
Impacts of Federal Estate Taxation on Investments in Forestry

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INTRODUCTION

The Federal Tax Reform Act of 1976 includes major revisions of federal gift and estate tax laws that will greatly affect the private, nonindustrial forest landowner who has inherited forest property from a family member. Estate taxes impose problems for any family. But for an estate made up primarily of timber and land, the problems encountered can be particularly difficult.

First, because forest property is often more valuable (according to appraisers) than many owners realize, the magnitude of the debt is often unexpected. Second, even if the magnitude of the tax is anticipated, liquidity—or lack of it—heavily affects the ability to pay the federal estate tax. Cash or readily marketable assets might not be sufficient or available, forcing the new owner to cut timber to pay the tax. However, in choosing this option, the new owner incurs costs beyond the estate tax itself. These include federal and state income taxes on capital gains from harvested timber, and yield taxes in those states assessing timber harvests. Depending on the local market, buyers may take advantage of the property owner's need for cash by offering low timber prices. Most important, and often overlooked, are the reductions in cash flow and present net worth of the forest estate resulting from forced sales to pay the tax.

Our objectives are to analyze how new estate tax laws affect forest property owners for different forest conditions,

and to determine present net worth of forest estates for varying age-class distributions and stocking levels when the new forest owner (heir) must fund the estate tax by selling standing timber.

CHANGES IN ESTATE TAX LAW

The Tax Reform Act of 1976 contains several new federal estate tax provisions especially pertinent for owners of forest property:

1. The marital deduction for property transfer between spouses is \$250,000 for estates of \$500,000 or less, and one-half for estates in excess of \$500,000 (*Explanation of Tax Reform Act of 1976*, p. 92).
2. Pre-1977 gift and estate tax exemptions of \$30,000 and \$60,000, respectively, were replaced by a unified tax credit beginning at \$30,000 in 1977 and increasing each year to \$47,000 after 1980. For example, a gift or estate of \$175,625 would be taxed \$47,000 in 1981; however, this tax would be offset by a \$47,000 tax credit. Therefore, a tax credit of \$47,000 would have a property exemption equivalent of \$175,625 (*Explanation of Tax Reform Act of 1976*, p. 91).¹

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¹ For larger estates, the equivalent exemption for a \$47,000 tax credit is less than \$175,625 because of the progressive nature of the federal estate tax.

3. Tax rates for gifts and estates were increased and combined into a unified gift and estate tax rate schedule, whereas prior to 1977, gifts were taxed at 75% of the estate rate (*Tax Reform Act of 1976*, p. 72).

TRANSFER AT DEATH

For this and subsequent examples, we will assume that forest property comprises the entire estate, that interest in the property was owned solely by the decedent, and that all the property is transferred to the surviving spouse. We have not considered the federal credit for state inheritance taxes; states often have a "pickup" tax equaling the federal credit, rendering the effective tax unchanged. The following simplified example will show how the federal estate tax is calculated.

Assume that a \$500,000 estate comprised entirely of forest property is transferred to a surviving spouse in 1981 (Table 1). The executor may use either market value or value in use for forest land (if the forest land and the owners meet certain qualifications) to determine the forest-property worth; we will assume that forest use values apply. Administrative costs (\$20,000) for settling the estate and other liens against the property (if any) are subtracted from the gross estate; but for this and subsequent examples, we will assume that no liens exist. In addition, because the adjusted gross estate is less than \$500,000, a marital deduction of \$250,000 is subtracted. Thus, for a net taxable estate of \$230,000, a tentative tax of \$64,400 is calculated from the federal gift and estate tax table; subtracting the \$47,000 tax credit leaves due a federal estate tax of \$17,400.

Keep in mind that the estate value

TABLE 1
EXAMPLE CALCULATION OF FEDERAL
ESTATE TAX

Parameter	Value
Gross Estate	
(value of the forest property)	\$500,000
Administrative Expense	— 20,000
Adjusted Gross Estate	\$480,000
Marital Deduction	— 250,000
Net Taxable Estate	\$230,000
Tentative Federal Estate Tax	\$ 64,400
Minus Federal Tax Credit (1981)	— 47,000
Federal Estate Tax Due	\$ 17,400

TABLE 2
APPRAISED VALUES OF LAND AND
TIMBER FOR SITE II DOUGLAS FIR*

Age (years)	Value per Acre
0	\$ 240
10	590
20	1,090
30	1,644
40	4,026
50	6,592
60	10,547

Source: Oregon Department of Revenue, 1977.

* An 85% stocking level is assumed.

(and thus, the tax due) will vary with the *value* of the forest and land, not only with the area or acreage involved. Estate value is primarily based on the age, condition, and stocking of the already-existing forest. Thus, forest condition markedly influences the estate tax due for any given-size forest. To illustrate this point, appraisal values for Site II forest land planted in Douglas fir were used to calculate the value per acre for age classes varying from bare land to 60-year-old timber (Table 2).

If property is passed between spouses after 1980, a marital deduction of \$250,000 plus an equivalent property tax

TABLE 3
EQUIVALENT ACRES ENTIRELY EXEMPTED FROM FEDERAL ESTATE TAXATION
FOR PROPERTY TRANSFER AT OWNER'S DEATH*
(Douglas Fir, Site II Stocking)

Age (years)	Transfer between Spouses** (acres)	Transfer from Surviving Spouse to Heirs*** (acres)
0	1,773	732
10	721	298
20	390	161
30	259	107
40	106	45
50	65	27
60	40	17

* Assumes that this forest property is the only property subject to federal estate taxes. Assumes no state inheritance tax.

** Marital deduction (\$250,000) plus equivalent property exemption (\$175,625) for \$47,000 tax credit equals \$425,625 property exemption after 1980.

*** Equivalent property exemption of \$175,625 for a \$47,000 tax credit after 1980.

exemption of \$175,625 (mentioned above), totaling \$425,625, could be taken without paying federal estate taxes. Dividing the total exemption by the appraised value per acre of bare land yields 1,773 acres of bare forest land that could escape taxation; if land were stocked with 60-year-old timber, only 40 acres would go untaxed (Table 3). When this property is subsequently passed from surviving spouse to heirs, only the equivalent property value exemption of \$175,625 will apply (\$47,000 tax credit). Only 732 acres of bare forest land or 17 acres stocked with 60-year-old timber will pass to heirs untaxed (Table 3).

EFFECTS ON PRESENT NET VALUE

Harvesting timber to pay for estate taxes will affect the present net value of the forest estate. Further, the magnitude of this effect will vary depending on forest conditions. The following analysis assumes that the long range goal is a

regulated forest;² area control was the harvest method chosen to achieve this goal.

Three forests, each 600 acres but varying greatly in age-class arrangement and stocking, were simulated and compared to see how funding the tax by harvesting affected cash flow and present net value. Oregon Department of Revenue appraised values for 1977 were applied to forest land and trees; a 6% discount rate was used to compare present net value of properties. For each case, present net value (PNV) where timber was immediately harvested to pay the estate tax was compared with PNV where the estate tax was funded by other means. Effects of increasing federal estate taxes on the increasing value of a forest property were also examined because such taxes escalate disproportionately as unit size increases.

² Regulation means arranging harvest schedules of the current forest so that eventually, amount harvested each year equals growth for the growing period (rotation) chosen.

CASE 1. This forest, which could be considered overstocked,³ has 150 acres of 60-year-old timber with varying acres in the younger age-classes (Table 4). When multiplied by the total number of acres in each age class, property values by age class (Table 2) yield a total property value of \$2,592,900 (Table 5). The estate tax owed is \$416,974 (see Appendix Table A-1 for specific calculations). To fund estate tax liability by selling timber, about 40 timbered acres in the 60-year age class must be cut (\$416,974 ÷ \$10,307).⁴ Resulting acreage distribution is presented in Table A-2.

Our analysis first takes the initial, forest age-class distribution (Table 4), regulates the forest using area control, and calculates the PNV and cash flow resulting from regulation (Table A-3). Next, our analysis simulates regulating the same forest using the distribution calculated when the estate tax was funded by harvesting (Table A-2); results of this regulation are evident in Table A-3. Reduction of PNV by funding the estate tax through immediate harvesting was \$180,005.02 (Table A-6).

CASE 2. This forest, which could be considered understocked, has 50 acres of 60-year-old timber with varying acres in the younger age-classes (Table 4). Applying values per acre (Table 2) to the total number of acres in each age class generates a total estate value of \$1,702,600; estate tax due is \$236,907 (Table 5; Table A-1). By again assuming that the estate tax will be funded by harvesting 60-year-old timber, 23 acres of timber must be harvested (\$236,907 ÷ \$10,307). Table A-2 provides the age-class distribution after harvest.

Table A-4 shows both cash flow generated from the forest assuming the estate tax was funded by other means,

TABLE 4
DISTRIBUTION OF FOREST LAND BY AGE CLASS FOR THREE MANAGED 600-ACRE FORESTS
(Acres)

Age Class* (years)	Case		
	1	2	3
0	0	0	86
10	225	225	86
20	75	75	86
30	0	100	86
40	75	75	86
50	75	75	85
60	150	50	85

* Ten-year age classes are assumed.

TABLE 5
ACRES OF TIMBER HARVESTED TO FUND THE ESTATE TAX

Case	Estate Value	Estate Tax Due*	Acres Cut to Fund Estate Tax
1	\$2,592,900	\$416,974	40
2	1,702,600	236,907	23
3	2,119,300	319,156	31

* See Table A-1 for specific calculations.

and cash flow generated when the tax was funded by harvesting timber. Total impact was a reduction in PNV of \$172,912.57 (Table A-6).

CASE 3. This forest may be considered regulated (Table 4). The total estate value (calculated like the previous two cases) was \$2,119,300; estate tax due was \$319,156 (Table 5; Table A-1). Post-harvest acreage distribution is evident in Table A-2.

³ Understocked or overstocked means either less or more timber volume than normal yield equations would indicate for a regulated forest.

⁴ Value of timber and land for 60-year age class (\$10,547) - value of bare land (\$240) = \$10,307.

TABLE 6
IMPACT ON CASH FLOW AND PNV FROM FUNDING THE ESTATE
TAX BY HARVESTING TIMBER

Case	Reduction in Cash Flow	Reduction in PNV of Cash Flow*	Estate Tax	Total
1	\$ 168,440.00	\$ 180,005.02	\$416,974.00	\$ 596,979.02
2	367,100.00	172,912.57	236,907.00	409,819.57
3	3,581,930.00	1,105,497.50	319,156.00	1,424,653.50

* 6% discount rate was used.

TABLE 7
ACRES HARVESTED TO PAY FEDERAL ESTATE TAX AS
REGULATED FOREST PROPERTY SIZE INCREASES

Size of Forest Property (acres)	Estate Value*	Federal Estate Tax	Acres Harvested To Pay Tax	Acres Harvested (% of total acres)
600	\$2,119,300	\$ 319,156	31	5.2
1,200	4,238,600	787,357	76	6.3
1,800	6,557,900	1,340,101	130	7.2

* The estate value for Case 1 was used for the example.

Table A-5 presents both cash flow generated from the forest assuming the estate tax was funded by other means, and cash flow generated when harvested timber funded the estate tax. Thirty-one acres ($\$319,156 \div \$10,307$) of 60-year-old timber must be cut to fund the estate tax in this manner, for a total reduction in PNV of \$1,105,497.50 (Table A-6).

DISCUSSION

Comparing Impacts on PNV

The reduction in PNV for each case may be compared between forests. The largest impact on PNV occurred for Case 3, the initially regulated forest; Case 1 suffered the next highest impact and Case 2, the lowest (Table 6). Comparing impacts between forests shows

that the closer a forest is to regulation, the greater the impact on PNV if the resulting estate tax is funded by harvesting timber. For Case 3, PNV impact was approximately three times greater than the tax itself.

Further inquiry is needed interrelating size of forest holdings and possible repercussions of the estate tax. As shown earlier, the impact of the tax varied greatly with initial age-class distribution. Perhaps a more appropriate gauge would be the value of the property rather than the size, because the greater the estate value, the greater the tax. In fact, estate tax increases proportionately faster than the estate value (Table 7), a finding in keeping with the progressive nature of the tax. Impact on PNV would have to be determined on an individual basis—each forest must be

regulated, first assuming no harvest, then simulating harvest, to fund the tax.

The foregoing analysis assumes that stumpage prices equal market prices estimated by the Department of Revenue for 1977. Increased harvesting to pay estate taxes could affect the stumpage prices local buyers offer, widening the impact on PNV if the appraised values used to levy estate taxes remain unchanged.

Changes in the discount rate used in the analysis did not affect the estate tax itself. However, as the discount rate is increased, the impact on PNV decreases.

Alternatives for Funding Estate Taxes

Purchasing insurance in the amount of the future estimated estate tax is a viable alternative to prepare for this debt (Kess and Westlin 1977, p. 201). The original owner could actually afford to insure the forest property such that the discounted value of premium payments over the owner's expected life would not exceed the discounted value of PNV loss from the forest. Although life insurance may be subject to estate taxes, it is not subject to federal income tax—a substantial benefit to the heir(s) of the forest property.

Borrowing from lending institutions or (if the property qualifies) from the government could fund the estate tax; however, complex problems could result. Currently, few lending agencies will loan money to forest enterprises because of the high risk involved. Repaying principal and interest with income generated from timber harvesting could cause greater impact on PNV than funding the estate tax by harvesting. Thus, this alter-

native demands careful analysis on an individual basis to determine its merit.

SUMMARY

If a regulated forest is the forest management goal, good estate tax planning is a must. Impact of the federal estate tax on the PNV of inherited, nonindustrial, private forest land can be substantially more than payment of the tax itself. Our three simulated cases determined the amount of timber required to fund the estate tax and the resulting impact on future cash flow and PNV, which changed substantially as a result of unexpected harvests. Regulated forest property (Case 3) suffered the greatest losses in this analysis. Increases in the discount rate lessened the impact on PNV but did not affect the estate tax due. Additionally, as the value of forest property increased, the estate tax increased in a progressive fashion.

Two alternative methods of funding the estate tax were outlined. Purchasing insurance based on future expected income or borrowing the tax equivalent from a lending institution were set forth as alternatives worthy of further investigation.

References

- Explanation of Tax Reform Act of 1976*. 1976. Chicago, Ill.: Commerce Clearing House, Inc.
- Tax Reform Act of 1976 (Including the New Estate and Gift Tax Provision)*. 1976. Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Beuter, J. H.; Johnson, K. N.; and Scheurman, H. L. 1976. *Timber for Oregon's Tomorrow*. Research Bulletin 19. Forest Research Laboratory, Corvallis: Oregon State University.
- Kess, Sidney, and Westlin, Bertil. 1977. *CCH Estate Planning Guide, 1977 Edition*. Chicago, Ill.: Commerce Clearing House, Inc.

APPENDIX

The TREES (Timber Resources Economics Estimation System) model developed by Beuter, Johnson, and Scheurman (1976) was used to simulate the growth of forest land in cases 1, 2, and 3. Many assumptions about forest management must be made for this simulation; however, in each case, assumptions were based on the "most probable" set of circumstances surrounding forest growth and management now and in the future.

The only input differing among simulations was initial inventory (number of acres in each age class). For each case, acres computed were immediately cut (thereby changing the initial distribution), and timber was sold to pay the tax. How the estate tax affected forest management was determined by first using the initial acreage distribution for each case, then substituting adjusted distributions.

TABLE A-1
CALCULATED ESTATE TAX FOR EXAMPLE CASES

Adjustments	Calculated Estate Tax		
	1	2	3
Gross Estate Value*	\$2,592,900	\$1,702,600	\$2,119,300
Administrative Expense	- 20,000	- 20,000	- 20,000
Adjusted Gross Estate	2,572,900	1,682,600	2,099,300
Marital Deduction	- 1,286,450	- 841,300	- 1,049,650
Net Taxable Estate	1,286,450	841,300	1,049,650
Tax	463,974	283,907	366,156
Less Tax Credit (1981)	- 47,000	- 47,000	- 47,000
Tax Due	416,974	236,907	319,156

* Gross estate value is found by multiplying appropriate row value (Table 2) by number of acres in the appropriate age class for each case (Table 4).

TABLE A-2
DISTRIBUTION OF ACRES BY AGE CLASS
AFTER HARVESTING TO FUND THE ESTATE TAX

Age Class (years)	Case		
	1 (40 acres cut)*	2 (23 acres cut)*	3 (31 acres cut)*
0	40	23	117
10	225	225	86
20	75	75	86
30	0	100	86
40	75	75	86
50	75	75	85
60	110	27	54

* To determine acres that must be cut to fund the estate tax, divide tax due (Table A-1) by assessed value per acre (Table 2).

TABLE A-3
HARVEST AND CASH FLOWS FOR ACREAGE DISTRIBUTION, CASE 1*

Decade	Harvest Volume by Diameter Range (fbm) ^b		Cash Flow by Diameter Range (\$) ^b		Total
	9-12.9 in.	13-20.9 in.	9-12.9 in. (\$133 per M fbm)	13-20.9 in. (\$177 per M fbm)	
Initial Acres^c					
1977-1987	930,000	6,260,000	123,690	1,108,000	1,231,690
1987-1997	500,000	4,960,000	66,500	877,920	944,420
1997-2007	930,000	4,770,000	123,690	844,920	968,610
2007-2017	7,010,000	—	932,330	—	932,330
2017-2027	6,320,000	250,000	840,560	44,250	884,810
2027-2037	1,610,000	5,770,000	214,130	1,021,290	1,235,420
2037-2047	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780
Adjusted Acres^d					
1977-1987	930,000	5,520,000	123,690	977,040	1,100,730
1987-1997	930,000	3,720,000	123,690	658,440	782,130
1997-2007	1,740,000	2,790,000	231,420	493,830	752,250
2007-2017	—	6,320,000	—	1,118,640	1,118,640
2017-2027	—	6,300,000	—	1,115,100	1,115,100
2027-2037	1,920,000	5,390,000	255,360	954,030	1,209,390
2037-2047	1,610,000	6,320,000	214,130	1,118,640	1,332,770
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780

* Run length = 100 years (10 periods).

^b Harvested timber is obviously not all the same size; a premium was paid for the larger diameters.

^c Distributions from Table 4.

^d Distribution *after* cutting to fund the estate tax from Table A-2.

TABLE A-4
HARVEST AND CASH FLOWS FOR ACREAGE DISTRIBUTION, CASE 2^a

Decade	Harvest Volume by Diameter Range (fbm) ^b		Cash Flow by Diameter Range (\$) ^b		Total
	9-12.9 in.	13-20.9 in.	9-12.9 in. (\$133 per M fbm)	13-20.9 in. (\$177 per M fbm)	
	Initial Acres ^c				
1977-1987	2,170,000	2,670,000	288,610	472,590	761,200
1987-1997	3,534,000	1,054,000	469,490	185,850	655,340
1997-2007	4,712,000	—	626,430	—	626,430
2007-2017	7,006,000	—	931,000	—	931,000
2017-2027	6,324,000	248,000	840,560	44,250	884,810
2027-2037	1,610,000	5,766,000	214,130	1,008,800	1,222,930
2037-2047	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780
Adjusted Acres ^d					
1977-1987	2,730,000	1,430,000	363,090	253,110	616,200
1987-1997	3,970,000	60,000	528,010	10,620	538,630
1997-2007	4,340,000	—	577,220	—	577,220
2007-2017	6,630,000	—	881,790	—	881,790
2017-2027	6,570,000	—	873,810	—	873,810
2027-2037	1,800,000	5,580,000	239,400	987,660	1,227,060
2037-2047	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780

^a Run length = 100 years (10 periods).

^b Harvested timber is obviously not all the same size; a premium was paid for the larger diameters.

^c Distributions from Table 4.

^d Distributions *after* cutting to fund the estate tax from Table A-2.

TABLE A-5
HARVEST AND CASH FLOWS FOR ACREAGE DISTRIBUTION, CASE 3^a

Decade	Harvest Volume by Diameter Range (fbm) ^b		Cash Flow by Diameter Range (\$) ^b		Total
	9-12.9 in.	13-20.9 in.	9-12.9 in. (\$133 per M fbm)	13-20.9 in. (\$177 per M fbm)	
Initial Acres^c					
1977-1987	1,610,000	6,450,000	214,130	1,141,650	1,355,780
1987-1997	1,610,000	6,450,000	214,130	1,141,650	1,355,780
1997-2007	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2007-2017	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2017-2027	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2027-2037	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2037-2047	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780
Adjusted Acres^d					
1977-1987	2,670,000	1,670,000	355,110	295,590	650,700
1987-1997	3,530,000	870,000	469,490	153,990	623,480
1997-2007	4,280,000	430,000	569,240	76,110	645,350
2007-2017	5,520,000	—	734,160	—	734,160
2017-2027	5,830,000	870,000	775,390	153,990	929,380
2027-2037	2,480,000	4,590,000	329,840	812,430	1,142,270
2037-2047	1,550,000	5,520,000	206,150	977,040	1,183,190
2047-2057	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2057-2067	1,610,000	6,450,000	214,130	1,141,650	1,355,780
2067-2077	1,610,000	6,450,000	214,130	1,141,650	1,355,780

^a Run length = 100 years (10 periods).

^b Harvested timber is obviously not all the same size; a premium was paid for the larger diameters.

^c Distributions from Table 4.

^d Distribution *after* cutting to fund the estate tax from Table A-2.

TABLE A-6
CASH FLOW AND PNV DIFFERENCES FOR THREE EXAMPLE CASES

Decade	Cash Flow			PNV Difference at 6% Discount
	Initial	Adjusted	Difference	
Case 1				
1977-1987	\$1,231,710	\$1,100,730	\$130,980	\$ 96,402.42
1987-1997	944,420	782,130	162,290	66,698.50
1997-2007	967,980	752,250	242,730	55,704.35
2007-2017	932,330	1,118,640	-186,310	- 23,874.99
2017-2027	884,810	1,115,100	-230,290	- 16,478.72
2027-2037	1,235,420	1,209,390	26,030	1,040.07
2037-2047	1,355,780	1,332,770	23,010	513.39
2047-2057	1,355,780	1,355,780	—	—
2057-2067	1,355,780	1,355,780	—	—
2067-2077	1,355,780	1,355,780	—	—
			$\Sigma = 168,440$	$\Sigma = 180,005.02$
Case 2				
1977-1987	\$ 761,200	\$ 616,200	\$145,000	\$106,721.27
1987-1997	655,340	538,630	116,710	47,965.87
1997-2007	626,430	577,220	49,210	11,293.25
2007-2017	931,000	881,790	49,210	6,306.09
2017-2027	884,810	873,810	11,000	787.12
2027-2037	1,223,030	1,227,060	- 4,030	- 161.03
2037-2047	1,355,780	1,355,780	—	—
2047-2057	1,355,780	1,355,780	—	—
2057-2067	1,355,780	1,355,780	—	—
2067-2077	1,355,780	1,355,780	—	—
			$\Sigma = 367,100$	$\Sigma = 172,912.57$
Case 3				
1977-1987	\$1,355,780	\$ 650,700	\$705,080	\$518,945.02
1987-1997	1,355,780	623,480	732,300	300,963.16
1997-2007	1,355,780	645,350	710,430	163,037.29
2007-2017	1,355,780	734,160	621,620	79,658.47
2017-2027	1,355,780	929,380	426,400	30,511.64
2027-2037	1,355,780	1,142,270	213,510	8,531.16
2037-2047	1,355,780	1,183,190	172,590	3,850.76
2047-2057	1,355,780	1,355,780	—	—
2057-2067	1,355,780	1,355,780	—	—
2067-2077	1,355,780	1,355,780	—	—
			$\Sigma = 3,581,930$	$\Sigma = 1,105,497.50$