

# FOREST VALUES AND THE IMPACT OF THE FEDERAL ESTATE TAX ON FAMILY FORESTS

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**Abstract.**—Previous research has suggested that heirs to family forest land may sell timber and/or land in order to pay state and/or federal estate taxes, which could result in land use conversion or other adverse ecological impacts. We estimated the number of Minnesota family forest landowners and the associated acreage that could be subject to estate taxes at various exemption levels. Using 2011 Minnesota forest land sale transactional data we calculated the minimum acreage that would trigger the federal estate tax at different hypothetical tax exemption levels and estate compositions (percent of gross estate whose value is comprised of forest land). Using the U.S. Forest Service’s National Woodland Owner Survey data for Minnesota and population mortality rates, we estimated the number of family forest ownerships and acres potentially affected under various scenarios.

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## INTRODUCTION

Of the United States’ estimated 751 million acres of forested land, 35 percent is owned by families and individuals (Butler 2008). Family forests, sometimes referred to as non-industrial private forests, are owned by individuals, married couples, trusts, and other unincorporated entities.

The federal government has taxed the intergenerational transference of estates through various laws since 1916 (Jacobson et al. 2007). Some 20 states and the

District of Columbia also currently impose estate and/or inheritance taxes; 12 impose estate taxes and six impose inheritance taxes. Two impose both (Michael 2011). The legal environment surrounding the estate tax has been particularly dynamic and uncertain over the past decade (Greene et al. in press).

From the perspective of large landowners in particular, the worst case scenario for estate tax law is that Congress allows the 2010 Tax Relief Act to sunset, causing the estate tax exemption and rate to revert to 2001 levels (Public Law 111-312, 124 Stat. 3296). That would mean that owners of estates worth more than \$1 million (\$2 million for couples) would have to pay a rate of 55 percent on estate value over that threshold. If Congress extends the current exemption and rate, owners of estates worth more than \$5 million for individuals and \$10 million for couples (plus inflation since 2001) will pay a rate of 35 percent.

The U.S. Forest Service expects that fully one-sixth of family forest land will be transferred over the next 5 years (USDA Forest Service 2012). This conclusion is derived in part by the fact that 19 percent of family forest owners fall within the ages 65-74 and an

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additional 15 percent are 75 or older. Collectively, this group of retirement-aged individuals owns 44 percent of family forests (Butler 2008). Some estates have had to sell parcels of land or timber to pay the estate tax (Greene et al. 2006). Given the area of land expected to be transferred in the near future, this raises two questions: How many owners and acres of forest land will be affected?; and Will affected landowners sell timber and/or land as a result?

The objective of this study was a) to estimate the number of owners and associated acres that could be affected by the federal estate tax; and b) estimate the degree to which timber and land might be sold as a result under various tax law scenarios within five states.

## BACKGROUND

Greene et al. (2006) attempted to quantify the effects of the federal estate tax on land ownership patterns among family forest owners. The authors surveyed about 1,400 members of two forest owner groups: the National Woodland Owner Association and the American Tree Farm System. With a 33 percent response rate, they found that 9 percent of family forest owners were involved in an estate transfer between 1987 and 1997, during which there was a constant \$600,000 exemption. Extrapolating, they estimated that 77,200 such transfers take place each year in the United States. Using average acreage owned by family forest owners, Greene et al. estimated the corresponding acreage to be 79.1 million per year.

Extrapolating from average acreage of timber in their sample that was sold to pay the estate tax, Greene et al. estimated that each year 4,900 estates sell timber to pay the estate tax, amounting to 2.4 million acres. The authors similarly estimated that 3,300 family forest owners sell on the order of 1.3 million acres annually to meet their tax liability. Since 29 percent of those sold parcels were developed, the authors estimated that about 400,000 acres of family forest are lost to development each year in such a fashion.

While the estimates made by Greene et al. (2006) need to be viewed with suspicion due to likely sample selection bias and other issues, they suggest that the estate tax has significant implications for the fate of family forests. No subsequent study has tried to reproduce or broaden their results. In this uncertain legal environment, there is a need for thorough understanding of how various permutations of estate tax law affect family forests.

## METHODS

The degree to which forest land is affected by the estate tax depends in part on the forest land owners' estate compositions. Only forest estates worth more than \$1 and \$5 million would be affected by "worst case" and "status quo" tax scenarios, respectively. Assuming a worst-case tax scenario, an extreme case of "all-forest" estate composition, and using our estimated median per-acre price for Minnesota parcels greater than 100 acres (\$975), only plots in excess of 730 acres would be affected by the estate tax. National Woodland Owner Survey (NWOS) data from 2006 suggest that an estimated 1,000 landowners in Minnesota own such parcels.

The extreme case of "all-forest" estate composition seems highly unlikely. We must take into account nonforest components of the estate: housing, investments, savings, and other assets. But we are faced with a near absence of data. We can only examine the affected owners and acres under differing assumptions of estate composition.

We began with a pilot study estimating forest land values in Minnesota. We obtained a sample of 489 forest land sales transactions in Minnesota that include the town, county, size of plot, and sales price.<sup>2</sup> These sales transactions occurred in 2009 and 2010 and represent only unimproved (no buildings) forested tracts, 20 acres or greater in size. We excluded tracts with improvements because we did not want to

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<sup>2</sup> Source: Michael Kilgore, University of Minnesota

conflate forest land value with the value of buildings. We limited our sample to parcels of 20 acres or more.

We calculated hypothetical minimum acreage thresholds, assuming a variety of per-acre forest land values, estate compositions (percent of total estate that is forest by value), and estate tax exemption levels. Put another way, we constructed a set of simplifying assumptions about the population of forest land owners and then calculated the minimum number of acres a landowner would have to own to be affected by the estate tax given those assumptions. The 489 forest land sales transactions informed the range of per-acre price assumptions and the possible tax law scenarios informed the range of tax exemption level assumptions. We then used 2006 NWOS data from Minnesota landowners to estimate the number of landowners and associated forested acreage meeting specified acreage thresholds.

An estimated 1,700 family forest owners could be affected by the estate tax at a \$1 million dollar tax exemption level, assuming estates are 50 percent forest and given a \$975 per-acre price (Fig. 1). At a \$5 million exemption level, the number of potentially affected ownerships drops to less than 50. The number of affected acres increases similarly for higher per-acre prices, estates with lower percent forest (by value), and lower tax exemption levels (Fig. 2). It is important to realize that these graphs indicate estimated owners and acres who *might* be affected by the estate tax, but not all of these landowners are expected to die (and therefore face the tax) every year. Nor does this information suggest how the families will react to the tax (e.g., sell land, sell timber, or some other action).

We can cautiously draw several conclusions. Under current estate tax law, it is mainly landowners who are relatively cash-rich and land-poor who will face the

estate tax. That is because there are very few (if any) privately owned tracts of forest land valued near \$5 million. If, on the other hand, the estate tax law is not continued at the status quo and instead reverts back to 2001 levels, many more landowners are expected to face the tax, including the relatively land-rich and cash-poor.

## NEXT STEPS

To obtain reasonable estimates of the number of forest land owners who might face the estate tax, we need more details about forest land owners' estate compositions. Specifically, we need to know what percentage of their total estates are composed of forest land. We are currently surveying Minnesota landowners to request information on, among other things, the value of their total estate and what percentage of that estate value is forest land. With this information, we can assign a more realistic range of estate compositions to the analysis behind Figures 1 and 2.

We also will expand the analysis to four other states—California, Michigan, North Carolina, and Washington—following similar procedures. There appears to be at least some high quality forest land sales transaction data from Michigan, but the types of data we seek may not be available in all states. In that case we will alter our analytical approach and/or select different states.

Indeed, a preliminary search for forest land sales transaction data suggests a near total lack of availability. This highlights the need to develop a nationally consistent periodic assessment of forest land values across the United States, something we will explore further upon completion of this analysis.

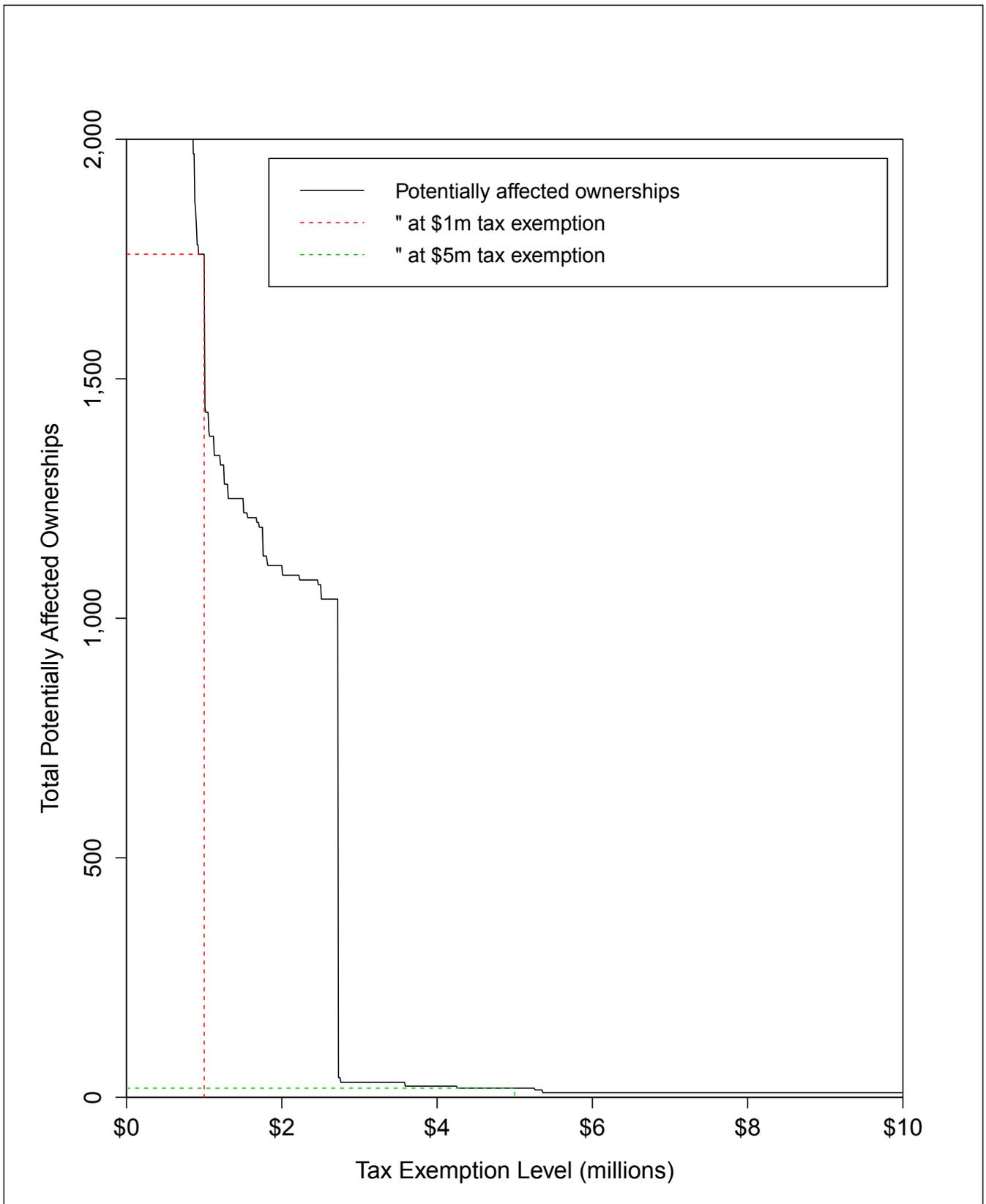


Figure 1.—Numbers of forest land owners potentially affected by the estate tax at varying tax exemption levels with estate = 50 percent forest and per-acre price = \$975.

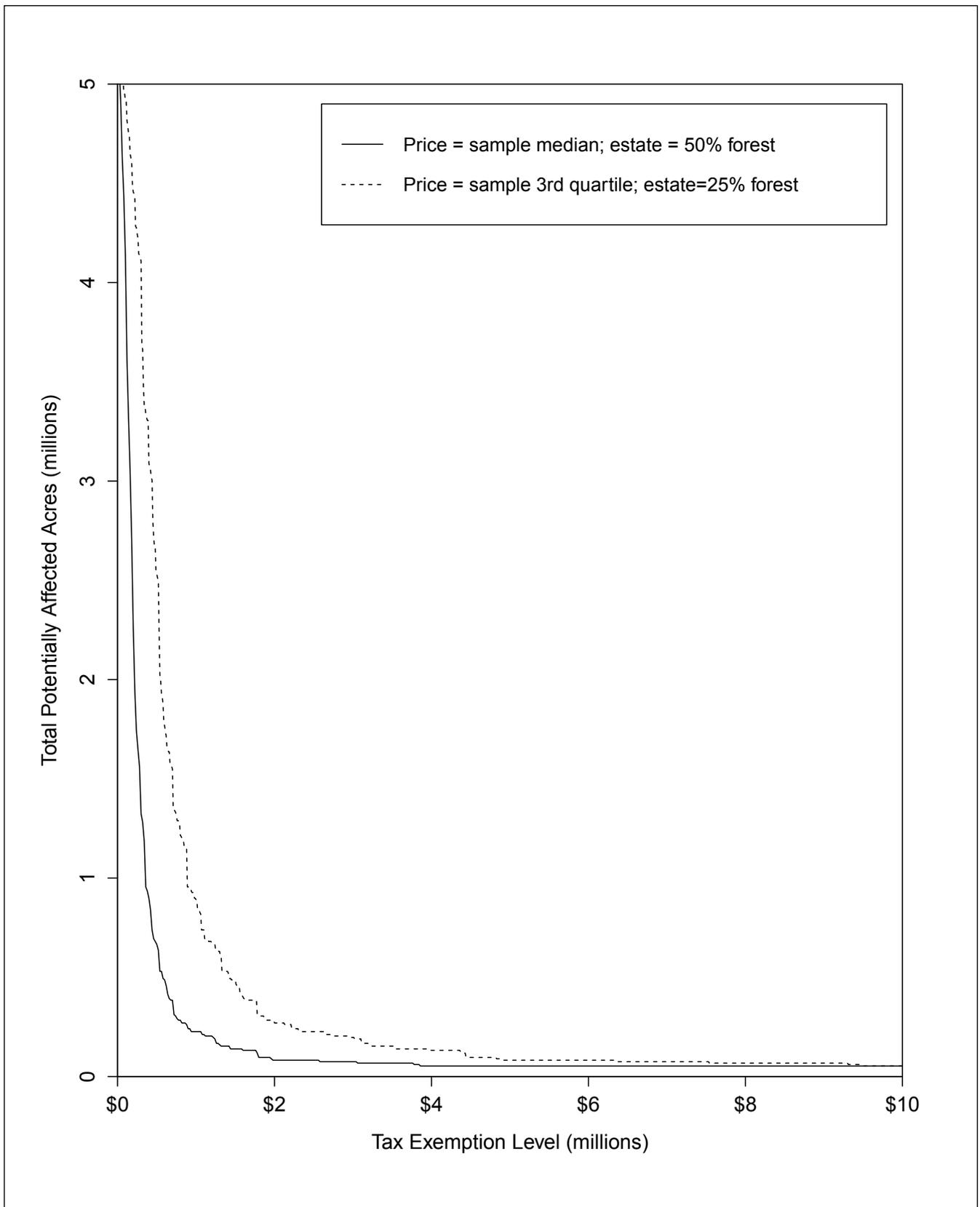


Figure 2.—Acres of forest potentially affected by the estate tax at varying estate values with varying estate composition and per-acre price.

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