems," International Assessor, Volume 43, No. 9 (Sept. 1977), page 7.

<sup>5</sup>Ellis T. Williams, Valuation of Forest Land & Timber Under the Property Tax in the United States, IVFRO Congress, Munchen, 1967.

<sup>6</sup>Fifth National Conservation Congress, Report on Forest Taxation, Washington, D.C., Nov. 18-20, 1913.

<sup>7</sup>Ibid.

The Impact of Rejecting Valuation Based on  
Potential Productivity of Forest and  
Farm Lands in Georgia

Leon A. Hargreaves, Jr.\*

It was Patrick Henry who said, "I have but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way of judging the future but by the past." In light of this, let's take a look at the experiences we have endured in the property tax arena in Georgia.

Following World War II, rapid and significant changes occurred in many areas of American life. As our economy expanded, the demands of citizens for increased and improved services kept pace with, and in some cases exceeded, the economic expansion. This demand for expanded services, the most expensive of which on the local level has been education, increased the taxes on property in some cases more than tenfold.

Revaluation and equalization became the order of the day, generally resulting in higher valuation, increased assessment ratios, and small, often temporary, decreases in millage rates. As an example, in Georgia, millage rates were about fifty percent less from 1965 to 1975 than in previous years and per acre valuation on rural land increased more than 538 percent. Actual tax levels increased 441 percent during the period.

How did all this come about? Georgia is still one of the few states which follows the classic ad valorem system of taxation.

The law requires the Assessor to determine value of a property based on its fair market value for its highest and best economic use. In 1962 a group from the Georgia Forestry Association met, and in light of legislation passed that year, decided rather cautiously that perhaps the time had come to take an in-depth look at the tax situation in our State.

The two laws which brought about this decision were:

1. A requirement that each county pay a minimum of 17 (eventually 20) percent of the cost of the minimum foundation program for education.
2. That each county revalue the property in their jurisdiction and bring all values to true fair market value.

In light of the low tax levels on farm and forest lands at the time, these laws seemed reasonable to a thinking man. A study of the tax

---

\*Professor and Associate to the Dean, School of Forest Resources,  
University of Georgia, Athens, Georgia.

situation (published in 1965) revealed the following:

1. Only 5 percent of the state's 159 counties attempted to change valuation on forest lands when market values or volumes of growing timber changed.
2. Only 16 percent of the counties included the value of standing timber in the valuation.
3. Only forty-one percent of the counties determined fair market value by market sales comparison for valuation.
4. Only 52 percent of the counties made a distinction between forest and non-forest land.
5. Assessment ratios varied from county to county.

These findings, plus discovery that increasing rural property taxes had been a result of higher valuation rather than increased millage rates prompted the authors to state, "The assessment of rural land in Georgia lacks uniformity or any recognizable system."<sup>1</sup>

The study therefore concluded:

1. Valuation is the critical area in which improvement must be initiated.
2. Under present Georgia law there is no economically feasible method of valuing timberlands.
3. The fairest and most easily administered tax on timberlands is one which puts forest land on an equal basis with other types of land devoted to production of food and fiber, with valuation based on potential productive capacity, general market conditions, and area location.<sup>2</sup>

It was recommended that the Constitution be amended and laws passed which would provide for taxation based on valuation according to the potential productive capacity of the land. Interim committees of both the House and Senate took the recommendations under advisement. The Senate Committee followed through and introduced Senate Resolution 15 in January of 1966. The resolution passed the Senate with only five votes against it.

The House action on the resolution was another story.

The opponents of the legislation were numerous. The Tax Assessors Association, The Municipal Association, The Education Association -- all opposed passage. The Atlanta newspapers vigorously opposed, accusing the proponents of seeking special treatment for the big corporations and "timber beasts" in general. One editorial called it the most important

legislation to come before the General Assembly since secession. I am reminded of Mark Twain's statement that, "In all matters of opinion our adversaries are insane." As one of the researchers involved I felt like the fly which sat on the axle-tree of the chariot-wheel and said, "what a dust do I raise," as described in Aesop.

After a public hearing attended by approximately 450 people, the Ways and Means Committee voted eleven to ten a "do pass" recommendation. The chairman, nevertheless, in casting the deciding yes vote, said he would oppose passage on the House floor. The vote finally came and, while the resolution received a majority, it did not receive the required two-thirds vote for a constitutional amendment.

The distribution of the yea and nay votes was interesting. It should be noted that the "one man one vote" edict of the Supreme Court had brought about reapportionment. This resulted in a situation in which only one more than the number of House members representing the seven most populous and hence urbanized counties in the State was sufficient to defeat any question requiring a two-thirds affirmative vote. No votes were cast in the affirmative by the delegation from the Greater Metropolitan Atlanta area (four counties) while in 144 counties the representatives favored the resolution by a margin of more than two to one. Major opposition came from the Piedmont region. The representatives from the coastal plain area voted heavily for the resolution while in the mountain areas the vote was almost evenly divided.

It has been said that there's nothing like a little experience to upset a theory. The theory held at the time was that it would be possible to pass the desired legislation with little publicity or educational effort. The fact that the House had just been reapportioned and consequently had a high percentage of freshmen members was overlooked.

Following this set-back, a Tax Study Commission was appointed with members from the House, and Senate, and appointees of the Governor. This Commission operated for almost two years under the direction of a consultant from outside the State. All kinds of taxation were considered, including the property tax. But about the strongest recommendation on the property tax was that such a tax should be fair and equitable. Again, experience is what you get when you are expecting something else. The consultant made his report -- the members of the Commission refused to endorse it -- and two more years went down the drain while property taxes spiraled.

Following this experience, there was talk of yield taxes, severance taxes, circuit breakers, and differential assessment. From 1963 to 1975 we had Gov. Sanders, Gov. Maddox, Gov. Carter, and Gov. Busbee. We have had a variety of personalities and philosophies represented by the incumbents of the Governor's office. Each of these gentlemen indicated strong support for the program of tax reform supported by the Farm Bureau and Forestry Association when they were running for office.

During Gov. Carter's term, several events transpired related to property tax reform. The Governor appointed various task forces to study the problems associated with the natural environment, intellectual enrichment, etc. The report of the Goals for Georgia Committee on the natural environment listed the need for property tax reform as the greatest need. The Governor also had committees studying the reorganization of State Government.

The forestry interests of the State were dubious of the plan for consolidation of the natural resources agencies of the State into a single department. Support for property tax reform in exchange for support of natural resources reorganization was rumored. The Forestry Commission, The Georgia Forest Research Council, and The Soil Conservation Committee remained separate state agencies. Taxes were not reformed.

During this same administration, The State Revenue Commission sponsored a series of eight bills designed to standardize administration and equalization of the property tax. These bills cleared the House before they were noticed by forestry interests. When they were noticed, they were bottled up in a Senate committee. The Revenue Commissioner requested and was given a conference with Forestry Association officials. His pitch was that until their tax reforms were enacted there was no chance that taxation of forest and farm land based on potential productivity would ever pass the General Assembly. The proposed legislation was:

- H. B. 1704: Substitutes a Board of equalization appointed by the Grand Jury for a previously used arbitration procedure.
- H. B. 1705: Establishes a uniform assessment ratio for all taxing jurisdictions.
- H. B. 1706: Provides that the value of property used by taxing jurisdictions be established by the county.
- H. B. 1707: Provides for establishment of qualifications, duties, payments to counties by the State and minimum appraisal staff.
- H. B. 1708: Establishes minimum qualification standards for Assessors and Boards of Assessors.
- H. B. 1709: Procedures to cover utilities, banks, etc. for valuation.
- H. B. 1710: Sets up a State Board of Equalization for appeals on property valued by the State Revenue Commission.  
(utilities, etc.)
- H. B. 1711: Abolishes arbitration procedures for utilities, etc. and provides for an appeals system to the State Board of Equalization.

The Forestry Association recognized these as straight from the "Good Government Book" of the Council on Intergovernmental Relations. Even after realizing that better administration under the Georgia system probably meant higher taxes, the group agreed to withdraw opposition and hoped for support of their own program.

It never came, the current Governor ran for office on a pledge that there would be no state-wide tax increase. One effort to pass a circuit breaker tax relief program failed and another to pass a differential assessment bill which would not apply to landowners with more than 1000 acres, or corporations, passed the Senate but failed in the House the last day of the session in 1976. The present year, 1977, saw little effort. The semi-annual excuse was that, since 1977 was not a general election year, there was no need to hurry.

Two other tax measures have been enacted in the recent past. One was an optional (by county or city) 1% sales tax. Only a few of the counties have been successful in local referendums to implement this tax. The other law redefined the meaning of fair market value and included present use as one criterion to be used by the assessor. This had been the law for more than a year but apparently had been generally ignored by local assessors.

Table I shows the median fair market value, median millage, and median tax per acre on farm and forest land during the period 1965-75. The state of Alabama sought legislation this year which would limit increases in taxes to a maximum of 20 percent in any one year. The mean annual increase in taxes per acre on forest land in the past 10 years in Georgia has been 18.9 percent.

Does Georgia compare favorably with other Southern states as to levels of property taxes paid on forest lands? Table II gives the levels in 1975 on several million acres of forest lands owned by Industry. Georgia clearly enjoyed the privilege of paying the highest tax per acre on forest lands in that year.

Table I

AD VALOREM TAX  
Rural Georgia  
1965-75

Year	Median Fair Market Value (\$)		Median Millage	Median Tax per Acre (\$)		Percent Forest Tax Increase Over Past Year	Percent Non-Forest Tax Increase over Past Year
	Forest	Non-Forest		Forest	Non-Forest		
65	42	57	46.50	0.46	0.64	-	-
66	52	70	40.25	0.57	0.75	23.9	17.1
67	70	98	28.25	0.79	1.01	38.6	34.6
68	82	110	26.75	0.85	1.16	7.6	14.8
69	95	125	29.75	1.04	1.35	22.4	16.3
70	98	130	29.75	1.12	1.43	7.7	5.9
71	100	134	30.00	1.19	1.56	6.3	9.0
72	161	213	22.25	1.34	1.91	12.6	22.4
73	203	300	22.84	1.86	2.66	38.8	39.2
74	248	315	23.50	2.19	2.83	17.7	6.3
75	268	353	23.50	2.49	3.15	13.7	11.3
Percent Change 1965-1975							
	538	519	(49.5)	441	392	18.9	17.7

Table II: Comparison of Taxes Paid on Industrial Forest Lands in the South, 1975

State	Acres in Study	Low tax per acre	Mean tax per acre	Median tax per acre	High tax per acre	Mean severance and/or yield tax per acre*	Mean severance and/or yield tax paid on company owned or controlled lands only	Mean property tax plus mean yield and/or severance
Alabama	2,559,357	.12	.23	.21	.39	.24**	.14	.47
Arkansas	1,415,968	.10	.60	.53	.77	.50	.12	.72
Florida	3,657,945	.41	.93	1.05	3.26	0	0	.93
Georgia	3,211,010	.67	1.60	1.49	4.23	0	0	1.60
Kentucky	65,187	.37	.50	.29	1.26	0	0	.50
Louisiana	2,811,378	.20	.44	.40	.62	.46	.23	.90
Mississippi	2,214,986	.35	.75	.68	1.37	.41	.23	1.16
North Carolina	1,757,891	.29	.59	.57	2.11	0	0	.59
South Carolina	1,588,635	.24	.62	.62	1.78	0	0	.62
Tennessee	555,516	.21	.53	.39	1.77	0	0	.53
Texas	3,604,490	.27	1.43	.94	25.81	0	0	1.43
Virginia	821,080	.39	1.15	.93	5.54	.80	.17	1.95
								1.32

\*Includes all severance and yield tax reported paid divided by acres reported. In most of these states the manufacturer pays the severance tax.

\*\*Includes processors tax (50% of severance tax paid.)

## Footnotes

<sup>1</sup>L. A. Hargreaves, Jr. et al. The Property Tax on Forest Lands in Georgia. Georgia Forest Research Council Report #12, 1965.

<sup>2</sup>Ibid.

## Florida's Experience

Fred Brett\*

I am pleased to have been invited to appear on this program and to be able to make a contribution to the exchange of information on Forest Taxation which is occurring at this symposium.

The topic is very timely. I suppose there has never been a time when you couldn't stir up interest when talking about taxes, but it seems that the subject is more prominent today and is of concern to more people than it has been at any time in my life.

Local taxes are up substantially in almost every North Florida county where I have any knowledge of the situation, and there are strong indications that another increase is in the offing next year. Most of you, I'm sure, could make a similar report for your local area. The simple fact is that the cost of government is going up, and someone has to pay the bill.

I'm here today primarily because I've gained some knowledge of the Florida tax law while serving as the Chairman of the Taxation Committee of the Florida Forestry Association. Our committee worked closely with the Florida Department of Revenue on the development of the new guidelines for assessing woodlands which appear in the Manual of Instructions for Property Tax Administration recently published by the Florida Department of Revenue.

I am employed by the Buckeye Cellulose Corporation, as the program indicates, but the primary frame of reference for my remarks will be from the work of the Forestry Association Committee.

With that introduction, let's move now into a discussion of Florida's Greenbelt Law.

At least for tax purposes, forestry in Florida is considered to be a part of agriculture. This seems to be altogether fitting and appropriate because we are working with crops of trees that can and should be harvested, used, regenerated, and harvested again. Timber grown in this manner supplies some of the basic life-support needs of people in the form of lumber for housing, packaging materials for food, fiber for clothing, and fuel to produce energy, just as agriculture produces food which, of course, is an essential life-support product required by man.

Florida's Greenbelt Law recognizes this association between forestry and agriculture. The Greenbelt Law is not a timberland assessment law, but an agricultural assessment law. Lands devoted to forestry purposes come under the law along with lands devoted to horticulture, floriculture,

---

\*Manager, Lands and Timber Administration, Buckeye Cellulose Corporation, Perry, Florida.

viticulture, dairies, livestock, poultry, bees, some forms of pisciculture, and all forms of farm products and farm production. This is one key difference between Florida's Modified Assessment Law and many others. Florida's law is an agricultural law and forestry is included under this law along with other agricultural pursuits.

Now, let's look briefly at the provisions of Florida's Greenbelt Law. For those who might like to note the number, it is Section 193.461 of the Florida Statutes. It is entitled Agricultural Lands; Classification and Assessment. The law in its present form was enacted in 1972 with several minor amendments being added since that time. Florida has had a greenbelt law, however, since 1959. I believe that there have been about six to eight changes in the law since it was originally enacted, so the present law is really the result of an evolutionary process which has occurred over the past eighteen years.

I am going to cover the provisions of Florida's Greenbelt Law in a very abbreviated form. We will just walk through the key words and phrases, and the numbers to which I refer correspond with the paragraph or sub-section numbers in the law.

1. Requires the County Property Appraiser to classify all lands within the county as either agricultural or non-agricultural.
2. Provides that any landowner denied agricultural assessment may appeal to the property appraisal adjustment board.
- 3a. Requires the filing of an annual tax return to apply for agricultural assessment, and requires the landowner to show that the lands are actually used for a bona fide agricultural purpose.
- 3b. Defines bona fide agricultural purpose and lists seven factors which may be taken into consideration in determining whether or not a bona fide agricultural use exists.
- 4a. Provides for reclassification of lands to non-agricultural classes when these lands are no longer used for agricultural purposes.
- 4b. Allows the county commissioners to reclassify lands into non-agricultural classes when there is contiguous urban development and when continued agricultural use will act as a deterrent to the timely and orderly expansion of the community.
- 4c. Provides that sale of land for a purchase price which is three or more times the assessment rate shall create a presumption that such land is not used primarily for bona fide agricultural purposes. The landowner may rebut this presumption and retain his agricultural assessment by demonstrating that the land will remain in agricultural use.

Parenthetically, a recent court ruling has held that agricultural use alone is not sufficient to bring the land within the "good faith commercial use" definition. In the case at point, the court ruled that the purchase price paid, the difference between income from agricultural enterprises and the expense to continue to own the land, and the announced purpose of the owner to hold the land for resale as an investment, properly resulted in a denial of agricultural assessment by the County Property Appraiser. (First National Bank of Hollywood V. William Markham, Case No. 76-320, District Court of Appeals of Florida, Fourth District, February 11, 1977.)

5. Defines agricultural uses.

- 6a. Provides that the assessment of agricultural land shall be based solely on its agricultural use. Seven use factors are listed for consideration in determining value.
- 6b. Provides that in years in which proper application for agricultural assessment has not been made, the land shall be assessed under the provisions of S. 193.011 (at full, just value).

Now, with the general provisions of the law in mind, let's look at its application to timberlands.

In Florida, the State Department of Revenue has the responsibility for promulgating standard measures of value and preparing a manual of instructions for use in the classification and assessment of all property. The Woodlands Section of the Agricultural Guidelines is a part of this manual. It provides for the assessment of timberlands in the following manner.

- 1. The basic formula for determining the value of each timber class is:

$$\text{Value} = \frac{(\text{Yield} \times \text{Price}) - \text{Costs}}{\text{Capitalization Rate}}$$

In this formula the average annual growth P O T E N T I A L, not actual yield, is the basis for determination of value.

- 2. Yield, or growth potential, is determined primarily by site index.
- 3. Five standard site index classes are used and yields for each class have been predetermined and recorded in a table of Integrated Yield Data. The yields range from 0.55 cords/acre/year for Site Indexes 50-59 (50-year basis) to 1.98 cords/acre/year for Site Index 90 and above in plantations.
- 4. The stumpage price for each county is determined jointly by the County Property Appraiser and the Department of Revenue.

A simple five-year moving average is applied to smooth-out the fluctuations which occur from year to year.

5. Management expense (cost) information is collected by the Florida Division of Forestry and supplied to the Department of Revenue. The Department of Revenue determines the cost allowance to be used and furnishes this figure to the County Property Appraiser. Ad valorem taxes are not included in annual management costs because they are a component of the capitalization rate.
6. The capitalization rate is determined under guidelines furnished by the Department of Revenue to the County Property Appraiser. The summation method is recommended. This method involves determination of a safe rate, a risk rate, an illiquidity rate, and a management rate, and combining these rates to obtain the basic capitalization rate. To this figure the county tax millage for the previous year is added, converted to percent, to obtain the capitalization rate to be used in the current year.
7. Value tables are prepared by calculating values for each timberland classification. Pine values are determined by applying the basic formula for calculating value. A non-pine value table is also prepared, based on growth potential, local prices, costs and market information, except for non-productive lands which are valued according to their contribution to the surrounding woodlands. The non-pine value table gives values for hardwood, swamp, and non-productive land.
8. The assessment procedure, then, is designed to place primary emphasis on the income approach. Normally, the tax value for each parcel is determined by multiplying acres times value for each timber class and obtaining a sum of the products. Provision is made in the guidelines, however, for adjustments to be made for other factors where a variation from the norm is noted.

Up to this point we have looked at the law itself and the guidelines designed to implement the law. That tells, in theory at least, how timberland is assessed for ad valorem tax purposes in Florida.

Let's turn now to the application of the law, and along the way we'll talk about where we stand in regard to complete implementation of the guidelines which we have just discussed.

First, let's look at the assessment advantage enjoyed by owners of timberland or other agricultural land in Florida as compared to other property owners. The comparison cannot be made in a clear, well defined, and concise manner, but basically there are two considerations. First, property not subject to the greenbelt law is assessed at its full just value, taking into consideration its present cash value, the highest and best use to which the property can be expected to be put in the

immediate future, the present use of the property, and several other factors. Second, Florida law excludes growing crops from taxation, so that timber growth which accumulates on the land year after year is not taxed and re-taxed every year until maturity.

Comparatively, then, if timberland or other agricultural land is being used at its highest and best use, then there would be no difference in its value whether taxed under the general law or under the greenbelt law. The advantage would come into play only when there was a higher and better use available for the land in the immediate future, but, in a developing state like Florida, you can be sure that there would be many battles fought over the question of highest and best use. If, on the other hand, the value of growing crops was no longer excluded from taxation and the cumulative value of timber standing on the land was taxed in addition to the land, at current tax rates, the results would be disastrous. One could easily visualize that taxes paid over the life of a stand of planted pine could amount to one-third of the gross income produced when the timber was harvested.

So, I believe that Florida's Greenbelt Law does make it possible to devote lands to timber and agricultural uses in Florida, but rather than giving a distinct advantage, it attempts to give a "fair shake" to owners of land devoted to "bona fide agricultural use", including timber.

Second, let's look at where we stand with regard to implementation of the new guidelines which were adopted just one year ago. These guidelines differ from the old guidelines primarily in that they establish standard timberland classifications for use by all county property appraisers throughout the State. The basic method for determining value remains unchanged, and assessed values probably will not change very much as a direct result of the new guidelines. Timberland values are changing, of course, as stumpage prices and management costs change, and it is my guess that the new guidelines will be implemented over the next two or three years as values presently in use become outdated and require revision.

Most appraisers now use four or five timberland classes and I would anticipate that they will try to fit these classes into the new standard classification system with a minimum of re-mapping and reclassification. To completely re-map and reclassify would be an enormous task requiring very large budgets, and it would have to be accomplished in many cases by hastily trained personnel. I sincerely hope that this does not occur.

You may be wondering why standardization is so important. I can't give you a full explanation, but, basically, it involves the distribution of State funds to the counties for school purposes. A minimum local tax effort is required to share in the distribution of these funds, and, to insure fairness, a standard system of assessment of all property in the State is now required by law. The standard classifications of the new woodlands tax guidelines are the result of this requirement. It is significant, I believe, to note that implementation of the new guidelines will not necessarily result in a fairer tax base for any one county. It will simply standardize the procedure used in all counties.

As I close my remarks, I would like now to draw some conclusions about Florida's Greenbelt Law.

First, it has been good for forestry and I believe it has been good for Florida. It might even be said that the continued existence of the Greenbelt Law is the key to survival of forestry in Florida. Many areas of Florida have experienced rapid growth and development over the past twenty-five or thirty years. In these areas land prices have sky-rocketed and this influence has "spilled over" into the less developed rural areas of the State. There seems to be an element of speculation in most relatively small land transactions today. Consequently, if all timberlands were taxed at their "probable sale value" there would be no way for landowners to pay their tax bill from income produced by their property. Forestry and agriculture are major contributors to the economy of the State, however, and it does not make sense to tax them out of existence. 16.2 million acres or 46 percent of Florida's total land area is classified as commercial forest land. The forest products industry is frequently referred to as the second largest contributor to Florida's economy. Only tourism makes a larger contribution. In 1974, stumpage sales amounted to 75 million dollars and the wholesale manufactured value of forest products was almost one billion dollars.

Second, it is altogether fair and right that special agricultural tax assessments be limited to those landowners who actively manage their lands for an agricultural purpose. The "bona fide agricultural purpose" clause is absolutely essential in a developing state like Florida if we are to retain the integrity of purpose behind the law. This clause may not preclude the possibility that a landowner will use agricultural assessments to reduce the cost of holding large tracts of land for future development, but it does require that land held in this manner be managed productively.

Third, the Florida law provides a desired incentive for good management of timberlands receiving special agricultural assessment. These assessments are based on the potential of the land to produce income rather than its actual productivity. Consequently, poor management is not rewarded by reduced taxes. Special tax assessments are justified only when a larger public purpose is served and when attractive economic returns are not otherwise available. The production of timber as raw material for a host of products which have become essential in meeting the every day needs of people, and the additional functions of providing recreation opportunities, clean air, and clean water constitute this larger purpose; and long investment periods, high risks, and uncertain markets reduce the attractiveness of timber investments to private landowners. So, I believe that the tax rates provided by Florida's Greenbelt Law are not only justified but that they provide a valuable public service in keeping Florida's timberlands productive.

I believe the Florida Greenbelt Law is right for its time and is right for Florida. It is serving our state well.

## The New York Experience

John W. Stock\*

There are two problem areas in which everyone has an interest. In each of these the average person has either a fund of misinformation or a lack of any knowledge whatsoever. These are the fields of ad valorem property taxation and the human reproductive process. I'll stick to the former.

New York State, with its 18 1/2 million population, is not normally considered a state where there should be substantial ad valorem problems on forest land. In fact, in the eyes of most people, New York shouldn't have any forest problems at all, because it is an urban state. This is part of the problem. The state is over 50 percent forested, with the percentage growing all the time as land is taken out of agriculture. There may be over a quarter of a million forest-landowners. I say may be, because I'm suspicious of statistics that do not include definitions. The average size may be 50 acres. Again the same difficulty. The fact that there are ownerships of over 100,000 acres and one of over 250,000, leads one to think that the median might be smaller. This ownership pattern adds to the problem.

This is open space and has always been a problem. First it was how to get rid of it, because it interfered with development and civilization, and, more recently, how to preserve it, because it helps to protect and preserve the very civilization it was removed to make possible.

I'd like to focus on the most concentrated, or if you prefer, the most unconcentrated open space in the northeast. The Adirondack Park. An area as large as Vermont or New Hampshire with only 25,000 families. Their open space is there to stay due to a constitutional amendment, various laws, and numerous rules and regulations. The open space may stay, but the people are in danger. A unique mixture of public and private land is in danger of being changed; and not in a manner that would benefit the system as a whole. The pressures for these changes are basically tax oriented.

The problem, in its simplest form, is similar to that in many states. Forest land, per se, is a poor investment, especially in the Adirondack Park. In a scattered pattern of assessing practices, the annual per acre tax load can go from a fraction to several times the value of the wood grown. In an area with about 25,000 resident families, there are over 95,000 identifiable separate land ownerships. Obviously,

---

\*Commissioner, Adirondack Park Agency, Tupper Lake, New York.

many of these owners are non-residents, and as is perfectly normal in rural areas, local government goes after the money where it is at. The local resident, who not so coincidentally is also the voter, is assessed at about 3 percent of full value. The industrial forest land, because foresters pay attention to this aspect of management, at about 12 percent, and the balance of the land at anywhere up to 200 percent of market value. This imbalance is of long standing because the non-resident owner of a small tract of so-so forest land is not going to get excited at paying taxes of \$20 an acre, because it's a lot less than he pays in suburbia. This extra-legal differential assessment worked for a long time but is changing.

In 1970 there were 33 owners of tracts of over 10,000 acres of forest land in the Adirondack Park. Now, less than ten years later, 20 percent of these tracts are gone. I fully expect, in my lifetime, to see most of the rest disappear, as far as being productive properties go. For economic reasons, basically, the reluctance of the legislature to come to grips with the problems of taxing open space (sic).

A current example: In the Wall Street Journal of January 13, 1977, the vice-president of finance for Rockwell International was quoted as saying, "Our divisions are doing a fine job in selling off . . . non-productive assets. High on the list for review are (New York) timberlands which we purchased some years ago." I spent some time tracking down the facts behind this story and it shows the inexorable pressure of economic factors, particularly real property taxes.

Of their total ownership of some 75,000 acres, 7,000 are in one small town that I am very familiar with. Rockwell has owned and operated this land for thirty years and is familiar with its characteristics and potentials. Their current tax bill is \$1.12 an acre, a sum that seems of little importance to the average person. Rockwell commissioned a firm of consulting foresters to do a cruise of the property to see if their findings confirmed Rockwell's in-house studies; namely, that they could not afford to own forest land in New York. The results showed that the average acre contained a little over 1,100 board feet of saw timber. A figure probably below the Adirondack average, but the land had just gone through a heavy harvest and was suffering from the ravages of the "Beech disease." Growth studies show a growth rate of 2.7 percent, well within the figures of other studies. These figures meant that on an average acre of Rockwell's land, using a generous \$50 per thousand stumpage, there are \$56.60 worth of timber. In the coming fifteen years, until the end of the next cutting cycle, the timber volume will have increased to 1,689 board feet, and assuming the same stumpage value, would be worth \$84.45. This means that fifteen years of growth have produced \$27.85 worth of timber. At an annual tax of \$1.12 per acre, in fifteen years the company has paid to the town and school district, \$26.07 in taxes, leaving a gross profit of \$1.78. But there is another source of income. The recreational rights on the land are leased for \$1 per acre per year. Over the fifteen-year cycle this would bring in \$23.28, making the profit \$25.06 per acre. A more

encouraging looking proposition. But is it really? The full market value of the land, according to the state, is \$50 an acre. If the company had put this \$50 into a safe investment paying 6 percent, they would have realized \$119.65 over the same time span, a profit of \$69.85. This is a discouraging fiscal picture for any corporation, and they had about decided to look for a purchaser when another important event took place.

The town fathers, in their infinite wisdom, decided it was time for a complete reappraisal. Their consultants decided that the highest and best use for the land was development and the land was worth \$85 an acre, full market value; in spite of the rather stringent development restrictions of the Adirondack Park Agency. This assessment would require an annual tax payment of \$1.75 an acre. This did not improve the picture. The growth, not being dependent on town boards or appraisers, remains the same, as does the recreational income. The 15-year tax bill would jump to \$40.74, so the profit over the 15-year cycle would have dropped to \$10.39. But at the new \$85 figure the safe investment income would have jumped to \$203.75 for a profit of \$118.75.

This is all Rockwell needed to finalize its decision that it could not afford to own forest land in New York state. The land, in its entirety, is in several towns and supports a stable employment of about 75 men. Another forest industry, with the same employment base, is not apt to purchase the land, for obvious reasons. Tax-exempt ownership does not support much of an employment base.

This is not a problem for the future, it is here now. And the pattern is being repeated.

What happened to the New York law that was supposed to make it possible for people and industry to own forest land profitably? Where had it failed?

The basic law went back over fifty years. Back when in New York, as in other states, forestry was planting trees. Arbor day was a school holiday and everyone went out and planted trees. No one did much planning as far as what and where to plant. Planting in itself was the solution to the nations forest problems. No one thought much about the future or what might happen as far as the tax picture went.

New York Real Property Tax Law says that the local assessor shall value the timber on each parcel annually to determine the fair share of taxes that the owner should pay. In theory, this tax would increase as the trees grew. Clarence Fisher, a state legislator from the edge of the Park, began to get worried about this concept. This system would keep people from planting trees. Planting trees was, by definition, good. So, being a legislator, he legislated.

He introduced a bill that said, in appropriate legalese, that a man having a plantation that fits certain requirements could have his

assessment frozen until he harvested the same. At which time he would pay a severance tax. This frozen assessment could never be raised. The law, as a plantation protecting device, wasn't all that bad; but Mr. Fisher's colleagues in the Assembly changed the whole concept. They made almost any land in the state eligible for coverage under the act, which ironically was named after its originator. Officially it was Section 480 of the Real Property Tax Law, but it was always referred to as the Fisher Act. During his lifetime, Mr. Fisher refused to have any of his land covered under the law named after him.

For a quarter of a century the law stayed on the books, survived a couple of feeble court challenges and was only used by a couple of owners. The tax load on open space was not very great. In the early 60s the picture changed. The industrial foresters, especially in the Adirondacks, began putting their lands under the Act. Outside the Park, many smaller landowners were finding out that this was a very desirable tax shelter to sit in and wait for the inevitable developers. Most of the larger landowners, interested in forest management, used the law to protect themselves against inordinate raises. There was only an inappreciable tax shift.

Then, in 1971, a town had a complete reassessment. This was the first time since the passage of 480 in the 20s that a town with land classified under the so-called Fisher Act had been completely revalued. The assessments on all the parcels of land in the town were raised from four to ten times. But the forest land, by law, could not be touched. Mr. Fisher had not thought about reassessment. The taxes on the forest lands dropped to one-eighth of their former level. In an area with the lowest per capita income and the highest unemployment in the state, the local taxpayers were paying the taxes of the large corporate landowners.

In 1973 the legislature started to patch up the legislation. And as usually happens when you try to fix poor laws, the results were worse. Lands supposedly enjoying a partial tax exemption began to pay a higher tax than neighboring, unmanaged lands, plus a 6 percent severance tax.

In 1975, responding to the problem, an ad hoc committee was formed by the State Forest Practice Board to rewrite 480. Headed by a past president of the Board, it included a representative from the State Forestry College, State Agriculture College, Conservation Department, and the Adirondack Park Agency. This latter group, a branch of the Executive Department, has complete land-use control over all private land in a forested area the size of Vermont.

They wrote a new bill, which, in their judgement, removed the tax shelters from the old bill and mandated better forest management. It did the following: (1) Required a management plan made by a professional forester. (2) Land to be valued at \$40 an acre or 20 percent of the full market value of similar vacant land, whichever was greater. (3) An initial ten-year sign-up period with an additional one year extension

annually. (4) Severe roll-back penalties for land use change. (5) Logical distribution of severance tax monies. (6) Land use could be changed in ten years without penalty.

The Committee thought this bill would solve the problems caused by 480, but enable sincere forest land managers to continue to own and operate their lands economically.

The same thing happened to the Committee's legislation that happened to Fisher's. The Legislature, in a classic over-reaction to the fear that the bill would allow "Middle East oil money" to buy up the Catskills, came up with a bill that no one in their right mind would use.

The bill, called 480A, had little discernable professional forestry input. It would require that the landowner surrender his management decisions to the State. The penalty for land-use conversion at any time could be confiscatory. Solutions of several seemingly contradictory provisions are dependent upon so-far undisclosed rules and regulations of the State. Nothing has been done about the tax shift in towns that are over 90 percent forested.

The basic problem is really that the problem is unrecognized. We are looking at attempts to do land-use control by other means. Possibly, it is because it is the only way that land-use controls can be sold to large numbers of the American people.

The Agricultural District approach, a back-door land-use control applied to large farming areas, is too new to evaluate. Few, if any, of the farms in the districts have gone after the possible tax benefits of being in the district. The other taxpayers, who will have to pick up the costs of the open space, have not been heard from.

The solution is to tie tax exemptions in with land use controls. If it is in the best interest of the system, at whatever level -- state, regional, or national -- to maintain certain designated areas in open space, be it for agriculture or forestry, then it behoves the beneficiaries to pay for it. Open space requires little service from government; its payments must be based not only on its ability to pay, but also on its needs.

This approach has already been started in New York; unsuccessfully. In the Adirondack Park there is total land-use control. Speculation on undeveloped forest land is extremely difficult, if not impossible. Yet, this land is valued as if it were uncontrolled. Pending legislation envisions the landowner paying taxes on the forest productivity value of the land because this is what he still has. The taxes that would have been generated by the developmental value of the land are to be paid by the State in recognition that the cost of open space for everyone should be paid for by everyone. This approach would have an annual per capita cost of something under 75¢. Now the taxpayers are getting it free. But we'll keep working on it. If we don't in New York State we soon get to the owner of last resort: the state or some tax-exempt owner (sic).

In my opening statement I mentioned that the average person knew little about the ad valorem taxing process. I'd like to add to this the belief that the only group (sic) that knows less than the average landowner is the average legislator; at least this is what their actions indicate.

## Factors Affecting Forest Yield Tax Impacts

W. David Klemperer\*

With three major timber states, Washington, California and Oregon having recently adopted forest yield taxes, one might wonder, is this the forest tax wave of the future?

As with any tax policy, your views will depend on your vantage point -- which is why I originally titled this talk, "Yield Taxes -- Where You Stand Depends on Where You Sit." Some of my colleagues found that a bit obscure, so I opted for a more formal title. The key point, and the theme of this paper, is that the impact of any given yield tax rate upon landowners and local governments will depend on several factors which vary among regions and ownerships. What seems like a suitable yield tax solution in one situation may have unintended effects when applied elsewhere.

Yield taxes are paid as a percentage of harvest value ("stumpage value") at the time of cutting. Since such a tax is generally in lieu of ad valorem taxes, usually no additional tax is paid on standing timber in the years before harvest. Typically, yield taxes are accompanied by the prevailing property tax rate on forest land or by some reduced land tax. (See Klemperer, 1975a, for a general discussion of yield taxes.)

### Tax Shifting

Analyses in this paper assume that forest taxes will be shifted primarily into lower forest values rather than into higher stumpage prices. Since forest products are sold competitively in national and international markets, it is unlikely that a significant part of local taxes could be passed on into higher wood products prices. Such price-increases would cause buyers to shop elsewhere. Under these conditions one would expect that bid prices for forest properties would be lower with taxes than without (Klemperer, 1977).

An increase in yield taxes should therefore decrease the bid price for bare forest land. However, bid prices for newly reforested timber (exclusive of land) should be unaffected by the tax, since such values depend on reforestation costs which would be independent of harvest taxes. As timber approaches harvest age, its investment value (or bid price) becomes the present value of future net harvest income, which can be reduced by yield taxes. Therefore, higher yield taxes

---

\*Associate Professor of Forest Economics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

will depress investment values of immature timber by a greater amount as one approaches harvest age. Note that this "investment value" of immature timber is not the stumpage value for immediate harvesting purposes. The latter is log price less logging costs and should not be affected by yield taxes as long as the tax is paid by the landowner. However, if the logger pays the yield tax, under competitive conditions he will reduce his bid price for stumpage since he cannot pass the tax forward. In that case, the yield tax could depress stumpage prices.

### Impacts on Local Government

Local government officials are often concerned that variations in timber harvest levels and values could cause instability of yield tax revenue-flows. This is why yield tax laws often contain revenue smoothing provisions. Reserve funds are sometimes suggested to provide added revenue during years of low harvest value. Partial smoothing of yield tax revenues can also be achieved by distributing tax revenues based on a rolling average of prior-years harvest values or based on the relative productive potential of forest lands in each district.

When changing from an ad valorem timber tax to a yield tax, where timber tax revenues are significant, initial yield tax revenues are usually distributed to districts in the same proportions as under the prior system. Sudden shifts in tax allocations between districts can be avoided by gradually phasing in to a new distribution system.

There is no doubt that even with revenue smoothing provisions, yield tax revenue collection patterns will ultimately differ from those which existed under a prior forest property tax. However, it must be kept in mind that under an ad valorem tax, relative timber tax distributions also change over time. Property tax revenues may dwindle in districts where mature timber is being depleted, and collections may rise in areas with a tax base of rapidly growing young timber.

If we take a long-term view, there may ultimately be little concern about the statewide pattern of timber tax flows from a school finance standpoint. In some quarters, there is a growing sentiment that all children should have equal educational opportunities, regardless of tax revenue-raising capabilities of the district where they live. Such a philosophy put into action would lead to an increasing reliance on statewide property taxes for schools at the same rate in all districts. It would likewise mean that a significant proportion of all yield tax revenues would flow to a state school fund, to be redistributed according to an equalizing formula. From a school finance standpoint, the question of yield tax revenue patterns would then become irrelevant. This illustrates that in the future, in some areas, the concern about yield tax instability may be minor.

### The Non-harvester

Obviously, one who holds timber for aesthetic and recreational reasons and never harvests, will avoid all yield taxes. Local governments could prevent such revenue loss by levying the yield tax upon potential harvest value of uncut timber at a specified timber age, after which remaining timber could become subject to some form of ad valorem tax. Such an approach, however, is not without administrative and recordkeeping problems.

To date, the yield tax has not been in widespread use over a sufficient period to determine whether non-harvesters represent a tax problem. In the long run, this potential tax avoidance may never materialize. It is true that surveys taken at only one point in time often indicate that 50 percent or more of non-industrial forest owners do not ever plan to harvest timber. However, studies continuing over several years suggest that changing intentions and ownership result in the eventual harvest of most private timber except for small recreational tracts (Turner, *et al.* 1977, Nelson and Stone 1973, Duerr 1976). The latter type of forest is therefore not well suited for yield tax treatment.

Paradoxically, harvest delays may eventually lead to a larger yield tax payments. Generally, the economically optimal rotation is shorter than that which maximizes long run timber output. Therefore, temporary harvest-delays will extend rotations and possibly increase long run timber output and yield tax revenues.

### Harvest Schedules

When replacing an ad valorem timber tax with a yield tax, one of the more obvious factors affecting the tax impact is the landowner's distribution of timber age classes and his harvest plans. With most U.S. yield tax rates in the 6 percent to 12 percent range, the yield tax due on timber soon to be harvested can far exceed ad valorem taxes which would have been due under the prior tax.

However, owners of young timber will often find that the yield tax due many years in the future will be less than the annual timber taxes plus interest would have been under the prior ad valorem system.

Depending on the yield tax rate which replaces an ad valorem tax, some owners with many ages of timber could find that tax-increases on older timber would roughly equal tax-decreases on younger stands. On such ownerships, if timber harvests are sustained on a fairly even flow, annual yield taxes on the property would equal the prior annual ad valorem tax. However, this does not necessarily mean that impacts of the two taxes would be the same for such owners. Even if annual yield taxes on a sustained yield ownership were to equal prior ad valorem taxes, the present value of future yield taxes would tend to be less on additional investments such as timber stand improvement or new re-forestation projects.<sup>1</sup> This occurs because the yield tax is levied in a manner which maximizes the time span between investment and tax payment.

The above principle also applies to forest regions with roughly equal annual harvests and where the distribution of timber ages is becoming fairly uniform, even if individual ownerships are not on annual sustained yield. For the same reasons stated above, the farther we postpone taxes toward harvest date, the less discouraging they tend to become to reforestation investment, for any given level of annual regional taxes raised. (See Klemperer 1975 and Klemperer 1976 for a more detailed treatment of this topic.)

Some might ask, "of what relevance are tax impacts on reforestation in states where laws require reforestation anyway?" Most reforestation laws require stocking levels lower than that which would be economically optimal on average sites. Thus, a tax can affect the extent to which an owner will go beyond the minimum reforestation required. Also, reforestation laws generally allow changes in land use -- changes which could be induced by taxes.

### Length of Payoff Period

Length of payoff period is probably the most important factor affecting the impact of any given yield tax rate. For crops (or investments in general) with short payoff periods, a large part of the taxable yield is the original investment cost. In such cases, a yield tax can easily eliminate most or all of the net earnings on capital. However, the yield tax impact on longer payoff periods is much less severe, other things being equal.

For example, consider an investment of \$100 yielding \$110 in one year -- a 10 percent pre-tax rate of return. After a 10 percent yield tax on the \$110 gross yield, net returns are \$99 -- a negative after-tax rate of return. However, the same \$100 investment earning 10 percent over a 30 year period would yield a gross of \$1,745, or \$1,571 after a 10 percent yield tax. Here, the after tax rate of return is about 9.6 percent.

The shorter the payoff period, the greater will be the portion of taxable yield represented by the original investment cost, and hence, the more burdensome any given yield tax rate becomes. This is illustrated in Table 1, using single-input single-output cases, where rates of return are computed after a 10 percent yield tax, given selected pre-tax rates of return and payoff periods. Note how the same yield tax rate causes sharp reductions in rates of return at shorter payoff periods, while the tax impact becomes increasingly more gentle as payoff periods lengthen.

This analysis suggests that a yield tax rate, which is in some sense "fair" for timber crops with relatively long rotations, can be significantly biased against short-rotation tree crops. For this reason it would be unfair to levy the long-rotation timber yield tax rate against enterprises such as nurseries, Christmas tree farms, and certain tree species when grown as short-rotation fiber crops (e.g., sycamore and poplars).

Table 1. After-Tax Rates of Return\*  
Under a 10% Yield Tax

(Single investment, single  
 payoff n years later)

	n \ p	Pre-Tax Rate of Return			
		6%	10%	14%	18%
Payoff Period	1	-4.60	-1.00	2.60	6.2
	5	3.79	7.71	11.62	15.54
	10	4.89	8.85	12.81	16.76
	20	5.44	9.42	13.40	17.38
	30	5.63	9.61	13.60	17.59
	40	5.72	9.71	13.70	17.69
	50	5.78	9.77	13.76	17.75
	60	5.81	9.81	13.80	17.79
	70	5.84	9.83	13.83	17.82

\*If I = original investment, p = pre-tax rate of return, n = payoff period, y = yield tax rate, and a = after-tax rate of return,

$$\frac{I(1+p)^n(1-y)}{I} = (1+a)^n \text{ and } a = \left( \sqrt[n]{(1+p)^n(1-y)} \right) - 1$$

Timber Stand Improvement. Directly related to the payoff period analysis is the question of yield tax impacts upon timber stand improvement (T.S.I.). Any effective T.S.I. investment increases future harvest yields. Where the payoff period is fairly long, as with brush control or most precommercial thinning, a yield tax will not be much more burdensome on T.S.I. than on reforestation. But the yield tax can be biased against shorter term T.S.I. investment such as fertilization, where the payoff period may be as low as 5 years.

The extreme bias of the yield tax against payoff periods shorter than 5 years (as shown in Table 1) is not likely to occur in the case of T.S.I., since most such investments tend to have payoff periods exceeding 5 years. Note that the 10 percent yield tax in Table 1 tends to reduce pre-tax rates of return by about 2 percentage points for payoff periods of 5 to 10 years. This is higher than most yield tax rates in this country and is used only as an example. The above-mentioned reduction in rate of return would be similar to that caused by a 2 percent property tax on full market value.

While an ad valorem tax on forest land is an added burden when combined with the yield tax, it could generally be treated as a fixed cost from a T.S.I. standpoint, since assessors would not ordinarily isolate land value-changes due to particular T.S.I. investments.

### Effects of Inflation

It is often correctly pointed out that, for any given investment payoff period, a capital gains tax will reduce real rates of return by an increasing amount as inflation rises. However, a yield tax's impact upon real rates of return is unaffected by the inflation rate. This is illustrated in Table 2, using a \$100 investment which pays off \$110 in one year, given no inflation. The capital gains tax base is the payoff minus \$100, while the yield tax base is the full payoff. In row 1, at 0 percent inflation, a 30 percent capital gains tax is \$3. Setting the yield tax at this same level gives a 2.73 percent yield tax rate.

In rows 2 and 3 of Table 2, 10 percent and 20 percent annual inflation are applied, assuming the investment payoff shares in the general inflation rate. In that case, both capital gains and yield taxes increase in current dollars (columns 4 and 6). Deflating each tax to constant year 0 dollars (dividing by  $1 + f$ , where  $f$  is the inflation rate in decimals), the real capital gains tax still increases with the inflation rate (column 5), while the real yield tax remains unchanged, regardless of the inflation rate (column 7). This same demonstration holds for any pre-tax rate of return and payoff period.<sup>2</sup> Capital gains tax burdens increase with rising inflation because the original investment cost or "basis," deducted when computing taxable capital gains, becomes a decreasing portion of harvest value as inflation increases. As shown in footnote 2, when payoff periods are long, as in timber growing, the real capital gains tax burden is likely to become fairly insensitive to the inflation rate.

Table 2. Impacts of Inflation on Capital  
Gains Taxes and Yield Taxes

1 year payoff period; 10% pre-tax real rate of return

1	2	3	4	5	6	7
Inflation Rate %	Initial Investment	Payoff (current dollars)	30% Capital gains tax (current dollars)	30% Capital gains tax (constant dollars)	2.73% Yield tax (current dollars)	2.73% Yield Tax (constant dollars)
0	\$100	\$110	\$3.00	\$3.00	\$3.00	\$3.00
10	100	121	6.30	5.70	3.30	3.00
20	100	132	9.60	8.00	3.60	3.00

### Impacts on Theoretical Bid Price for Land

Following an analysis similar to that of Gaffney (1975), Appendix A isolates the influence of 3 parameters on the degree to which the yield tax will affect bid prices for forest land: 1) payoff period, 2) reforestation cost, and 3) pre-tax bid price for land (pre-tax site value). The measure of burden is the percent by which a given yield tax rate will reduce the pre-tax site value. The appendix shows that, given a constant ratio of planting cost to site value, the yield tax favors forest types with long optimal rotations. However, for any given rotation, the yield tax is biased against high ratios of planting cost to site value. Thus, compared to the land-use pattern under a no-tax situation (or under a neutral tax), the yield tax would tend to favor development of forest types with long payoff periods and relatively lower initial capital inputs.

Whether or not this potential yield tax bias might be significant depends on how close to one another the pre-tax land bid prices are which alternative types of forestry could generate. If these land bid prices are not widely dissimilar, a yield tax could tip the balance in favor of forest types with long payoff periods and low ratios of planting costs to site value. This would be a tax-induced misallocation of resources if such forest types did not generate the highest present values on a pre-tax basis. In other words, in the absence of positive or negative side effects, the yield tax could cause changes in land use which would reduce total social benefits. On the other hand, if, on a pre-tax basis, one forest type can generate the highest land bid price by a large margin, the yield tax or any other tax is unlikely to cause changes in forest types.

Whether or not a yield tax could cause land uses to change from non-forest to forest or vice-versa, would depend upon the yield tax rate in comparison to the type and level of tax on non-forest uses.

### Conclusions

Major factors affecting yield tax revenues to local governments are:

1. The pattern of harvest volume and value over time.
2. If harvests are temporarily delayed by certain owners, short-term yield tax revenues could be reduced, but long-term revenues might actually increase.

Factors influencing yield tax impacts upon forest owners' income and wealth include:

1. The degree of competitiveness in the wood products industry and the direction of tax shifting.

2. The owner's timber age class distribution and his harvest plans.
3. Length of forest investment payoff period.
4. The yield tax's impact on bid price for bare forest land will be an increasing function of the rotation length and re-forestation cost, and a decreasing function of pre-tax bid price for land.

The yield-tax-induced reduction in real forestry rates of return is independent of the general inflation rate.

### APPENDIX A

This appendix illustrates the effects that the following three parameters have on the degree to which a yield tax can reduce bid prices for land: 1) payoff period (rotation length), 2) reforestation cost, 3) pre-tax bid price for land. It is assumed that for any given forest type, rotation and reforestation cost are at economically optimal levels, such that the bid price for land is maximized. The analysis examines the degree to which a yield tax can affect the bid price which different forest types can generate for land. It does not consider yield tax impacts upon economically optimal levels of various parameters within the same forest type.

Let  $C$  = reforestation cost per acre

$R$  = rotation length

$i$  = interest rate (in decimals)

$t$  = yield tax rate (in decimals)

$L_b$  = before-tax bid price for land (per acre).

$$(1) \quad L_b = \frac{H - C}{(1 + i)^R - 1} - C = \frac{H - C(1 + i)^R}{(1 + i)^R - 1},$$

for the simple case here where  $\$H$  occurs every  $R$  years and  $\$C$  is spent now and every  $R$  years thereafter.

$L_a$  = bid price for land after yield tax (per acre), given that the tax is fully capitalized into lower land value.

$$(2) \quad L_a = \frac{H(1-t) - C(1+i)^R}{(1+i)^R - 1}$$

SB = site burden, or percentage tax-induced reduction in land value. Therefore,

$$(3) \quad SB = \frac{L_b - L_a}{L_b}$$

Solving (1) for H,

$$(4) \quad H = L_b((1+i)^R - 1) + C(1+i)^R$$

Substituting (2) into (3),

$$(5) \quad SB = \frac{L_b}{L_b} - \frac{H(1-t) - C(1+i)^R}{L_b((1+i)^R - 1)}$$

Substituting (4) into (5), and dividing numerator and denominator by  $L_b$ ,

$$(6) \quad SB = 1 - \frac{((1+i)^R - 1 + \frac{C}{L_b}(1+i)^R)(1-t) - \frac{C}{L_b}(1+i)^R}{(1+i)^R - 1}$$

$$(7) \quad SB = 1 - \frac{(1+i)^R - 1 + \frac{C}{L_b}(1+i)^R - t(1+i)^R + t - \frac{tC}{L_b}(1+i)^R - \frac{C}{L_b}(1+i)^R}{(1+i)^R - 1}$$

$$(8) \quad SB = 1 - \frac{[(1+i)^R - 1] - t[(1+i)^R - 1] - \frac{tC}{L_b}(1+i)^R}{(1+i)^R - 1}$$

$$(9) \quad SB = 1 - 1 + t + \frac{\frac{tC}{L_b}(1+i)^R}{(1+i)^R - 1}$$

$$(10) \quad SB = t + \frac{\frac{tC}{L_b}(1+i)^R}{(1+i)^R - 1}$$

Using a 6% real interest rate, Table A1 provides a sensitivity analysis of (10), showing the site burden (percentage reduction in bid price for land) caused by a 10% yield tax, given forest types with various rotation lengths and  $C/L_b$  ratios.

Note that with natural regeneration, where  $C = 0$ , the site burden of a yield tax is the same for short- or long-rotation forest types. However, for the more common case where  $C/L_b > 0$ , Table A1 shows that the site burden of a yield tax rises with increasing  $R$ . It is also shown that for any given  $R$ , site burden rises with increasing  $C/L_b$  ratios.

Thus, if two forest types with the same  $R$  but different  $C$ 's could generate the same pre-tax bid for a tract of bare land, after a yield tax, the forest type with the lowest  $C$  could generate the highest bid. Similarly if  $C$ 's were equal, the forest type with the longest  $R$  could generate the highest after-tax bid for land. The yield tax is biased in favor of forest types with long rotations and low reforestation costs.

Table A1. Site Burden\* of a 10% Yield Tax(Sensitivity analysis of formula 10 with  $i = .06$  and  $t = .10$ )

C/L <sub>b</sub>		Ratio of reforestation cost to pre-tax site value								
R		0	.1	.2	.4	.6	.8	1	2	3
Rotation Length	1	0.1	0.277	0.453	0.807	1.160	1.513	1.867	3.633	5.400
	3	0.1	0.162	0.225	0.349	0.474	0.599	0.724	1.347	1.971
	5	0.1	0.140	0.179	0.258	0.337	0.417	0.496	0.891	1.287
	10	0.1	0.123	0.145	0.191	0.236	0.281	0.326	0.553	0.779
	20	0.1	0.115	0.129	0.158	0.187	0.216	0.245	0.391	0.536
	30	0.1	0.112	0.124	0.148	0.173	0.197	0.221	0.342	0.463
	40	0.1	0.111	0.122	0.144	0.166	0.189	0.211	0.322	0.432
	50	0.1	0.111	0.121	0.142	0.163	0.185	0.206	0.311	0.417
	60	0.1	0.110	0.121	0.141	0.162	0.183	0.203	0.306	0.409
	70	0.1	0.110	0.120	0.141	0.161	0.181	0.202	0.303	0.405
	80	0.1	0.110	0.120	0.140	0.161	0.181	0.201	0.302	0.403

\*Percentage tax-induced reduction in pre-tax bid price for land.

## Footnotes

<sup>1</sup>This will no longer hold if the rate of timber price increase significantly exceeds the interest rate used in computing present values (see Klemperer, 1976).

<sup>2</sup>Let  $I$  = initial investment,  $i$  = real rate of return,  $f$  = inflation rate,  $n$  = payoff period,  $y$  = yield tax rate,  $g$  = capital gains tax rate.

$$\text{Yield tax in constant year 0 dollars} = \frac{yI(1+i)^n(1+f)^n}{(1+f)^n}$$

The inflation factors  $(1+f)^n$  cancel out, leaving the yield tax in constant dollars independent of the inflation rate.

$$\text{Capital gains tax in constant year 0 dollars} = \frac{g[I(1+i)^n(1+f)^n - I]}{(1+f)^n} = gI(1+i)^n - \frac{gI}{(1+f)^n}$$

As  $f$  rises, the negative component above decreases, and the tax increases. Note that as  $n$  approaches the length of most forestry rotations,  $I$  is small relative to final yield, and the constant dollar capital gains tax is rather insensitive to  $f$  (given at least moderate values for  $i$ ).

## Literature Cited

- Duerr, W. A. 1976. Land Ownership Changes Likely to Affect Timber Production. Proceedings of the Appalachian Section Meeting, Society of American Foresters. Asheville, N.C. pp. 23-26.
- Gaffney, M. 1975. Taxes on Yield, Property, Income, and Site: Effects on Forest Revenues and Management. Unpublished manuscript. 40 pp.
- Klemperer, W. D. 1975. Evaluating Forest Tax Alternatives for Oregon. A Study prepared for the Oregon Legislative Interim Committee on Revenue. January. Salem, OR. 244 pp.
- \_\_\_\_\_. 1975a. Forest Yield Taxes -- Pro and Con. Northern California Review of Business and Economics. Summer.
- \_\_\_\_\_. 1976. Impacts of Tax Alternatives on Forest Values and Investment. Land Economics. 52(2):135-157.
- \_\_\_\_\_. 1977. An Economic Analysis of the Case Against Ad Valorem Property Taxation in Forestry -- A Comment. National Tax Journal. December. 30(4):469.
- Nelson, T. C. and R. N. Stone. 1973. Supply and Forest Owners. In Timber! Problems/Prospects/Policies. Edited by W. A. Duerr. Iowa State University Press. Ames. pp. 63-77.
- Turner, B. J., J. C. Finley and N. P. Kingsley. 1977. How Reliable are Woodland Owners' Intentions? Journal of Forestry 75(8):498-499.

# The Washington Forest Tax Law Its Development and Implementation

Billy Dean Scott\*

Washington's Forest Tax Law of 1971 set up a dual system for taxing forest properties: an ad valorem tax levied annually on the value of the land when used only for timber production, and an excise tax or yield tax based on the value of the timber at the time of harvest.

The purpose of this paper, the first of companion papers on the Washington forest tax experience, is to examine background, to discuss the theoretical considerations, and to trace the development of the Washington forest tax system in its transition from an annual ad valorem tax on the combined timber and forestland values to the dual system currently employed.

## Background

Washington's timber sector accounts for a significant portion of the economic activity of the State. Of the 18 million acres of forest land in the State, approximately one-half is privately owned and subject to some form of taxation.

In 1976, Washington's forest industries accounted for:

- . Forest products valued at over \$2.5 billion;
- . 9.0 percent of the nation's roundwood;
- . 11.8 percent of the nation's softwood lumber (3.661 billion bd. ft.);
- . 10.3 percent of the nation's softwood plywood (1.894 billion sq. ft.);
- . 7.5 percent of the nation's pulpwood (5.574 million cords) and
- . 62.5 percent of the nation's softwood logs for export (1.974 billion bd. ft.).

Employment in lumber and wood products in 1976 was 50,900, while the paper and allied products sector accounted for 17,400. Thus, forest products manufacturing, including logging, accounted for 68,300 primary jobs. With log-export-supported jobs in transportation, the total is 75,500. Forest products industries, therefore, account for about one-fourth of all jobs in the state. (Direct, indirect, and induced).

The Forest Tax Law of 1971 recorded another step forward in the continuing search for a fair and equitable system for assessing and collecting taxes on timber and timberlands. From the time of the Broad

---

\*Chief Economist, State of Washington, Department of Natural Resources, Olympia, Washington.

Arrow of colonial times to the present, forests in this country have been taxed to one degree or another. During colonial days, the benefactor of the tax was the British navy. Now, forest taxes are levied at all levels of government to finance programs ranging from education to national defense. Historically, timber and timberlands in the State of Washington have been taxed as a part of the ad valorem property tax base. Many years after the turn of the century, the forest resource was still characterized by over-mature stands. Many timber owners, burdened with heavy financial obligations, sought to reduce those burdens by harvesting their timber as rapidly as possible. Quite often they then allowed the land to revert to public ownership as a result of tax delinquency.

Over the years, numerous arguments have been advanced to convince lawmakers and the public that timber and timberlands are different from other classes of property treated under the property tax laws. Such efforts have been rewarded in several instances in the State's history:

- . Reforestation Act of 1931,
- . A timber tax deferral law (1941) (RCW 84.32),
- . A law directing the publication of the "Appraisal Manual for Timber and Timber Land" (1951),
- . The Timber Valuation Act (1963),
- . The Open Spaces Tax Act of 1967, and
- . The Forest Tax Law of 1971.

During the 1920's, the public, through the efforts of early conservationists, became aware that forests were indeed renewable but not inexhaustible. During this period, lands were being cut-over and abandoned because no one was interested in paying taxes on land that apparently could not produce a marketable crop for a lifetime. The passage of the 14th amendment to the State's Constitution permitted the passage of the yield-tax legislation. The Reforestation Act was largely the result of efforts to keep forested properties on the tax roles. The purpose of that law is recorded in the Revised Code of Washington, Chapter 84.28:

"Public welfare demands that steps be taken to encourage reforestation and to protect and promote the growth of new forests on lands chiefly valuable for that purpose in order that they may be restored to the economic and industrial life of the State. To accomplish that end, it is necessary that a system of taxation and assessment be devised for such lands, which will encourage the growth of new and immature forests on lands chiefly valuable for that purpose, and which will enable the owners thereof to bear the burden of taxation on such lands over the period of years necessary to produce forests of commercial value. Therefore, the State of Washington, through its legislature, hereby exercising its police and sovereign power, declares and enacts that all logged-off or selectively harvested lands and all un-forested lands chiefly valuable for the production and growth of forests, and all lands growing immature forests of no

commercial value shall not be assessed or taxed at a rate which will discourage or hamper the growth of forests on such lands, but shall be assessed and taxed at such rate and in such manner that owners of such lands may be encouraged to reforest, protect and grow forests of commercial value on such lands."

The concerns pointed out in this law are often repeated:

- (1) Encourage, protect, and promote new forests
- (2) On lands chiefly valuable for that purpose
- (3) To bolster the economic and industrial life in the State
- (4) Maintain reasonable tax structure
- (5) Owners must be able to bear financial burdens during the long production periods required.

The State Forester was designated to implement the Reforestation Act of 1931. The administrative procedure chosen was permissive. Persons who desired to have their lands classified could do so upon meeting certain basic requirements concerning restocking.

The Act had a statutory land value which was the basis for property taxes and a yield tax on the timber value at the time of harvest. It excluded lands with mature timber.

The Act was not widely accepted because owners felt the severe penalties for declassifying lands clouded the title and they suspected future changes might affect them further. When the enrollment of lands under this Act was terminated, less than 6 percent of the timberland of the State had been classified (568,000 acres).

In 1941 the Legislature passed a law which permitted the owner of forested land to defer a portion of the taxes on the timber until the time of harvest. This law was not accepted by the timber land owners. There is no evidence that it was ever used. It was repealed in 1972. (RCW 84.32).

Since about 94 percent of the timber and timberland remained under the general property tax, and county assessors administering the system did not have expertise in timber and timberland appraisals, they asked the Washington State Tax Commission (forerunners of today's Department of Revenue) to assist them in the formulation of forest land values and timber values. This request ultimately resulted in the Appraisal Manual for Timber and Timberland. The first edition was published in 1952 with revisions appearing in 1956, 1963, and 1967.

A few years later, the Reappraisal Act of 1967, which required reassessment of all real property on a four-year cycle, prompted forest landowners and other concerned groups to call for legislative assistance to set up a study of impact on forest production.

Another resources-related tax law was passed by the legislature in 1967 -- The Open Spaces Tax Act which directed local taxing authorities

to assess lands on a current-use basis. It provided for a system of owner-requested admittance to the program with a roll-back penalty for withdrawals based on the difference between highest-and-best use and current use with appropriately selected interest rates on the tax differences. It was within this environment that the Forest Tax Study Committee, authorized in Senate Concurrent Resolution 30 in 1969, began its work to formulate Washington's present Forest Tax Law.

### Theoretical Considerations

Taxes are usually levied for one or more reasons which include:

- (1) Raise revenue for government programs; e.g., property tax, sales tax, income tax, business taxes.
- (2) Provide incentive to alter behavior patterns toward some more socially desirable norm; e.g., liquor taxes, tobacco taxes.

In the case of taxes designed solely for the purpose of generating revenue, the taxing authority will usually attempt to use some measure of impact on wealth or income to determine relative tax burden. After-tax income or wealth positions of the taxpayers should be relatively the same as their before-tax positions.

In analyzing a change in the forest tax structure, certain criteria must be met and certain correlating assumptions must be made. These criteria and assumptions describe the atmosphere in which the tax will be levied and administered and [in which] the revenues generated will be spent.

Assumptions should include:

- (1) The need for revenue money is a genuine need.
- (2) The recipient government is reasonably efficient in the operation of its programs.
- (3) The government unit will not use the tax as a vehicle for redistribution.
- (4) The government unit will not continually change the excise or yield tax rate to solve all its short-term financial problems.

Revenues from the taxes levied on forest properties and timber in Washington are distributed to taxing districts for use along with revenues from property taxes on other types of properties.

The taxpaying public demands that government programs be efficiently run.

When a legislative body enacts a forest tax law, it should strive to maintain or improve the specified measure of equity among all groups of taxpayers -- forest and non-forest.

The government unit will carefully select a tax rate which, in conjunction with regulations affecting the forest group, will permit the groups to make the long-term investment decisions required for the maintenance of a viable forest industry. Annual changes in the tax rate would be highly detrimental to a stable forest industry which is dependent on long-term investment decisions.

The legislative body must carefully select a tax system which will have little or no impact on the allocation of resources in production processes. Tax system change should not cause a change in the management intensity or rotation length.

Under the above assumptions, the legislative body must ensure that the system meets other criteria. It must:

- (1) Produce adequate revenue to fund programs.
- (2) Maintain a certainty that funds will be available when required.
- (3) Ensure that tax burden is equitably distributed.
- (4) Be simple to administer (and explain).
- (5) Comply with general public acceptability.

Timber and timberland may be taxed by any one of several methods and comply with the assumptions and other criteria above. However, changing from one system to another may create problems for either taxpayers or taxing districts, or both, depending largely upon the age distribution of the timber stands.

Markets for forest products are largely national and international. Local producers must not be placed in a position with a total tax burden disproportionate to the burdens borne by forest products firms in other producing regions.

The use of technology of forest production and technology of product conversion may both be heavily impacted by social and environmental constraints. Such constraints tend to reduce the value of factors composing tax bases and to create tax burden differentials between regions with different levels of regulation or constraint.

### Transition

Palo Alto Research Associates, Inc. (PARA), consultants, were retained to study the timber and forestland situation in the state. Antici-

pation of problems in making the transition from the property tax on timber to the more desirable yield tax on timber prompted the PARA consultants to recommend another course of action -- updating the existing tax system to achieve more uniform application.

Extensive public hearings were held to register the views of individuals and groups concerned about forestry related taxes. The consultants recommended that the state update the present system rather than adopt the system which would help encourage forest management most. The \$4 to \$8 million estimated cost of accomplishing the update convinced Forest Tax Committee members that a dual-based forest tax system similar to the Reforestation Act of 1931 would serve the State and its forestry community best.

During the course of the hearings, several important points continued to re-surface.

- . The system must operate uniformly on a state-wide basis.
- . Revenue must continue at a uniform level not less than the current level to each taxing district in the state.
- . The system must be a mandatory system.
- . A penalty must be charged for withdrawal of lands which are not considered to be highest and best use forestry.
- . There must be sufficient local records to keep track of possible land use changes.
- . Equal treatment of all land and property owners, especially between forest properties of all sizes.

### Revenue Distribution

Revenue distribution under the property tax laws is simple -- revenue generated in a taxing district is returned to that district. Revenue amounts are relatively constant until harvest. In contrast, the amount of yield tax revenue may fluctuate widely from year-to-year depending on age distribution of timber in the district, the objectives of local landowners and timber market activity.

To compensate for uncertainty in yield tax revenues, a distribution system was established which would allocate yield tax revenues based on the relative assessed value of timber on the tax rolls (timber factor system) when the transition began. Later, after several years of experience, the allocative mechanism would use the five-year moving average of harvest values (harvest factor system) in the districts to allocate the revenue. Reserve fund monies, derived from the surtax, were to guarantee that revenue levels were at least equal to amounts received before the yield tax began.

Over the ten-year period, the revenue distribution system will have gradually moved from the property tax system to the harvest factor system allowing time to make adjustments if required. During this time period, the integrity of the budgets and bonding capacities of taxing districts have not been compromised.

### Tax Bases

Sets of values for each of the two tax bases were required for the implementation of the forest tax system. Land values were to be computed for timber species and quality combinations. The same elements of value are present in each of the tax bases. Stumpage value is the residual remaining for payment to the producer of timber after all costs of production have been subtracted from the selling price of the products derived from the timber. Land values for the production of timber represent the capitalized value of the stumpage that a particular tract is capable of producing.

Values for the stumpage and land therefore are both dependent upon the species, quality, and quantity of timber that a specific tract might produce. Other factors contributing to the calculation of value are the accessibility and topographic characteristics of the property which impact the costs related to the harvesting and marketing of forest products. Cognizance of the impact of productivity factors, as well as other factors affecting costs of cultural operations, harvesting, and transportation, is made in determining both sets of related values.

The Department of Revenue was charged with the annual promulgation of both land and stumpage values. In order to accomplish this task, procedures were developed to conduct mass appraisals for each set of values -- stumpage or timber and land.

Mass appraisals were selected as the most economical method of supplying the required land value and stumpage value information to taxpayers and local governmental units. This method also ensures a greater degree of uniformity than would a system with each county determining its own values. Most counties did not and do not have personnel trained for this level of forest valuation work.

### Land

Forestland under this law is quite simply defined as "land in any contiguous ownership of 20 or more acres . . . devoted to and used for growing and harvesting timber and means land only." Tracts smaller than 20 acres do not generally provide the basis for an economic forestry operation. By comparison, the Reforestation Act of 1931 required a minimum tract size of 40 acres.

In studying land use patterns it was noted that some lands were considered to have a higher, more valuable use than producing timber crops.

Most of these lands had been assessed by local authorities at this higher value. To encourage forest production, the law permits taxation on the current use basis after the owner has followed the procedures to have the land placed in the "Designated" category. Lands with highest-and-best use of forestry were placed in the "Classified" category. In the original statute, there was no penalty for a land use change from classified lands, but a penalty was charged for a use change from designated lands. The penalty assessed was the equivalent of the difference between the tax levied on forest land and the tax on land in the new use multiplied by the number of years the property was taxed as forest land up to a maximum of ten years. The amount thus derived is the compensating tax. An amendment to the law now subjects classified lands to the same compensating tax for declassifying for a change in use.

Characteristics of forest productivity differ significantly east and west of the Cascade Mountain Range which divides the state. The most productive lands are located in Western Washington.

Since the value of forest land is dependent upon the present net value of expected income to be derived from the land, both revenues and costs of production related to topography, accessibility, and distance to market centers are required for the determination of value. In the mass appraisal system selected, physical units of measure were used to define the land quality classifications or grades. Three land quality classes are based on site index; four operability classes are based on accessibility and topography. The resulting land classification matrix gives twelve grades for land in Eastern Washington and twelve grades for land in Western Washington.

Land valuation was based upon market evidence as in other real property assessments in the State. The requirement for bare land values, however, made it necessary to remove the influence of values attributed to trees of various sizes, qualities and species in the timber and land sales data. Value determination methods based on forest rent and land expectation values were rejected as introducing uncertain assumptions related to future costs, prices, and interest rates. A simple method of abstracting the residual bare-land value was adopted.

Local assessors are responsible for the administration of property taxes on forest land. Land values are prepared for the assessors by the Department of Revenue. Applications for designation and appeals are handled by the assessors also.

### Timber

Timber values or stumpage values are expressed on a price per unit basis at the time and place of harvest. To comply with the requirements of the law for units with similar growth, harvesting, and marketing conditions, the Stumpage Value Areas (SVA) illustrated in Figure 1 were set up.

Each of the SVA's contains one or more manufacturing centers and the forested areas that normally furnish logs to those centers. Transportation zones were determined in relation to the manufacturing centers and to towable waters. Tree species, quality, and price relations were established. Then a series of studies were conducted to determine the magnitude of value adjustments required to account for differences in location, accessibility, topography, volume per acre, total volume per harvest location, and other elements affecting harvesting costs.

Approximately 90 percent of the timber harvested in the state does not move through formal market channels -- it is harvested and processed by its owner in integrated forest products facilities. For this reason, public timber sales were selected as the source for price and cost data for stumpage value calculations.

Where no public sale data were available, log market data were used after appropriate adjustments to reflect costs of log production and transportation.

The objective of the complex stumpage valuation computations was to produce sets of tabular values and adjustments to those values which would permit the calculation of appropriate stumpage values without an expensive appraisal of the timber on each individual tract.

Tables are constructed for old growth and young growth, final harvests and thinnings in Western Washington, and for partial cutting in Eastern Washington.

### Selection of Tax Rates

Tax rates may be selected to achieve the same degree of tax burden whether the tax is levied as an ad valorem property tax on land and timber, a yield tax on timber value at the time of harvest, or a productivity tax. Under the dual system, such as that used in Washington, the sum of the two components should not create a heavier burden than would the tax levied in any one of the systems alone.

To facilitate the work of the Legislature in the selection of the full excise tax rate on timber, calculations were made using several combinations of assumptions. [One criterion] of paramount concern, was that revenue generated by the system would be adequate. Expected inflation rates, changes in costs, changes in stumpage values, changes in land values and property tax rates, discount rates, and numerous other factors were considered.

Interim tax rates had been set at 1.3 percent and 2.9 percent during the transition period. To each of those figures was added [a] 0.5 percent surtax to be accumulated in a reserve account to ensure full support of budgets of the taxing districts during the transition. The interim rates and the transition tax bases did, in fact, provide the required revenue without distribution of funds from the reserve.

The Legislature set the full excise or yield tax rate at 6.5 percent after examining testimony supporting a wide range of possibilities, most of which were much higher than the rate selected. The statute also contained an expiration date which would require review and subsequent legislative action to keep the yield tax after December 31, 1978.

### Conclusion

There is a lesson to be learned from our collective experience in the State of Washington with timber and timberland taxation. Those of us who are concerned with the proper allocation of resources must help to generate and maintain an atmosphere where communication and action

may be directed toward providing government with a reasonably certain source of revenue to adequately finance efficiently run programs and activities. Such funds must be derived from taxes equitably levied in order to minimize distortion of production decisions.

## The Washington Yield Tax: A Successful Beginning

John B. Conklin\*

In effect, Washington's 1971 Forest Tax Law set up two complimentary systems for taxing forest properties: one system for taxing timber and another for taxing the land on which the trees grow. The law exempts privately owned standing timber from ad valorem taxation and imposes in its place an excise or yield tax on timber at the time of harvest. Forest land continues to be subject to annual ad valorem taxes, but the assessed value of forest land is based solely on the value of land for growing and harvesting timber without regard to other uses.

### The Timber Yield Tax

Beginning in 1972, the ad valorem tax on timber was gradually phased out over a three year period and replaced by the timber yield tax. As of the 1974 assessment year, private timber was no longer subject to ad valorem assessment. The timber yield tax is payable quarterly by the timber harvester, and is 6.5 percent of gross harvest value.

Administration of the yield tax is centralized in the State Department of Revenue. The Department publishes tables of stumpage values (see Figure 1) twice each year which the harvesters must use to determine the taxable value of each harvest unit. These stumpage value tables contain fair market values for timber of various species, quality classes, and harvest types, and take into account distance to market and logging conditions within each of ten market areas in the state (see Figure 2). The harvester may also apply certain standard adjustments to the table values to account for factors such as low volume per acre, small harvest units, and unusual logging conditions.

The Department of Revenue collects the yield tax and computes the distribution of tax revenue back to the counties and other local taxing districts. Two separate funds and formulas are used to distribute yield tax revenues. The first formula, which will eventually be phased out, distributes revenue according to the value of the standing timber inventory (timber roll) in each taxing district. In effect, this formula guarantees that each taxing district will receive an amount of revenue equal to what it would have received under the old ad valorem tax on timber. The second formula distributes revenue based on the value of the timber cut in each taxing district. The state also receives a share of yield tax revenue which is used along with revenue from other sources to support basic education in schools throughout the state.

---

\*Forest Tax Economist, Washington State Department of Revenue, Olympia, Washington.

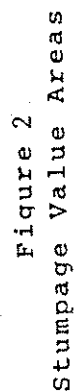
Figure 1  
Old Growth Stumpage Values  
Stumpage Value Area 4  
Western Washington  
1977

Species Name	Species Code	Timber Quality Code Number	Stumpage Values Per Thousand Board Feet Net Scribner Log Scale by Hauling Distance Zone Number				
			1	2	3	4	5
Douglas Fir	DF	1	\$241	\$238	\$235	\$232	\$229
		2	209	206	203	200	197
		3	170	167	164	161	158
		4	161	158	155	152	149
Western Hemlock <sup>1</sup>	WH	1	186	183	180	177	174
		2	145	142	139	136	133
		3	122	119	116	113	110
True Fir <sup>2</sup>	TF	1	186	183	180	177	174
		2	145	142	139	136	133
		3	122	119	116	113	110
Western Red Cedar	RC	1	176	173	170	167	164
		2	139	136	133	130	127
		3	103	100	97	94	91
Sitka Spruce	SS	1	102	99	96	93	90
		2	89	86	83	80	77
		3	74	71	68	65	62
Noble Fir	NF	1	217	214	211	208	205
		2	137	134	131	128	125
		3	105	102	99	96	93
Yellow Cedar	YC	1	300	297	294	291	288
		2	211	208	205	202	199
		3	179	176	173	170	167
Other Conifer	OC	1	102	99	96	93	90
		2	89	86	83	80	77
		3	74	71	68	65	62
Red Alder	RA	1	30	27	24	21	18
Cottonwood	BC	1	16	13	10	7	4
Other Hardwoods	OH	1	26	23	20	17	14
Hardwood Utility	HU	5	10	10	10	10	10
Conifer Special Cull or Utility	CU	5	15	15	15	15	15

<sup>1</sup> Includes Western and Mountain Hemlock.

<sup>2</sup> Includes Pacific Silver Fir, Grand Fir, and Alpine Fir.

## 147



The annual timber harvest from private land in Washington averages about 4.0 billion board feet per year, and produces about \$35 million in yield tax revenue.

### Tax on Forest Land

Privately owned forest land continues to be taxed under the ad valorem property tax, but the assessment on eligible land is based solely on the value of the land for growing and harvesting timber and considers the bare land value only.

To become eligible for the special assessment, the land must be classified by the county assessor as forest land or be designated by the assessor after application from the landowner. Each tract must be 20 acres or more in size to be eligible. Under certain circumstances, the owner of classified or designated land is liable for payment of a compensating tax for the number of years the land has been classified, up to a maximum of ten years if he changes the primary use of the land to something other than timber production.

Each tract of classified or designated land is graded by the county assessor according to its productivity and accessibility. There are three site classes and four accessibility classes for land east and west of the Cascade mountains. The law gives the Department of Revenue the responsibility for determining the "true and fair" value of each grade of forest land. These values are determined annually based on a study of forest land sales throughout the forested counties of the state (see Table 1). The Department's land values reflect the value of bare land exclusive of all tree growth or other improvements. The ad valorem tax is collected by the counties in the same manner as other property taxes, and it currently produces about \$4.5 million in property tax revenue which translates into an average tax per acre of about 71 cents.

### Accomplishments Under the Yield Tax

It has been five years since enactment of the yield tax in Washington. The general consensus among forest land owners, the forest industry, and the local governments which depend on the revenue, is that the yield tax is a significant improvement over the old property tax on timber. An important advantage of the yield tax is that it is uniformly administered throughout the state. Under the old property tax, tax rates and the quality of forest land appraisals varied greatly from county to county. Consequently, the tax burden could be minimal for land owners in one county but relatively high elsewhere. Under the yield tax system, all forest land and timber is subject to the same valuation standards regardless of location.

Another obvious result of the shift from the property tax to the yield tax is the dramatic increase in revenue. Figure 3 illustrates the

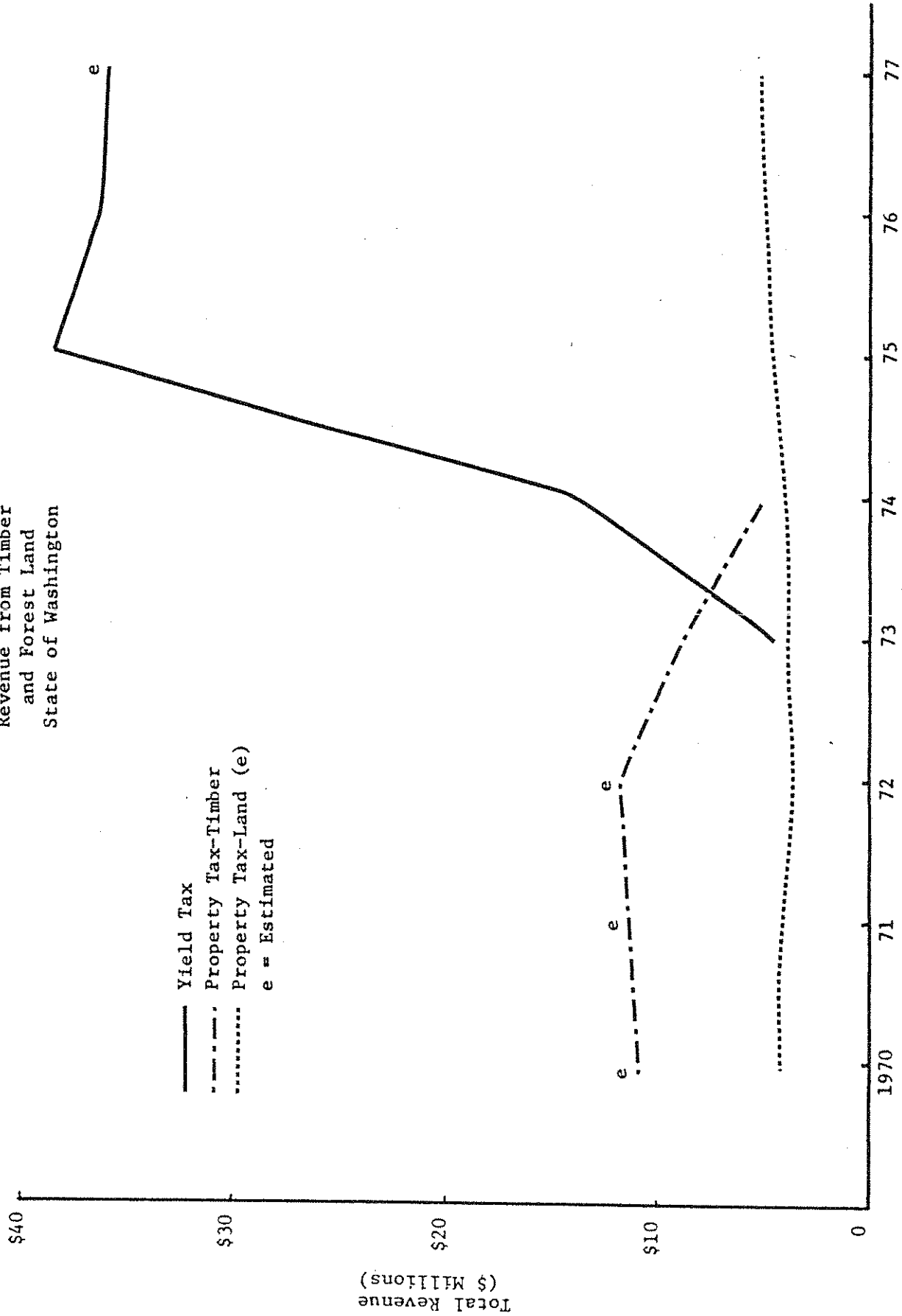
Table 1: 1977 Forest Land Values\*

(\$/Acre)

<u>Land Quality</u>	<u>Access/ Topography</u>	<u>Western Washington</u>	<u>Eastern Washington</u>
Good	Favorable	\$132/acre	\$50/acre
	Average	114	46
	Difficult	84	39
	Inoperable	5	1
Average	Favorable	94	30
	Average	82	27
	Difficult	58	24
	Inoperable	3	1
Poor	Favorable	52	14
	Average	45	12
	Difficult	32	10
	Inoperable	1	1

\*Values reflect the value of bare land excluding all tree growth and other improvements.

FIGURE 3  
Revenue from Timber  
and Forest Land  
State of Washington



tax revenue from forest land and timber both before and after the adoption of the yield tax. As shown, timber tax revenues have more than tripled since adoption of the yield tax. The dramatic increase in revenue is due to the combined effects of the increasing tax rate and the sharp increase in stumpage values which occurred in the 1973-74 period. It is possible that the property tax could have produced equivalent or greater revenue, but the cost to the counties of upgrading timber appraisals would have been prohibitively expensive.

Another important advantage of the yield tax is that it is more economical to administer. The Department of Revenue currently employs a staff of about 35 professional and clerical people to administer the forest tax at a cost in fiscal 1976 of about \$845,000. This amounts to about two percent of the revenue from timber and forest land. If the state had chosen to continue taxing forest property under the ad valorem system, but with accurate timber inventories and up-to-date appraisals, there is no question that the cost to the counties would have been far in excess of two percent of revenues.

What impact has the yield tax had on forest management in Washington? It may well be impossible to assess the impact of the yield tax on forest land use and forest management decisions due to the many other economic factors which mask the effects of a change in the tax system. However, it is evident that the tax has had a favorable impact on the attitudes of the people in the forest industry who determine how forest land is to be used and managed. In spite of occasional squabbles between the Department and the taxpayers over various details of valuation and tax reporting, it is clear that the forest industry continues to support the concept of a yield tax and the basic system which has been developed in Washington to implement it. It is probably safe to assume, therefore, that this positive attitude about the tax will in one way or another foster an improved environment for forest management. In addition, permanent relief from highest and best use assessments and the exemption of timber from the property tax allows many small landowners to cut their timber whenever market conditions are most favorable and their management objectives can be best satisfied. While it is doubtful that any tax system can accomplish anything in a positive sense for forestry, it is probable that the yield tax has fewer negative effects than the old property tax.

#### Problems in Implementing the Yield Tax

While the yield tax has proven to be an improvement over the property tax in terms of revenues produced, uniformity of administration, and reduced impact on forest management decisions, it is one of the most complex tax systems ever devised in the State of Washington. Conceptually the tax is simple, but the determination of stumpage and land values and the distribution of timber tax revenues are complex technical problems with important policy overtones.

DEPARTMENT OF REVENUE  
FOREST TAX DIVISION  
OLYMPIA WASHINGTON 98504

DATE	YEAR
------	------

PAGE OF

# FOREST EXCISE TAX RETURN DETAIL

ATTACH A SEPARATE DETAIL SHEET FOR EACH FOREST EXCISE TAX PERMIT NUMBER, SECTOR, AND MANAGEMENT UNIT. ADDITIONAL DETAIL SHEETS WILL BE PROVIDED UPON REQUEST.

1. LANDOWNER NAME			2. LANDOWNER NAME IF OTHER THAN HARVESTER			3. REGISTRATION NUMBER		
4. FOREST EXCISE TAX PERMIT NUMBER	SEC	TWP	RGE	SUB-DIV OR QTR SECTION	5. STUMPAGE VALUE AREA	6. HAULING DISTANCE ZONE	7. HARVEST UNIT NO	

HARVEST TYPE		HARVEST ADJUSTMENTS			
CHECK ONE HARVEST TYPE ONLY		ADJUSTMENT	ACTUAL VOLUME	ADJUSTMENT CLASS	ADJUSTMENT AMOUNT
<input type="checkbox"/>	OLD GROWTH FINAL HARVEST	HARVEST VOLUME PER ACRE			\$
<input type="checkbox"/>	YOUNG GROWTH FINAL HARVEST 40-69% REMOVED	LOGGING CONDITIONS			
<input type="checkbox"/>	YOUNG GROWTH FINAL HARVEST 70% OR MORE REMOVED	AVERAGE VOLUME PER LOG (THINNING ONLY)			
<input type="checkbox"/>	THINNING	SMALL HARVEST			
<input type="checkbox"/>	MERCHANTABLE SAWTIMBER, ALL AGES				
<input type="checkbox"/>	SPECIAL FOREST PRODUCTS				
		TOTAL ADJUSTMENT (ENTER IN LINE BELOW)			\$

HARVEST AGE GROUP						11. NUMBER OF ACRES LOGGED THIS QUARTER	13. LAND OWNERSHIP
CHECK AGE GROUP OF GREATEST VOLUME HARVESTED FOR APPLICABLE SPECIES						12. IS HARVESTING COMPLETED FOR HARVEST UNIT? <input type="checkbox"/> YES <input type="checkbox"/> NO	A <input type="checkbox"/> INDUSTRIAL B <input type="checkbox"/> LARGE LANDOWNER C <input type="checkbox"/> SMALL LANDOWNER
AGE IN YEARS							
0-49	50-99	100-159	160-199	200-249	SALVAGE		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

TAXABLE STUMPAGE VALUE CALCULATION							
A SPECIES CODE	B QUALITY CODE	C VOLUME HARVESTED *	D TAXABLE STUMPAGE PER UNIT VOLUME	E TOTAL ADJUSTMENT AMOUNT FROM 9	F ADJUSTED STUMPAGE PER UNIT VOLUME	G TAXABLE STUMPAGE VALUE	(DO NOT WRITE IN THIS COLUMN)
1			\$	\$	\$	\$	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13. TOTAL VOLUME HARVESTED		TOTAL TAXABLE STUMPAGE VALUE				\$	



# FOREST EXCISE TAX RETURN SUMMARY

SHOW CHANGE IN ADDRESS OR OWNER INFORMATION IN SPACE PROVIDED FOR CHANGE

DATE

## SUMMARY TOTAL FROM DETAIL SHEET(S)

DETAIL SHEET PAGE NO.	CHECK YES TO CLOSE FOREST TAX PERMIT *	FOREST TAX PERMIT #	CHECK YES TO CLOSE OUR APPEAL #	DATE OF APPEAL	CHECK YES TO CLOSE SECTION *	SECTION #	DATE OF SECTION	SECTION #	DATE OF SECTION	SECTION #	TOTAL TAXABLE STORAGE VALUE

SAMPLE

\*SEE REPEATING INSTRUCTIONS



SIGNATURE \_\_\_\_\_

PHONE \_\_\_\_\_

VOID PENALTIES RETURNED BY MAIL

DATE OF RETURN	_____
DATE OF SECTION	_____
DATE OF APPEAL	_____
DATE OF SECTION	_____
DATE OF APPEAL	_____
DATE OF SECTION	_____

property tax, or whether it is to some degree a state resource. Should yield tax revenue be distributed on the basis of harvest values so that the tax dollars are returned to the taxing district where they were produced, or should a more stable revenue flow based on forest land acreage or standing timber inventory values be our goal? The legislature has already changed the distribution system several times, and it is likely to make further revisions as we search for a distribution formula which will benefit the most and injure the least.

Although the ad valorem tax on bare land produces only one-seventh as much revenue as the yield tax, forest land valuations are of great interest to the taxpayer. Forest land valuation is almost as complex a problem as stumpage valuation, and it has received a disproportionate amount of attention and study. The constraints placed upon the Department by the law greatly complicate the land valuation problem. Market valuation is required, but there is a scarcity of forest land sales where the buyer's exclusive interest is in timber production. In addition, the assessed values must reflect the values of bare land exclusive of all mature and immature tree values. Consequently, the Department must employ various analytical techniques to segregate the bare land component from the total purchase price of the land sales. The Department's analytical methods are the key issue in a court case brought by several taxpayers challenging the Department's 1977 land values. Interestingly, while the taxpayer complaintants have argued that the land values are too high, one of the counties has entered the case against the Department, arguing that the values are too low. Recently, the Department has taken the position that as a practical matter it is unrealistic to attempt to determine market value of forest land apart from the trees. At best, market evidence can give us only an indirect estimate of bare land value. Consequently, the Department has recommended that the legislature adopt statutory values for forest land subject to periodic adjustment every three to five years. If the land values were fixed by law, the Department could devote more of its time and energy to making needed improvements in yield tax administration.

Several other issues could eventually evolve into changes in the yield tax system. The most immediate problem confronting the state legislature is the expiration of the tax on December 31, 1978. The legislature must decide whether to raise or lower the tax rate, and both equity and the revenue needs of state and local government will be important considerations. While considering the yield tax rate, the legislature will most likely examine nearly every aspect of the law and its administration. In addition to land and stumpage valuation, revenue distribution, and the tax reporting questions, the legislature may consider changes in the standards of eligibility for forest land designation if it is determined that the tax benefit is being abused by speculative interests. There is also the possibility that the yield tax may be extended to include state and federal timber harvest. Extension of the tax to public timber could increase total revenue by 25 percent or more, but it may have undesirable impacts on the forest industry and on existing federal revenue sharing programs.

### Conclusion

When the Washington legislature enacted the 1971 Forest Tax Law, it embraced an old concept in timber taxation and applied it on a larger scale than had ever before been attempted in this country. It represented a rather ambitious undertaking since no one in our state had any experience in administration of a mandatory, centrally administered yield tax. As might be expected, the Department and the taxpayers have struggled through several years of growing pains as we have tried to make the system work smoothly and fairly for everyone. The general consensus seems to be that in spite of numerous rough edges, the yield tax system is an improvement over the old property tax on timber. The time has arrived to make changes in the system -- through amendments to the law if necessary -- which will fine-tune the administration of the law and correct any inequities which still exist.

Our forest tax system has served as a model for other states to copy, and we hope that the model can be improved so that others may avoid some of the problems that any new system experiences.

## Prospective Economic and Land Use Impacts

### of California's Yield Tax System

William McKillop\*

The California yield tax system was instituted with the signing into law of the Forest Taxation Reform Act of 1976. Prior to initiation of the yield tax system, timber was taxed under a modified ad valorem property tax system as specified by Article 13 of the State Constitution. Under Article 13, residual timber or regrowth was exempt from taxation for a period of at least 40 years following a harvest cut in which at least 70 percent of the volume was removed. After 40 years, exempt timber could be placed on the tax roll by action of a Timber Maturity Board, but an owner could forestall this action by again removing at least 70 percent of the volume. Thus the ad valorem property tax on timber could be avoided on these tracts where growing conditions allowed the use of cutting cycles or rotations that were 40 years or less. Although the exemption provision had been originally passed (in 1926) as a means of promoting prudent forest management, by the nineteen seventies it was apparent that the system was distorting forest management practices in many instances. Furthermore, county governments were quick to point out that much of the State's timber assets were making no contribution to the local tax base. These were major reasons for the adoption of the yield tax system which came into operation on April 1, 1977.

California's system is patterned in large part after Washington's yield tax; but there are several significant differences between the two systems. One major feature of the California yield tax is that the 6-percent rate is applied to all timber harvested in the State whether from private or public land. Another major feature is the stringency with which land use is controlled. Each county is required to set up a Timberland Preserve Zone (TPZ) including all land which is currently assessed for growing timber as the highest and best use. A county may also include in its TPZ, land which is used for timber growing even though it was not assessed on this basis. Parcels in a TPZ are zoned for a "rolling" 10-year period. This period is automatically renewed each year unless rezoning is contemplated. If an owner wishes to have his land rezoned immediately (without waiting for the end of the 10-year period), and the county agrees, he must pay a heavy tax-recoupment fee.

Land in a TPZ is subject to the ad valorem property tax, but its appraisal is based on its bare-land value for "growing and harvesting timber and compatible uses." TPZ land values are prescribed in the Forest Taxation Reform Act for the 1977-79 period. Thereafter they will

---

\*Professor of Forest Economics, University of California, Berkeley.

be determined by transactions evidence for similarly restricted timberland. However, the Act requires that, for a given site class, the value may not, in essence, exceed the value of the mean annual increment per acre. With such a provision, TPZ appraised values will, undoubtedly, be substantially below market values for unrestricted timberland in the foreseeable future.

Several other aspects of California's yield tax system are of interest. However, the objective here is not to describe the system but rather to examine what impacts its adoption is likely to have on forestry and land use in the future. The system has been in operation for only a short time and, obviously, it is not easy to predict what these impacts will be. Nevertheless, it is worth examining a number of possible consequences including effects on forest land use and ownership; implication for timber output and investment in timber management; and impacts on governmental revenues.

### Land Use and Ownership

Yield tax legislation as originally drafted in committee did not contain the stringent land use restrictions that appeared in the final Act. Efforts to pass comprehensive land use legislation for the state as a whole had not been successful, but concern for the preservation of open space and the future productivity of the state's natural resources carried over into final drafts of the yield tax bill. California has approximately 8 million acres of private commercial forest land, but by the latter part of the nineteen sixties increasing withdrawals for non-timber purposes, especially vacation home developments, were becoming a significant threat to the State's timber growing capability. Creation of Timberland Preserve Zones is a substantial deterrent to such withdrawals. Preliminary data suggest that when the land classification process is complete, approximately 6 million acres will be included in Timberland Preserve Zones. It is possible that some land may be removed from TPZ's from time to time through rezoning, but it is unlikely that such removals will be significant in view of the strong legislative impediments to rezoning. Furthermore, there are indications that commercial timber growers will be encouraged to purchase land and add it to their holdings in TPZ's. The old ad valorem timber tax system had distinct financial advantages for certain categories of timber, but uncertainty over the nature of tax reform and rapidly rising assessed values for land were substantial deterrents to timber growing as a business enterprise in California. It appears that the provisions of the Forest Tax Reform Act will do much to allay these concerns and thus encourage expansion of the acreage of forest land devoted to timber growing as a commercial venture. In addition, the wide disparity between assessed values for land inside and outside TPZ's is a strong incentive for small landowners to consider timber production as a major goal of ownership so that they may successfully petition to have their holdings included in such TPZ's. Under the original Forest Tax Reform Act, counties could set a minimum acreage of 160 acres or less before a tract could be included in a TPZ in the initial classification process. A recent amendment removes this minimum acreage requirement in cases where the owner has a timber management plan prepared by a professional forester.

### Effect on Timber Output

In economic jargon, addition of land to Timberland Preserve Zones represents the "extensive margin" of commercial timber production. It is desirable to consider, also, the "intensive margin" by focussing on the effect on output from lands currently being managed for commercial timber production. The discussion falls naturally into two parts: (1) short-term output from stands that are currently merchantable, and (2) long-term output from future merchantable stands.

As implied earlier, there were strong pressures under the old ad valorem system to harvest timber on cutting cycles or rotations that were no greater than forty years in length; and while harvesting, to remove 70 percent of the merchantable volume. Or in cases, such as low-site land, where current merchantability standards could not be met under forty year cutting cycles, there were strong financial incentives to harvest timber as soon as possible after the forty year period had elapsed. As one would expect, these pressures will be largely removed by the change to a yield tax system. The question of interest, in the context of this discussion, is to what extent short-term outputs will be altered because of the institution of the new system. This is difficult to answer for two major reasons. Firstly, harvest scheduling patterns of major land owners have been developed under the old system. It might appear to be desirable to change the timing and intensity of harvest under the new system, looking at an individual stand in isolation; but the need to maintain a certain level of cash flow or to meet mill requirements may prevent major adjustments in the short-run. The second reason stems from the difficulty of predicting what decisions individual owners, or even representative owners, will make under the new system. Many may be bound by the same institutional or corporate constraints as they experienced under the old system, but others may reduce their rate of cutting. On balance, however, it is unlikely that any overall reduction in the cut will be significant in the face of major influences such as the state of lumber markets and the availability of public stumpage.

The impact on long-term output is, of course, even more difficult to estimate, but some information is available on the subject. A 1974 study for the State legislature, by a University of California team, used a computer analysis of forest management models to gauge what might happen to rotation lengths, duration of cutting cycles, soil expectation values, and levels of residual growing stock under various alternative tax systems, including the then current ad valorem system, and a yield tax system with a 6-percent rate. In the case of even-aged stands, the analysis focused on finding the rotation length that would lead to the maximum soil expectation value; i.e., the maximum value a purchaser would theoretically be able to pay for bare land. In the case of uneven-aged stands the expectation value included the value of the residual growing stock as well as the value of the land. The level of mean annual increment over the optimum rotation or cutting cycle was computed for each combination of species, site, and tax system. As expected, levels

of mean annual increment were the same under a yield tax system as they would be in the absence of local government taxes on land and timber. In other words, the analysis was an empirical demonstration of the concept that a yield tax system does not distort the pattern of timber output. However, the results showed that in many cases the modified ad valorem property tax system would lead to significant reduction in mean annual increments because of the fact that it was financially favorable under that system to use shorter rotations or shorter cutting cycles. In the case of even-aged stands of redwood on site I land, there was no effect on productivity because the optimum rotation under the property tax system was less than the 40-year exemption period for timber. But in the case of site II, the results indicated that moving to a yield tax system would lead to an increase in mean annual increment of around 16 percent. In the case of site III, which is the average in the California Redwood Region, the indicated gain in productivity was 38 percent; in the case of even-aged stands on first quality sites in the Pine Region, it was 32 percent. Similar results were obtained for uneven-aged stands.

It must be recognized that the forest management models which provided these results were based on various assumptions about future timber yields, costs, stumpage prices, capitalization rates, and the decision-making processes of timberland owners. Thus, they do no more than suggest that timber productivity will be significantly higher under the new yield tax system than under the old property tax system. Two other types of observation support this conclusion. In the first place, it is clear that the move to the yield tax alleviates the cash flow problem of smaller land owners and enables them to delay harvesting until stands are financially mature. Secondly, it is reasonable to expect that the move to the yield tax will act as an incentive to intensification of forest management for California timberland owners in general. As discussed earlier, there now appears to be less uncertainty about future tax burdens than under the old system; and cash flow problems are reduced. Furthermore, risk of loss is somewhat less under a yield tax system. Under the property tax, an owner may pay taxes on merchantable timber for several years only to have it destroyed or damaged by fire or other natural hazards. Whereas, under the yield tax system, the local taxing agency shares some of this loss because the tax is paid only on the value harvested.

### Governmental Revenues

Before embarking on a discussion of effects on governmental revenues, it should be explained that the harvesting of timber from National Forests and other public lands is an important source of revenue for many Northern California counties. Collectively, California counties received some \$22 million in fiscal 1976, representing 25 percent of net receipts from the harvest of National Forest timber under the Act of May 23, 1908. In addition, prior to the institution of the yield tax, purchasers paid property taxes on sold but uncut federal timber under the possessory interest principle.

The California yield tax rate (6 percent) was chosen so as to raise approximately the same annual revenue from timber as the average under the ad valorem property tax system for the period fiscal 1973 through fiscal 1975. If separate yield tax rates had been imposed for public and private timber, the rate on public timber would have been less than 6 percent. Conversely, the rate for private timber alone would have been greater than 6 percent. Although there is a shift in the tax burden from private to public timber under the yield tax, total annual tax receipts are not expected to decrease. To safeguard against any such decrease, provision was made for a "minimum revenue guarantee" whereby each county would receive no less during the first three years of the yield tax than it received in the 1973-75 period. However, in assessing the impact of the yeild tax on county revenues, it can be reasonably argued that it is improper to compare receipts in fiscal 1977 with the 1973-75 average. A correct analysis requires that the yield tax receipts in a given period be compared to an estimate of what the property tax on timber would have produced over the same period. It is likely that in most counties, fiscal 1977 yield tax receipts will not be significantly different from the level that would have been obtained under the old property tax system. Certain counties, however, will receive only their minimum revenue guarantee. This guaranteed level may be considerably less than property tax receipts would have been, because the 1973-75 base period did not contain the very high stumpage values that were subsequently attained. However, in spite of these conjectural losses, there is general recognition that retention of the old system would have resulted in substantial future reduction in tax receipts because of the rapid removal of timber from the tax rolls.

### Conclusion

A large majority of timberland owners, state and local government officials, and taxation experts favored the substitution of a yield tax for the modified property tax system in California. Unanimous passage of the Forest Taxation Reform Act in both the State Assembly and the Senate was evidence of strong, multilateral support for the legislation. Nevertheless, supporters of the legislation, as well as opponents, were not blind to the fact that such sweeping reform could have substantial drawbacks. In the first place, there was concern over shifts in tax burdens. Certain classes of owners might be disadvantaged by the reform, such as those with small inventories of taxable timber and a high rate of cutting. It was also recognized that certain counties or individual taxing districts, in spite of safeguards in the Act, might suffer revenue losses, at least in the short run. More importantly, there was substantial concern that transition to the new system would be cumbersome and very costly from an administrative point of view. Fortunately, the transition appears to have been suprisingly smooth. The Reform Act is a complex piece of legislation, but all interested parties were given a chance to offer suggestions and criticisms at numerous points in its development. This, together with a fine job of administration by units of state and county government, is the key to successful implementation of the new system.

With regard to tax burdens and tax revenues, it appeared inevitable that some shifting would occur in the short run. In fact, it was suggested that such shifting was needed to achieve a greater degree of equity than existed under the old system. In addition, it can be argued that long-run gains to individual owners and taxing districts, as well as to the people of California as a whole, will more than compensate for any temporary losses. It is reasonable to expect that the new system will be administratively more efficient, will enhance the productivity of the State's timber resource, and will maintain forestry as a viable land use.

Forest Taxation in Michigan: A Long History of  
Moderate Success with Proposals for  
Change and Improvement

Henry H. Webster, Raleigh Barlowe, and J. G. Olmstead\*

Introduction

We have been asked to discuss Michigan's experience with special taxation arrangements for forest land. This has a long history, dating back more than sixty years, with a primary landmark date 52 years ago. Our primary forest taxation law was first enacted in 1925.

Michigan's experience can be best discussed by considering three major topics. First, the context of forest taxation in Michigan, a context that has changed drastically in ways that influence the taxation arrangements needed to most effectively foster efficient use of productive forest resources. Secondly, we examine specific aspects of Michigan's experience: provisions of the original Commercial Forest Act and Private Forest Reserve Act, the ways in which they have been amended on several occasions, some rather striking trends in enrollment of land under these acts -- especially the Commercial Forest Act, financial patterns of state outlays and yield tax receipts associated with the Act. Finally, we discuss changes in the acts that are now under legislative consideration or other discussion. In doing so, we suggest some alternatives that would more fully bring the Commercial Forest Act into harmony with the changed context within which forest taxation in Michigan now operates.

Forest Tax Laws: A Historical Perspective

Michigan has a long and proud history as a forested state. Virtually the entire state was covered with mature timber at the time of first settlement. Lumbering became its leading industry during the last of the 1800's. Michigan was the top timber producing state in the nation in the three decades from 1870 to 1900. A long period of rebuilding of forest resources is now coming to fruition with new opportunities for their more careful development.

Michigan also has long experience with forest taxation. Privately owned forest holdings were subject to ad valorem property taxation at

---

\*Henry H. Webster, State Forester, Michigan Department of Natural Resources, Lansing, Michigan. Raleigh Barlowe, Professor of Resource Development, Michigan State University, East Lansing, Michigan. J. G. Olmstead, Forest Resource Analyst, Michigan Department of Natural Resources, Lansing, Michigan.

an early date. The anticonservational impacts of this taxing arrangement encouraged lumbermen in the state to follow cut-out and get-out timber harvesting practices. John J. Hubbell of Manistee, Michigan, was one of the first people to see forest tax reform as a means for stopping this ruinous practice. Around 1890, he proposed that the state adopt a new forest taxing system under which forest lands would pay a low annual tax while stumpage would be taxed only once, at the time of harvesting. (Fairchild, 1935)

### Laws Enacted

Separate tax legislation involving Hubbell's concept was later adopted in Michigan for small woodlots and for commercial forest holdings. Special tax treatment for the farm woodlot problem was passed first. A bill calling for fixed assessments on woodlots was passed in 1903 but vetoed by the governor. Other proposals calling for the assessment of land but the exemption of forest cover and other improvements, a flat rate tax on forest lands, a tax rebate arrangement, and a voluntary version of Hubbell's forest crop proposal were considered in 1905 and 1907. A woodlot taxation law, the nation's first forest yield tax, was passed in 1911. In 1917 this legislation was replaced by a second woodlot tax law, the Private Forest Reserve Act.

Interest in the forest taxation problem as it affected larger commercial forest holdings peaked in the 1920s. Rural property taxes were rising at a rapid rate, cut-out and get-out harvesting practices were still common, and many communities in forested counties were levying high taxes on existing forests to finance local public improvements.

From a conservation view, the problem was acute. All but a small area of virgin timber in the lower peninsula had been cut, and the end of Michigan's original forest resources in the upper peninsula seemed to be in sight. Long-term forest management practices were extremely rare, and thousands of acres of cutover lands were again being abandoned as their owners found no market among potential settlers for cutover lands. In 1925, the legislature enacted a Commercial Forest Act to encourage the private holding and management of second-growth forest lands.

Both forest tax laws gave landowners the option of enrolling their lands or keeping them under the general property tax. Those who participated would supposedly benefit from lower current taxes on their woodlot and commercial forest holdings. Nominal annual land taxes were required, and a single tax was applied on stumpage at the time timber was harvested. It was expected that the total land taxes plus the stumpage tax would fall below the accumulated taxes that owners would pay if they remained under the property tax. In return for these benefits, owners were required to retain and, in a very broad sense, manage their lands for long-term forestry. Their lands were to be open to public access for hunting and other recreational pursuits.

### Complications Experienced

Participation was often complicated by community needs for tax revenues. In early years, forest and woodlot owners frequently decided against participating under the forest tax laws because they felt that (1) their decision to do so would be interpreted by neighbors and local officials as examples of legal tax evasion, or (2) tax assessors would adjust their property tax assessments on other properties to compensate for any possible tax losses to local governments.

The tax savings aspect of both programs was complicated by the passage of Michigan's 15-mill tax limitation constitutional amendment in 1932. This action greatly reduced rural property taxes by limiting the size of the tax levies that could be applied. With depreciated property values and low tax levies, owners of second-growth forest land often found that their annual property taxes were lower than the annual land tax required under the Commercial Forest Act.<sup>1</sup>

Rising property taxes in the 1950s gave landowners new economic incentives for participating under the commercial forest program. At this point, however, the increasing need of local communities for tax revenues brought demands on their part for higher annual land taxes. The rise of the environmental movement in the late 1960s also brought forest owners face to face with the problem of public expectations concerning the roles they should play in opening their lands for public recreational use and in accepting managerial practices that support environmental goals.

### Changed Pressures

Still another complication stems from changing demands and pressures on forest lands. Michigan's forest tax laws were originally designed to induce owners to hold and manage their second-growth lands for long-term forest production. The alternative was abandonment and tax forfeiture. Today the alternative is most commonly conversion to residential and other real-estate related uses. The intensity of this pressure can be illustrated in several ways: (a) after decades of decline, every county in the northern lower peninsula and several in the upper peninsula now have population growth rates faster than the national average (according to estimates developed by the Census Bureau for the Upper Great Lakes Regional Commission); (b) at least two sizeable urban areas are developing in heavily forested parts of the northwestern lower peninsula and central upper peninsula; and (c) Michigan has more vacation-oriented second homes than any other state (according to estimates recently published by the Council on Environmental Quality).

Some forest land will be needed for non-forest uses. However, from a public viewpoint, most will find their best use for many years in

forestry. And an often disorderly and unnecessarily wasteful conversion process also requires public attention. A state policy for furthering good land management and strengthening the forest resource land base definitely calls for continued tax policy that will favor widescale acceptance of improved forest management programs on these lands.

### The Commercial Forest Act

Michigan's Commercial Forest Act was enacted in 1925. It has been amended no less than ten times since that date.

#### Eligibility

The law authorizes that land may be classified as a commercial forest and receive special tax treatment after examination by representatives of the Department of Natural Resources. To be eligible, land must be chiefly valuable for timber growth, and not used for agricultural, mineral, grazing, industrial, recreational, or resort purposes. In its original form, the law excluded both land already supporting stands of substantial size and land sparsely stocked with trees. The effect was to encourage complete harvest before attempting to enroll land. One major set of amendments loosened these restrictions to admit sizeable but still immature stands, and to admit sparsely stocked but potentially productive forest lands as part of larger management units.

#### Tax Payments

Owners of land enrolled under the Commercial Forest Act currently pay 15 cents per acre per year to local government. The state then pays 25 cents per acre per year for a total of 40 cents. The total amount is distributed among local units (e.g., county, township, school board) in the same proportions as locally collected taxes. The level of annual payments by both owner and state have increased gradually over the 52 years the law has been in effect. But specific rates have been directly in the law for essentially the entire time. This, of course, is one reason why it has been necessary to amend the law quite frequently.

The law originally provided that a yield tax equal to 25 percent of the value of all timber harvested be paid to the state. This tax rate was reduced to 10 percent in 1931. Until 1970, one-half of the yield tax was returned in the state general fund while the balance was returned to the counties for distribution between the local units on the same basis as the annual land tax payment. The entire yield tax has gone to the state general fund since 1970.

### Conditions

Owners are required to secure cutting permits from the Department of Natural Resources before removing timber from their listed lands. All listed lands are open for public hunting and fishing unless closed by action of the legislature or the Natural Resources Commission. No authority is granted to the Department of Natural Resources to specify minimum cutting standards or to penalize owners for the use of destructive cutting practices.

### Withdrawal Provisions

Unlike the provisions of Wisconsin's Forest Crop Law, no provisions are made for a contract between forest owners and the state for any stipulated term of years. The state legislature can change the terms, fees, taxes, and provisions of the law at any time. Owners who are adversely affected by such changes, however, have the privilege of withdrawing their lands from classification without penalty.

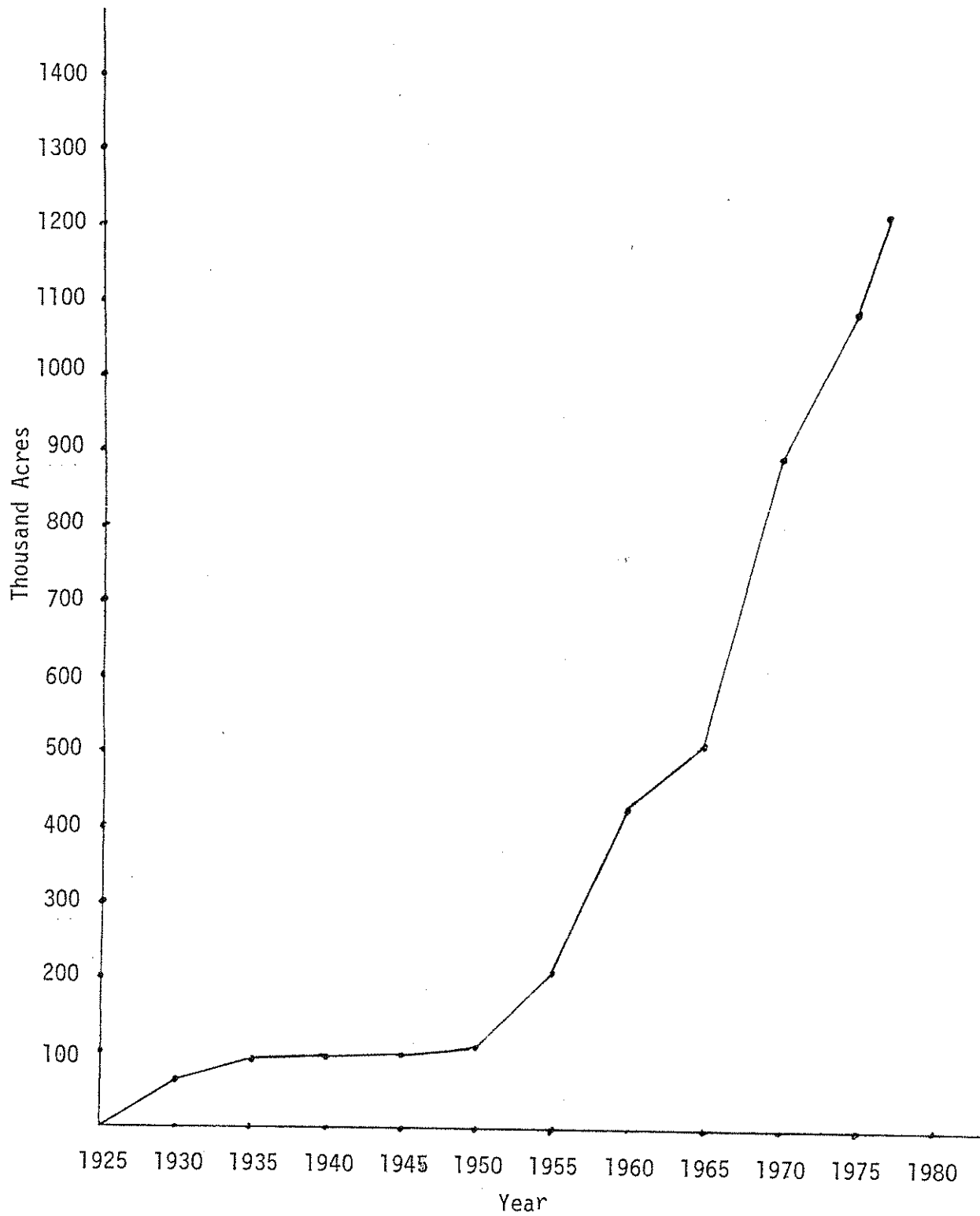
The 1925 law authorized owners to withdraw their lands from classification for other reasons by paying five cents per acre for each year of listing under the law. This declassification arrangement was later changed to require payments of three cents per acre for each of the first 20 years of classification plus a fee that steadily increased from two percent of the appraised stumpage value if withdrawn or cut during the first year to ten percent of this value during the ninth year of listing or any year thereafter. In 1958, a straight ten percent yield tax was substituted for the sliding scale arrangement. Should the owner fail to pay his taxes or use any of his forest reserve lands for purposes contrary to those authorized, the Department of Natural Resources has the power to cancel the listing and require payment of the same declassification charges that apply with voluntary withdrawals.

### Participation Increasing Greatly

Nearly three decades passed before Michigan forest landowners demonstrated any particular interest in the Commercial Forest Act. In its first 26 years of operation, less than 5,000 acres per year were, on the average, successfully listed. Around 1955 this pattern changed. Figure 1 illustrates this change quite dramatically. In the second 26 years of our experience with the act, acreage listed increased ten-fold. As of January, 1977, over 1.2 million acres of forest were participating under the act.

Pressure from competing land uses is the essential cause of this rapid increase in enrollment. Competing land uses have very substantially raised land values and ad valorem taxes. For that reason, the special tax arrangement available under the Commercial Forest Act has become markedly more attractive to major private landowners.

Figure 1. Enrollment under Michigan's Commercial Forest Act has increased rapidly.



Most of the land enrolled is located in the upper peninsula and involves the holdings of a few corporate owners. The forests of six firms, ranging upwards from 30,000 acres, account for 85 percent of the total. Some 202 listings of 640 acres or less were recorded as of January 1, 1977.

<u>Acres</u>	<u>Number of Ownerships</u>
0-640	202
640-10,000	27
10,000-100,000	4
100,000+	4

### Financial Experience

Questions about the "cost" of the Commercial Forest Act, to the State and to local units of government, are frequently raised.

Following is a summary of the revenue and expenditure aspects for the entire history of the Commercial Forest Act:

#### State Expenditure<sup>2</sup>

Payments to Counties	\$2,385,656.28
----------------------	----------------

#### State Revenue

Yield tax (1926-1971)	\$167,196.92
Yield tax (1972-1976)	316,364.17
Acreage Withdrawal Fee (1926-1976)	27,553.67
Stumpage Withdrawal Fee (1972-1976)	43,535.57
	<u>\$554,650.33</u>

<u>Net State Outlay (1926-1976)</u>	\$2,385.656.28
	- 554,650.33
	<u>\$1,831,005.95</u>

Over the years then, Michigan has outlaid about 1.8 million dollars to finance the operation of the Commercial Forest Act. The figures do not, however, tell the full story.

For this sum, the State has acquired a ten percent investment, by virtue of the yield tax and withdrawal fee provisions, in the standing timber on 1.2 million acres of land. Over the past five years, this investment has paid an average annual dividend of 63 thousand dollars. The value of this investment continues to rise as timber grows, and with real price increases in stumpage. The yield tax paid in 1976, for example, represented a 3.2 percent dividend on capital invested in these forests.

What about the "cost" to local governments? An analysis of the impact of this act on local governments was made in 1975 by the State Auditor General. The 15 counties that compose the upper peninsula had to forego \$750,000 in taxes on listed lands in 1974, an average of 73 cents per acre. On the other side of the coin, however, these lands required virtually no service by local governments and thus no dollar outlay.

In summary, the Commercial Forest Act has been a moderate success, especially during the past 25 years. It has been one of a number of factors that have contributed to a considerable rebuilding of Michigan's forest resources. Other major factors have included vastly improved fire protection, several concentrated efforts in public forest management (currently the Forest Cultivation Program), and a rising level of concern for security of supply by major private landowners.

### The Private Forest Reserve Act

The Private Forest Reserve Act, enacted in 1917, in effect replaced the woodlot tax law of 1911 after the latter attracted only one listing in six years. The second act has been more successful, but only very modestly so, and clearly is not as successful as the Commercial Forest Act.

#### Provisions and Participation

The Private Forest Reserve Act provides that owners of land holdings up to 160 acres, at least half of which are devoted to conventional agriculture, can designate as much as one-fourth of their total holding as a private forest reserve. The land designated must meet specified minimum standards in terms of stocking with forest tree species. Land designated is then to be assessed at no more than one dollar per acre. Forest products harvested for sale off the farm are subject to a five-percent yield tax, home use is exempt. A withdrawal penalty of five percent of the current value of standing timber is also part of the law.

To date, administration of the Private Forest Reserve Act has been entirely in the hands of local government. Listings are made with township supervisors and assessors who are then responsible for applying appropriate assessments and withdrawal penalties.

Participation has been very low. Summaries made in three representative years show that only 2,500 acres were enrolled at the high point in 1939, and that the total acreage is now only 600 acres. (Dressel, 1926; Nelson, 1940; and Olmstead, 1975).

#### Evaluation: Change Needed

Michigan's experience with its special woodlot taxation laws can be written off as a failure. This is unfortunate. There is a greater

need for this type of legislation now than ever before. Rising land values and rising local tax rates are putting a double bite on farm woodlot owners. Owners who find themselves paying taxes in the range from \$10 to \$40 an acre annually have good reasons for asking if they can afford to continue holding farm areas as woodlots, particularly when they have opportunities in many cases to either sell them off for recreational or residential uses or to clear them for cropland use. And these pressures are particularly in urbanizing areas where small areas of forest have especially high public value for amenity purposes.

Consideration clearly should be given to a revamping of the present legislation. In this updating process, emphasis might well be placed on encouragement of improved forest management on the hundreds of small forest holdings found in Michigan. The existing provisions limit classification to farms that are 160 acres or less in size. This can no longer be justified. Average farm sizes have increased considerably from 92 acres to 169 acres on a statewide basis in the last 60 years. Good woodlot management should not be hampered by a maximum acreage limitation; and eligibility for participation should not be limited to small farms.

With the large amount of part-time farming now found in Michigan (45.9 percent of the farm operators in 1974 worked 100 or more days off their farms), special tax treatment should not be limited to farmers who till more than half of their land. Going further, one can question the rationale for limiting eligibility for participation to farmers. Other rural landowners, both residents and nonresidents, should be eligible for special tax treatment if they show willingness to accept and carry out responsible forest management programs.

#### Proposed Changes

The Commercial Forest Act has been a moderate success while the Private Forest Reserve Act most definitely has not, as we have seen. Possible changes in both are being discussed in Michigan today. Changes in state objectives in forest taxation are the generic reason for considering revision of both laws.

Special forest taxation arrangements are no longer needed to keep land on the tax rolls or in some productive use. The major goal now is to protect the productive forest land base and to induce owners to adopt management practices that will contribute to the long-run prosperity and economic welfare of the state.

Taking the two laws together, several modifications should be considered to make classification more attractive to forest owners. Lands probably should not be rejected for classification simply because they now appear submarginal for commercial forestry use. Owners should be allowed to include wetlands and nonproductive lands where they occur as portions of blocked holdings. Accommodations should be worked out for owners who want to practice forestry but whose lands have natural resource values for nonforestry uses. Owners of small forest holdings

should be more positively encouraged to enroll as long as they are willing to adopt constructive forest management practices. Consideration might also be given to the provision of longer-term contracts under which owners will enjoy greater security in their economic expectations. Other changes to secure more adequately public values of effective forest resource management also deserve serious consideration. They can best be examined in terms of specific proposals.

### Legislation Introduced

Several proposals for amendment of the Commercial Forest Act are being discussed, and one bill has been introduced in the Legislature by a prominent member strongly concerned with matters related to forest resources.

The major pressure for change currently comes from local government in particular portions of the state, especially the western upper peninsula. This area is approximately 90-percent forested, with large acreages classified under the Commercial Forest Act, and with large additional acreages apparently eligible, though not classified at this time by owner's choice. There are also very sizeable acreages in public ownership, both state and federal. The pressure on local government for additional revenue in the face of rising costs is intense. Additional irritants are adding fuel to this fire. Withdrawal from the Commercial Forest Act of some acreage, in particular ownerships, for sale as recreational real estate has raised the issue of withdrawal penalties to a high level of concern. Concern about the quality of management on such lands, as Michigan strives to improve and intensify forest management, has had parallel effects.

Revision of the Commercial Forest Act has been widely discussed for the past two or three years. The leading figure in this discussion has been Representative Russell Hellman. A number of timber industry leaders have taken part while personnel of the Department of Natural Resources have provided technical assistance at several stages in the process.

Representative Hellman introduced a bill in September. No legislative action has yet been taken. There is also reason to believe that a number of further improvements may be in order. Nevertheless, this bill points the way toward a number of needed changes in the Commercial Forest Act:

- a. The bill would require preparation of an appropriate management plan for land entered under the Commercial Forest Act. An orderly planning process, and agreed silvicultural standards, would be the primary bases of acceptable plans.
- b. The bill would set a minimum enrollment period of ten years where none had existed before. And it would require that

continued eligibility be determined each five years. Conformance to the management plan would be the major factor in determining continued eligibility.

- c. The bill would substantially stiffen withdrawal penalties. They would be calculated in terms of the accumulated difference between ad valorem taxes that would have been paid and the amounts actually paid under the Commercial Forest Act, compounded at a specific rate of interest. The interest rate factor declines in equal increments from 90 percent to 10 percent over the first ten years of the listing. After ten years, the amount of repayable ad valorem taxes also declines.
- d. The bill would increase payments to local governments. The yearly payment by the landowner would be increased from 15 to 30 cents per acre; that by the state from 25 to 70 cents per acre. Thus, local government would receive \$1 per acre each year rather than 40 cents. In addition, half of the yield tax would go to counties, where, at present, it goes entirely to the state general fund. (The fixed dollar amounts of annual payments are one imperfect feature; an indexing arrangement would have a longer useful life.)
- e. The bill would limit public access on classified lands to forms of activity compatible with timber growth and harvest. Recreational vehicles that severely rut forest roads at particular seasons have been a special problem. Under the proposed bill, such vehicles could be banned at crucial seasons, or prohibited completely.

### Proposed Woodlot Taxation

Substantial revision of the Private Forest Reserve Act is also being discussed. This proposal is backed by the Michigan Forest Association. It is designed to provide a workable scheme for the small forest tracts held by approximately 180,000 owners that total 54 percent of the officially defined commercial forest acreage in Michigan.

The proposed substitute for Michigan's present woodlot tax law would extend the opportunity for having one's lands classified for special tax treatment to all private owners of 10 to 5,000 acres of forest lands that are used primarily for forestry and are not otherwise developed or commercially used. (Tracts containing an owner's residence and other forest-associated buildings could be classified with the buildings and taxed separately.) Up to ten percent of a property could be water, marsh, or otherwise without timber production capability. Properties with recreation, mining, and other development potentials could be listed as long as the owners show intent to use them primarily for forest production.

Owners would be required to submit forest management plans for their properties. These plans and each owner's progress in carrying out the management provisions would be subject to review by foresters from the Department of Natural Resources.

Wooded tracts with young, growing forest cover would be taxed at 30 percent of the ad valorem property tax rate for a period of 20 years, or until the first commercial sale of timber. Thereafter, the tax rate would rise to a 65-percent level. A tax deduction equal to 25 percent of the ad valorem rate (down to effective tax rates of 5 and 40 percent) would be granted to those owners who would allow public use of their properties for wild land recreation. A ten-percent yield-tax would be collected from owners on the value of all commercially harvested timber. The state would distribute this tax back to the local units of government.

Owners who fail to comply with their approved management plans, or who voluntarily request withdrawal of their lands, would pay withdrawal charges equal to the difference between the taxes paid and those that would have been paid (less the allowance for recreational use by the public) plus a ten percent penalty charge.

#### Related Legislative Topics

Both of these proposals for improved forest taxation arrangements could be related to several other legislative topics, although there is no explicit relationship at present. A relationship to two other legislative topics was suggested in one discussion of forest resource programs in 1975. The other topics were land use planning and a state forest practice act. The relationship could be a close one: land use planning to protect the productive forest land base from premature conversion, the revised forest tax arrangements to reduce conversion pressures and to provide incentives for management, and the practice act to insure the quality of management. This "package" approach has not gone forward, however, since legislation for land use planning has become an extremely contentious issue in Michigan. Even so, the requirement for a management plan in both forest tax proposals would secure a part of the benefits of a state forest practices act.

#### Possible Alternatives

The package approach just discussed shows the merit of considering alternatives. The essential reason for special tax treatment for forest lands in Michigan has changed dramatically since the Commercial Forest Act and the Private Forest Reserve Act were enacted between 50 and 60 years ago. The major problem then was idleness of forest lands. The major problem now is intense competition among alternative uses of forest land with premature/scattered conversion and fragmentation of the forest land base. This change in problem provides an argument for a drastic change in approach in terms of pure logic. A yield tax is logically an appropriate means for overcoming idleness of land. Modified assessment

is logically more appropriate for directly attacking premature conversion and fragmentation due to competing uses.

The problem of idle land and its subsequent reversion to the state for nonpayment of taxes was common in the early decades of the 1900's in Michigan. The idea of the yield tax was that payment of taxes would be deferred until timber was harvested. The landowner who did not have sufficient annual income to pay annual taxes would then be encouraged to put these lands to productive use knowing he might earn a profit in the future. This then would prevent such lands from coming into state ownership and the resultant administrative problems and expenses. Today, tax forfeiture is rare and involves only small parcels of land, often in the city.

A current problem, from a management standpoint, is the conversion of forests to other land uses (subdivisions, etc.) or to uses which preclude forest management and production (10.1-acre parcelization for scattered second or vacation homes). The advantage of modified assessment over yield taxes in this case is at least twofold. First, it recognizes that most landowners have the income to pay some reasonable annual tax to local government. As a result, local revenue is more stable and the ability of local governments to maintain programs and incur indebtedness with secure repayment projections is enhanced. Secondly, and somewhat more esoterically, modified assessment is a step toward scaling down local government ambitions and a greater realization in general of use value. A tax based on modified assessment would fit neatly into a package approach in terms of pure logic. But a constitutional amendment would be required since Michigan's constitution currently requires uniform assessment. The route to constitutional amendment is long and difficult.

There may be alternatives short of constitutional amendment. One would provide another avenue to improvement of the Private Forest Reserve Act. This alternative would tie taxation of productive forest land to an expanded version of Michigan's Farmland and Open Space Preservation Act (Act 116, P.A. 1974). This act indirectly controls the level of ad valorem taxes on land entered under it.

If the standards of eligibility were modified to encourage forest land entries, owners would be required to enter into a contract with the state for a renewable term of at least ten years. Under this contract, owners would give up their development rights for this period via a development rights easement. Thus, owners would commit themselves to keep their land holdings in their present forestry use for the duration of the contract. They would continue to pay their property taxes as before, but any amount by which these payments would exceed seven percent of their household incomes for the year could be used as credits against their state income taxes. Should the credit exceed their income tax liability, the balance would be refunded to them by direct payment.

Owners who choose not to renew their ten-year contracts get their development rights back, but are charged a fee equal to the amount of

tax credit they have enjoyed in the last seven years. Those who are removed from the program because they violate their agreement, and those who request early withdrawal, are charged for their last seven years of tax credits plus six percent interest.

Participation under this program could prove very beneficial to those forest owners who are carrying out long term forest management programs that involve a series of annual timber harvesting operations. With high property tax levies on growing and merchantable timber, the seven-percent household income limit on the owner's liability for property taxes could provide a boon for these operators. The benefits of participation would have less appeal to owners of young, growing forests who will not harvest sizeable amounts of timber for a considerable number of years. A large potential for tax savings could be associated with decisions to harvest all of the timber in a given holding in one year. Provisions would be needed to assure that such harvests did not damage long-term productivity.

An approach tied to the Farmland and Open Space Preservation Act would quite evidently apply particularly to land held in individual or family ownerships. Another approach would also be required for corporate forest owners who own more than 90 percent of the land currently enrolled under the Commercial Forest Act.

An arrangement proposed in neighboring Ontario might be adapted to Michigan conditions as an alternative to the Commercial Forest Act. As part of the 1976 provincial budget, the government of Ontario seriously proposed that the province (state) pay to local government essentially the full amount of ad valorem tax on designated productive forest and agricultural land. The province would then collect a substantial severance tax on harvested products. Substantial withdrawal penalties would be part of the package. Also being discussed is the possibility of tying acceptance of land into the program, and withdrawal of land from it, to programs of systematic land use planning.

Ontario's approach is perhaps a more advanced case of the "package" approach that has been only briefly mentioned in Michigan to date. It suggests a new and imaginative approach to protection of productive farm and forest land in order to facilitate long-term management. It breaks with tradition, but one can ask if there is any reason why forest owners must be direct payers of property taxes. In terms of its possible application to Michigan, adoption of this or a similar arrangement to forest lands can make considerable sense because: (1) the prospect of complete or partial tax exemption of lands managed for forest production may provide the incentive needed to get many owners interested in quality management practices; (2) state payment of the property taxes would provide needed revenues for local governments; (3) the decision to exempt forest owners from all or most of their property taxes (most of which are tied to the value of growing and standing forest inventories) has a parallel in the action of the legislature in 1975 in exempting farm personalty and business inventories from property taxation at the

same time that it repealed several other taxes and instituted a single business tax; and (4) the state can expect to secure reimbursement for exemption of forest properties from property taxation from the increased revenues it can expect to receive from forest owners under the single business tax and the state income tax and from the added tax revenues that would result from increased forest industrial activity in the state.

### Summary and Conclusions

Michigan has had a long history of special tax treatment for forest land. The Private Forest Reserve Act was first enacted 60 years ago, the Commercial Forest Act 52 years ago.

The Commercial Forest Act, in particular, has been a moderate success. It has been one of a complex of factors that have contributed to a substantial rebuilding of Michigan's forests, both private and public. This is a contribution, even though other factors have probably outweighed this special tax treatment. These forests are now seen by a widening circle of interests as one of many means for developing a more diverse, less concentrated and vulnerable, state economy. In more specific terms, the total acreage enrolled under the Commercial Forest Act has increased substantially, especially in the last two decades. And the state has acquired an increasingly valuable ten-percent investment in timber on 1.2 million acres.

This success has been only partial, however. There have been less beneficial side effects. One such effect has been a continuing (and continuous) revenue problem for local government in heavily forested areas with much land classified under the Commercial Forest Act and much land in public ownership. The specific form of the act has (despite frequent amendment) made it difficult to rapidly relieve this problem on a continuing basis. Specific dollar figures in the act require legislative action every time a few cents change is needed.

The Private Forest Reserve Act (intended for woodlots) has been vastly less successful. Participation has never been great and has, in fact, recently declined even further. Restrictions on eligibility in the law have proved nearly watertight.

Examination of Michigan's potential for future growth and development suggests that far more production should be expected from its forest lands. Approximately half of the state's area is classified as forested, but only a portion of this area is managed for forest production. Good land use in the state calls for programs that will bring larger areas into productive forest use. This objective has the double advantage of contributing to environmental enhancement and, at the same time, buttressing the state's economic base for providing jobs and supporting needed economic growth. A major need in policy, accordingly, calls for incentives and programs that will stimulate the adoption of approved long-term forest production practices.

The core reason for special tax treatment for forest lands in Michigan has changed dramatically. When the Commercial Forest Act and the Private Forest Reserve Act were first enacted, the central problem was idleness of a very large acreage of forest land in private ownership. Fifty years of effort in forest protection and management, movement of some of this land into the largest State Forest system in the nation, and major demographic change have greatly altered circumstances. The central problem is now premature conversion of forest land to other uses, and fragmentation of the forest land base as a result of intense competition among alternative uses. In pure logic, the most appropriate special tax treatment was shifted from a yield tax to modified or differential assessment. But, in fact, a clause in Michigan's current constitution requires uniform assessment.

The need for revision of the current tax laws is widely recognized. A prominent legislator has introduced a bill that would make substantial changes, although still working within the essential pattern of the original Commercial Forest Act. Primary changes would relate to requirements for management plans, to periodic reestablishment of eligibility, to withdrawal penalties, and to increased payments to local government. Specific improvement and clarification is needed in this bill. But there is little doubt that it points the way toward needed changes. It is, in concept, a good bill if we are limited to an incremental approach, as is frequently the case in legislative matters. A revision and modernization of the Private Forest Reserve Act is also being proposed by the Michigan Forest Association, an organization of private forest owners.

At the same time, there is much to recommend serious study of more far-reaching approaches. The idea would be to seek some of the advantages of differential assessment, and to tie forest taxation more closely to systematically planned land uses, without challenging uniform assessment as required by Michigan's constitution. Two possible alternatives relate to expansion of Michigan's Farmland and Open Space Preservation Act, and to adaptation of new approaches being discussed in Ontario. These approaches involve provincial (state) payment of virtually all real estate tax on designated forest and agricultural land, and a close tie between such treatment and land use planning processes. Expansion of the Farmland and Open Space Preservation Act could, in effect, replace the Private Forest Reserve Act. An adaptation of the proposed Ontario approach could take the place of the Commercial Forest Act, and might indeed serve in place of both of Michigan's present tax laws.

Proposed incremental changes in both forest tax laws, and more far-reaching approaches, need to be seen as complementary, not competing. More specifically, the commercial forest bill already introduced in the Michigan Legislature, and the small woodland proposal being discussed, both point toward useful incremental steps, for the short term. The time that incremental approaches buy should be used to perfect a more far-reaching approach more fully in harmony with the changed forest resource situation in Michigan.

In the adoption of new policies, one can never be certain that the new approaches will secure all that is expected of them. States must be willing to experiment, try promising new approaches, and reject old formulas that do not work. In devising new forest taxation policies in states such as Michigan, emphasis should be given to (1) providing owners with needed incentives for adopting sound forest management programs, (2) providing local communities with continuing sources of revenues for the financing of governmental services, (3) considering indirect as well as direct means by which forest landowners can make their contributions to pay the costs of government, and (4) matching policies as closely as possible to demonstrated, agreed-upon resource needs.

## Footnotes

<sup>1</sup>A survey of forest assessment practices in the upper peninsula in 1945 showed that most second-growth timber lands were assessed at a blanket rate of \$100 per forty, and that they were usually taxed at a rate of \$1.50 a forty, or less than four cents per acre. (Cf. Raleigh Barlowe, "State and Local Policies Relative to Forest Land Management in the Northern Lake States," p. 17. Report prepared for the U. S. D. A. Bureau of Agricultural Economics, 1946.) Lee M. James and James G. Yoho ("Forest Taxation in the Northern Half of the Lower Peninsula of Michigan," Land Economics, vol. 33, pp. 139-148) found that 43 percent of the properties they studied in the Lower Peninsula in 1954 and 1955 paid less than 15 cents an acre; 24 percent, 15-19 cents; 22 percent, 20-24 cents; and only 11 percents more than 25 cents an acre.

<sup>2</sup>Note: Internal costs of administering the law are not included.

## Literature Cited

- Auditor General, Office of, State of Michigan, DNR Economic Growth and Development Program Audit Report, August 21, 1975.
- Dressel, Karl, Woodland Taxation in Michigan, Master's thesis, Michigan State College, 1926.
- Fairchild, Fred Rogers, Forest Taxation in the United States, U.S.D.A. Misc. Publication No. 218, pp. 358-366. (Washington, 1935).
- Nelson, Alf Z., Forest Land Taxation in Michigan, mimeographed report of the U.S. Forest Service, 1940, p. 27.
- Olmstead, J. G., Private Forestry Reserve Act Survey, unpublished report, Michigan Department of Natural Resources, 1975.

## Administration of State and Local Taxation On Timber and Forest Lands

James K. Wead\*

### Introduction

In March 1976, the Council of State Governments entered into a cooperative agreement with the Forest Service of the United States Department of Agriculture to collect data regarding existing types of taxes levied by state and local governments on timber and forest land. Fifteen states which contain 40 percent of the commercial forest land in the United States were selected for an in-depth analysis of the taxes levied and the administration of those taxes. The data collected is being analyzed by the Forest Service and a publication of the findings is due to be released in July 1978. This paper is based on the findings of the study. Table 1 lists pertinent information concerning the states studied.

### Administration of Timber Taxes

A review of the administration of timber taxes in the [fifteen] states [studied] shows that there are three basic components to the administrative process as it applies to timber taxes. The three components are:

- I - Statutes and rules regulating timber taxation
- II - Agencies involved in timber taxation (both governmental and private)
- III - Attitudes between agencies.

Because of the subjective nature of the third component of timber taxation, no attempt was made to evaluate the impact of attitudes between agencies on the administration of timber taxes. It is, however, important to note that attitudes between governmental agencies such as the Department of Revenue and the Forestry Commission, or the State Tax Administration and the local tax administrator, and between taxing and legislative agencies and the forest industry, do impact timber tax administration. Where attitudes of mutual trust and respect exist between the taxing authority and the taxed entity, audit expenses are minimized, revenue predictions are more accurate, and the economic impact of changes in types or rates of taxes are more accurately predicted.

---

\*Special Assistant, The Council of State Governments, Lexington, Kentucky.

TABLE 1  
SELECTED INFORMATION ON STUDIED TIMBER PRODUCING STATES

STATE	TOTAL LAND AREA (M Acres)	COMMERCIAL FOREST LAND		AVERAGE VOLUME OF GROW. STOCK, ALL SPECIES (MM Cu.Ft.)	AVERAGE NET ANNUAL GROWTH (M Cu.Ft.)	AVERAGE ANNUAL REMOVALS OF GROWING STOCK (M Cu.Ft.)	AVERAGE ANNUAL ROUNDWOOD PRODUCT REMOVALS	
		Area (M Acres)	Proportion of Total (Percent)				Volume (M Cu.Ft.)	Percent of Growth
Alabama	32,678	21,742	67	16,010	947,149	807,183	744,829	79
California	100,091	14,828	15	54,251	630,000	927,000	843,723	134
Florida	35,179	16,231	46	10,888	531,800	347,900	285,233	54
Georgia	37,295	25,102	67	19,695	1,356,632	927,939	789,008	58
Kentucky	25,504	11,826	46	8,547	319,214	141,254	116,764	37
Louisiana	28,867	15,342	53	13,602	743,842	721,637	602,353	81
Maine	19,797	16,894	85	21,253	710,800	408,700	407,646	57
Minnesota	50,745	16,875	33	11,727	455,635	155,198	135,469	30
Missouri	44,189	14,600	33	6,496	302,683	108,835	107,669	36
Montana	93,258	15,983	17	28,650	443,141	324,411	279,560	63
New Hampshire	5,781	5,020	87	5,147	138,136	60,490	51,191	37
New York	30,636	14,489	47	12,517	285,857	114,904	99,676	35
Oregon	61,574	25,673	42	87,093	1,151,000	1,556,000	1,529,041	133
Virginia	25,496	15,859	62	15,171	563,478	442,907	352,786	63
Washington	42,665	18,401	43	65,115	1,244,400	1,536,070	1,397,401	112
Total, Fifteen Sample States	633,755	248,865	39	376,162	9,823,767	8,580,428	7,742,349	79
Total, All States	2,270,050	497,697	22	648,877	18,567,647	14,032,808	12,154,954	65
Proportion, Sample States to Total U.S. (Percent)	28	50	58	53	61	64		

Source: U. S. Forest Service, Council of State Governments

An example of an attitude of cooperation which greatly improves timber tax administration is the severance tax rate setting and collection process in Louisiana. The State Forestry Commission and State Board of Equalization meet annually to set the average valuation of timber for the coming year. Based on information from timber sales and industry testimony, the valuation to be used for determining the yield tax amount in the coming year is determined. Different values are set for various types of timber. Thus, the values to be used in 1977 are based on 1976 sales and are arrived at by cooperation between the Board of Equalization, the Forest Commission, and industry representatives.

After the amount of the yield tax has been determined, the values are published and mill operators collect the tax from timber harvesters as the harvesters deliver the timber to the mill. The mill operators cooperate in the collection process without any statutory obligation to do so. This process is one of the more efficient in terms of thoroughness and cost effectiveness in any of the states studied. It is operable only because of an attitude of mutual cooperation between the Department of Revenue, the Forestry Commission, and the timber industry.

This is not to suggest that there should not be an adversary role between the taxing agency and the taxed entity in areas of disagreement. The adversary role is basic to the taxing system. It does appear that an attitude of mutual respect and cooperation will maximize administrative efficiency and minimize costs to the taxpayer.

### Statutes and Rules

Statutes governing the taxation of timber and forest lands are those laws which are passed by the legislatures. Rules are the administrative decisions made by the agencies responsible for implementing laws to govern the process of administering the laws. While all laws are by definition formal documents, rules may be formal or informal. The statutes of the various states determine the method of valuation used for tax purposes on forest lands, standing timber, and severed timber. Table 2 indicates the method of valuation of forest land for property tax purposes. Market Value means the value of the land at its highest and best use based on comparison with sales of similar land. The problem with this method of assessment, when thinking in terms of timber production, is that urban pressure or recreational uses may indicate a value for the property that creates such a tax burden as to make forestry uneconomical. To deal with that problem, three of the four states which use market value as the primary value indicator assess forest lands at a lower rate than other commercial properties, usually under an agricultural assessment law. Use Valuation capitalizes the economic capability of the land to produce timber in order to place a value on the land for tax purposes. Eleven of the states surveyed provide for use valuation of timber land, usually upon application of the owner to the assessor or the State Department of Revenue. Other methods of valuation of forest land are used in three states where the taxable value of the land is set by statute. The statutes affecting the valuation of standing or severed timber are listed in Table 3. Georgia

Table 2

## Methods of Valuation of Forest Land in Selected States

State	Market Value	Use Value	Other
Alabama	x <sup>(8)</sup>		
California		x <sup>(1)</sup>	
Florida		x <sup>(1)</sup>	
Georgia	x		
Kentucky		x <sup>(1)</sup>	
Louisiana	x <sup>(8)</sup>		
Maine		x	
Minnesota	x <sup>(6)(2)(8)</sup>	x <sup>(3)</sup>	x <sup>(4)</sup>
Missouri		x <sup>(5)</sup>	x <sup>(1)(6)</sup>
Montana		x	
New Hampshire		x	
New York			x <sup>(7)(1)</sup>
Oregon		x	
Virginia		x <sup>(1)</sup>	
Washington		x	

- (1) Market value assessments may be used in some cases.
- (2) Property Classification Law.
- (3) Tree growth tax.
- (4) Auxiliary Forest Law - 13¢ per acre.
- (5) Agricultural Assessment Law.
- (6) Forest Croplands Law. Assessed value of land \$3 per acre.
- (7) Assessment set by law - not to exceed \$40 per acre times equalization factor.
- (8) Assessed at a lower rate than other commercial property.

Table 3

Type of Taxes Applied to Standing or Severed Timber - 1978

State	Severance	Yield	Ad Valorem	Exempt
Alabama	x			
California		x		
Florida				x
Georgia			x	
Kentucky				x <sup>(1)</sup>
Louisiana		x <sup>(2)</sup>		
Maine				x
Minnesota		x <sup>(3)</sup>		x <sup>(4)</sup>
Missouri		x <sup>(5)</sup>		x <sup>(6)</sup>
Montana				x
New Hampshire		x		
New York				x <sup>(7)</sup>
Oregon	x <sup>(8)</sup>	x		
Virginia	x			
Washington		x		

- (1) Standing timber exempt by practice, not by law.  
 (2) Yield tax based on prices of timber in previous year.  
 (3) Auxiliary Forest Law.  
 (4) Tree Growth Law and Land Classification Law.  
 (5) Forest Cropland Law.  
 (6) Agricultural Assessment Law.  
 (7) Maximum per acre, including land set by law. May not exceed \$40 per acre times local equalization rate.  
 (8) A severance tax applies to all timber. The Yield tax applies only to timber harvested from private land.

is the only state of those studied which applies an ad valorem tax directly to the standing timber in addition to the land valuation. Two states apply a severance tax (fixed amount per measure) to severed timber and seven states apply a yield tax (percent of value) to severed timber. Seven states exempt standing and severed timber under some of the statutes regulating forest land valuation.

#### Agencies Involved in Timber Tax Administration

There are many agencies which are directly or indirectly involved in state/local timber tax administration. The taxpayer is involved, especially where he must file a return to comply with yield or severance tax laws. The legislature initiates the basic laws for tax administration. The judiciary defines disputed legislative intent. The financial needs of the recipient of timber tax revenues influences the types and amount of timber taxes. In some instances, conservation groups can influence the administration of timber tax laws. The agency most directly involved in timber tax administration is the state or local tax administrator directly responsible for timber taxation. Table 4 presents the state/local governmental interface of responsibilities in the administration of forest land taxation in the fifteen study states. In four of the states, primary responsibility for valuation rests with the Department of Revenue under one or more of the statutes applicable to forest land valuation. The local assessor has primary responsibility for forest land valuation under one or more statutes in thirteen states. In Missouri, the responsibilities are different, depending upon the relevant statute. In Montana, the state has responsibility for all valuation for property taxes. Table 5 lists the type of assistance provided by state agencies to the local authorities in valuing forest land for tax purposes.

In three states, no State assistance is provided. Local assessors are provided with suggested values by the State Department of Revenue in eight states, and five states provide a valuation formula either by statute or through the State Department of Revenue under the laws governing the valuation of forest land.

#### State/Local Administrative Responsibility for Valuation of Standing or Severed Timber

Table 6 indicates the agency with primary responsibility for the valuation of standing or severed timber in the study states.

Local assessors have primary responsibility for timber valuation in Georgia and Kentucky, which have ad valorem taxes on standing timber. The State Department of Revenue is responsible for administering the yield tax in six of the study states. In Virginia and Alabama, the severance tax is administered by the State Department of Revenue. Only in Minnesota is a yield tax administered primarily by the local jurisdiction.

Table 4  
Agency Responsible for Forest Land  
Valuation for Property Taxes in Selected States

State	State Department <sup>(1)</sup> of Revenue	State Department <sup>(2)</sup> of Forestry	Local Assessor
Alabama	Advisory	-	Primary
California	Advisory	Advisory	Primary
Florida	Advisory	Advisory <sup>(3)</sup>	Primary
Georgia	Review	-	Primary
Kentucky	Advisory	-	Primary
Louisiana	Review	-	Primary
Maine	Primary	Advisory	-
Minnesota	-	-	Primary
Missouri			Primary
Montana <sup>(4)</sup>	Primary	Advisory	-
New Hampshire	Advisory	Advisory	Primary
New York	Advisory <sup>(5)</sup> Primary		Primary
Oregon	Primary <sup>(6)</sup>	Primary <sup>(7)</sup>	Classification
Virginia	Advisory	Advisory	Primary
Washington	Advisory	Advisory	Primary

(1) Includes Board of Equalization.

(2) The Department of Forestry advises the State Department of Revenue on forest valuation procedures.

(3) Agriculture Assessment Law.

(4) The State Department of Revenue has primary responsibility for administration of all property tax valuation.

(5) The State Board of Equalization is responsible for valuation of state-owned forest land for property tax rebates from state to local government entities.

(6) Other than lands valued under Western Oregon Small Woodlot Option.

(7) For lands valued under Small Woodlot option only.

Table 5  
State Agency Assistance in the Valuation of  
Forest Land for Property Taxes in Selected States

State	Recommends or Determines Values	Recommends Methods of Valuation	Recommends Capitalization Rates for Use Value (1978 rate)
Alabama			
California	State Board of <sup>(1)</sup> Equalization		
Florida	-	State Dept. of Revenue <sup>(2)</sup>	State Dept. of Revenue
Georgia	-	-	
Kentucky	-	State Dept. of Revenue	
Louisiana	-	-	
Maine	State Assessor	State Assessor	State Assessor
Minnesota	(3)		
Missouri	State Tax Commission <sup>(4)</sup> (5)	State Tax Commission <sup>(1)</sup>	
Montana	State Department of Revenue	State Department of Revenue responsible for valuation.	
New Hampshire	State Dept. of Revenue	-	-
New York	(6)		
Oregon	State Dept. of Rev. <sup>(7)</sup>		
Virginia	State Dept. of Rev. <sup>(8)</sup>		
Washington	State Dept. of Rev.	State Dept. of Revenue	

Footnotes: (Table 5)

- (1) Value ranges specified by statute.
- (2) Use value/income approach prescribed by law.
- (3) Prescribed by law for Auxiliary Forest Law.
- (4) Set by State Tax Commission under Agricultural Assessment Law.
- (5) Prescribed by law - \$3 per acre for Forest Croplands Law.
- (6) Taxable Value limited to \$40 per acre times local equalization factor under Forest Cropland Law
- (7) Department of Revenue actually sets values except for lands classified under Small Woodlot Option which are valued by the Department of Forestry.
- (8) In counties which have adopted use value for forest lands.

Table 6

Agency Responsible for Valuation of Standing  
or Severed Timber in Selected States

State	Standing		Severed	
	State Dept. of Revenue	Local Assessor	State Dept. of Revenue	Local Assessor
Alabama		exempt	Set by Statute	
California		exempt	Primary	
Florida		exempt	none	
Georgia	Review	Primary	none	
Kentucky	Review	Primary <sup>(1)</sup>	none	
Louisiana		exempt	Primary	Advisory
Maine		exempt	none	
Minnesota		exempt	Advisory	Primary <sup>(2)</sup>
Missouri		exempt	Primary	
Montana		exempt	none	
New Hampshire		exempt	Primary	Advisory
New York (state owned lands)	Review Primary	Primary <sup>(3)</sup>	none	
Oregon		exempt	Primary	Advisory
Virginia		exempt	Set by Statute	
Washington		exempt	Primary	Advisory

(1) Exempt in practice.

(2) Under Auxiliary Forest Act only.

(3) Total value of land and standing timber may not exceed \$40 per acre times local equalization factor under Forest Cropland Law.

### Applicability of Yield or Severance Taxes

Five of the nine studied states which have a yield or severance tax apply the tax to timber harvested from government owned lands, as well as to timber harvested from private lands. If only the states with universally applied severance or yield taxes are considered,<sup>1</sup> the applicability of the taxes to timber from government-owned lands becomes five of seven. Oregon and Washington are the only states with such taxes which specifically exempt timber harvested from government-owned lands.

### Conclusions

An analysis of the data collected and conversations with state forestry tax and legislative officials lead the author to the following conclusions concerning timber tax administration in the states:

1. Economic or use valuation of forest lands for timber taxation, with provisions for capturing tax losses in cases where the land is removed from timber production, is the preferred method of tax valuation.
2. The ad valorem taxation of standing timber is becoming a thing of the past, either by treating timber as an agricultural crop totally exempted or by substituting a yield or severance tax.
3. Where the yield or severance tax applies to all timber harvested from private lands, it is, in most cases (currently five of seven states), applied to timber harvested from government-owned lands.
4. State Departments of Revenue and Forestry provide significant aid to local officials in the valuation and administration of the ad valorem taxation of timber and forest land.

## Footnotes

<sup>1</sup>Minnesota and Missouri apply a yield tax only under forest valuation laws that are restricted to a relatively minor percentage of private timberland.

## Where Do We Go From Here

Robert S. Manthy\*

The stated purpose of this symposium has been "... to present the latest information available on the economic, administrative, political, and resource allocation aspects of forest tax policy." My assignment is to review how well that purpose has been served.

I approach this task knowing that each participant brings with him his own set of objectives. Each participant will, therefore, assess the conference differently, based upon how well his personal objectives have been met. I suspect, for example, that John Vance will be disappointed. In his welcoming address he stated his personal concern over the need to look at taxes in terms of equity between alternative landownership classes and in terms of a presumed need for more timber management activity on nonindustrial private forest land holdings. Fortunately, most speakers directed their efforts at the stated conference purpose, that of providing a learning experience, rather than at their personal concerns.

Before addressing the question "Where Do We Go From Here?" it seems worthwhile to consider what this conference did not attempt to do. It did not attempt to promote or negate any particular form of taxation such as capital gains, yield taxes, or ad valorem taxes. Similarly, it did not attempt to reach a conclusion regarding the need to stimulate or discourage the harvesting or growing of timber. The conference planners correctly recognized that taxes are only one of a number of means that society can use to influence the behavior of its forest land owning members. Finally, nothing was to be established or proved. Consequently, it would be inappropriate to attempt to draw conference conclusions.

### Where To Now?

It appears to me that the only contribution I can make at this point is to provide a few observations on the major biases and omissions that I perceived. I will attempt to specify what we should have considered, but did not. My point of view is that of an academic and as an adviser. As an academic, my concerns will be the completeness, appropriateness, and accuracy of coverage. As an adviser to investors in forest lands through my affiliation with a resource economics

---

\*Professor of Forest Economics, Department of Forestry, Michigan State University, East Lansing, Michigan.

consulting firm, Greentree Associates, I am concerned with exactly the same things but from a very practical standpoint.

### Normative Problems

Several concepts of "goodness" appeared throughout the conference. Three such normative concepts were explicitly or implicitly stated by virtually every contributor.

First, a "wood is good" attitude was implicit in the almost universal assumption that the growing and regeneration of timber on forest land is a basic desire of all forest landowners and that taxation methods should encourage these activities. My experience indicates that very often the premise is false. A major class of forest landowners that I have dealt with are concerned principally with land ownership as a hedge against inflation. These owners are not particularly concerned with wood for wood's sake. If owned land is capable of growing trees at minimum expense they are not opposed to such a use.

Second, there was an apparent common belief among participants that the protection and retention of forest land investments is socially desirable. To the extent that this means that any forest taxation procedure that leads to a change in land use is undesirable, I cannot agree. Taxation is one of the tools society has available to it to direct land into alternative uses.

A third major normative concept that surfaced during the conference is that owner objectives are more important than social objectives, particularly when the ownership objective allowed for timber production.

Relatively little attention was given to the welfare of nonforest land owners as it is impacted by taxation on forest landowners. This obviously demonstrates the proclivity of foresters to see the world through a knothole. The concept of ownership as a privilege rather than as a right was also ignored. It may be that our society has evolved to a position where we no longer can afford to allow individual landowner sovereignty. In a similar vein, relatively little attention was given to the non-timber objectives of forest landowners. As I have said before, I have dealt with many landowners who feel that income production or sheltering is more important than timber production. Similarly, with the exception of Bill Conklin, relatively little attention was given to the revenue generation objectives of landowners. The tendency was to concentrate upon timber production impacts of taxation. Finally, and perhaps most seriously, virtually no consideration was given to the long-term conservation impact of alternative forms of taxation. No one volunteered that the yield tax can be used to discourage harvesting of timber. From a social point of view, a high yield tax may be a desirable conservation device.

One final comment about normative consideration seems appropriate. I detected virtually a complete failure on the part of participants to recognize that the concept of a "right" action requires definition of the "good" that is brought about by that action. It was convenient for participants to concentrate on defining what is a "right" in taxation without ever defining the "good" being pursued. The implicit good, of course, was that whatever results in higher levels of timber production is good. My above comments suggest my attitude toward that position.

### Non-Normative Problems

Matters of value are slippery and difficult to handle. Most of us prefer to ignore the need to define goodness and tend to concentrate on just "the facts." Certain implicit and explicit statements of "fact" surfaced during the conference that caused me some concern. The nature of my concern is that reality may not be as it was frequently described. Major sectors of our society do not concur with the "facts" presented. Factual incorrectness does not lend itself to providing an image of credibility.

Several concepts of "fact" arose during the conference and strained my sense of credibility. First, many participants apparently believe that intensive management is needed to meet future timber "requirements." Papers presented at the Airlie House Conference on the Role of the Non-Industrial Private Landowner suggest something else. If the objective is increased timber supply, it could be that higher timber prices are needed, not more intensive management. Second, there was an apparent implicit understanding among participants that forest land taxes determine management intensity. Yet, the papers presented suggest that the form of the tax may be far more important than the timing or the size of the tax. Furthermore, it is not clear whether higher taxes or lower taxes are required; a case can be made for both conditions. Generalizations are dangerous.

Will taxation methods have an impact upon landowner decisions regarding reforestation; or, do ownership objectives determine levels of reforestation? A related non-normative concept that strains our credibility is the belief that wildland owners want to grow timber. In many sections of the northern United States, naturalistically inclined owners want to grow trees, not timber.

Finally, I feel that the cash flow and capital gain arguments presented periodically throughout the conference were poorly stated and reasoned. I do not accept rightness by authority. My experience suggests that many of the forestry profession's tax authorities have gained their authoritative positions more by the loudness of their voices than by the accuracy and logical consistency of their arguments.

I realize that many of the above statements may sound quite critical. They are offered not for the sake of criticism but in an honest attempt

to provide a constructive answer to the question, "Where Do We Go From Here?" This conference has had many excellent speakers and some incisive discussion from participants. If we are to move forward in professional understanding of the implications of alternative methods of taxation of forest lands, we must build upon the information contained in these proceedings. I have attempted to identify some of the areas in need of attention.