Does Open Space Pay in Brentwood?

Part 1:
Housing Growth and Taxes

Brentwood Open Space Task Force
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Most of the undeveloped fields and forests in Brentwood comprise land that can be built on. Over time, this land either will be sold to developers who will satisfy the demand for new homes, or will be preserved from development by individual private actions or by public initiative.

*Any **public** effort to preserve land will generate public benefits, but of course these benefits will come at a cost. In this is the opportunity for Brentwood residents to unite or to divide.*

The value of preserving open lands is compelling: protection of the rural environment we love; the opportunity for recreation; the protection of habitat; the protection of Brentwood's precious aquifer; the preservation of the very things that have defined Brentwood for three and a half centuries.

At the same time, many taxpayers, particularly those with modest or fixed incomes, may feel they cannot afford the cost of open space protection. And individual landowners, even those sympathetic with open space protection, will want to protect their right to sell their land as they see fit when the need appears.

*Without forgetting the aesthetic and environmental benefits of preserving Brentwood's farms and fields, the cornerstone of uniting Town residents is an understanding of the taxpayer economics of open space preservation. Stated simply, if public open space preservation efforts can reduce rather than add to the growth in taxes, then we **all** have something to gain from a publicly-funded preservation initiative that gives new options to landowners.*

This analysis is the first of two papers that take on the issue. This paper quantifies the impact of new homes on Brentwood taxes. The second paper will address the tax costs and benefits of open space preservation.

There probably is not an adult Brentwood resident who hasn't noticed two dramatic factors of town life: the increase in the property tax rate, and the blossoming of housing developments in the old fields and farmlands. Most people probably assume that there is some relationship between the two: that the arrival of new families in a town puts a new demand on schools and town services that may require property tax hikes to pay for it.

But the quantitative relationship between housing growth and taxes is a speculative one if you don't measure it, and questions remain. Don't large new homes add enough to the property tax base to offset the costs created by new children in the schools? Is the minimal 'current use' property tax rate on Brentwood's open lands really adequate to contribute to the cost of town services to begin with? Doesn't the conversion of current-use lands to higher-taxed residential lands contribute to the tax base? Couldn't the increase in town tax rates just be the result of general inflation, and the growing complexity of school and town administration?

It was probably easy for many years in New Hampshire communities to assume that the new homes were at least contributing new taxes that offset the school and town service costs. But tax rates *were* rising, and in the mid-1990's, New Hampshire towns began to measure the relationship of housing development and taxes. UNH Cooperative Extension and the Rockingham Conservation District assisted some of these first efforts, in the form of "Cost of Community Services" studies.

These studies quantified the significant pressure on tax rates of residential development in New Hampshire. UNH Cooperative Extension's Phil Auger summarized these early studies in a seminal article, "Does Open Space Pay?"[1]. Since the publication of this article, there have been more studies, followed by a small revolution in New Hampshire open-space protection efforts in high-growth towns, sparked in part by the clarity of the findings on the causes of rising taxes.

In *all* communities studied, the conversion of open space to year-round family homes was shown to increase taxes, although to differing degrees in different communities. New homes don't generate enough taxes to cover the school and town services costs they generate. And even though open lands do not generate as much tax income, they use even less in town services, by far. The towns that are more densely developed systematically have higher taxes.

Brentwood's Open Space Task Force has done a Cost of Community Services analysis for Brentwood. The details, based on Brentwood's 2002 budget, are attached to this paper, but the results are easy to summarize. The important measurement is whether each land use (residential, commercial/industrial, open space) generates a tax *deficit* (town costs exceed tax revenues) or a tax *surplus* (tax revenues exceed town costs):

- *Residential property generates Town revenues that fall short of school and Town service costs by 17%, resulting in a **tax deficit** of $1.035 million.*
- *Commercial/industrial property generates Town revenues that exceed Town services costs by 76%,resulting in a **tax surplus** of $1.028 million.*
- *Open lands generate Town revenues that exceed Town services costs by 17%, resulting in a **tax surplus** of $6,517.*

[1] Philip A. Auger, Does Open Space Pay?, UNH Cooperative Extension, 1996. This document is available at the following website address: http://ceinfo.unh.edu/nrgn1010.pdf .

How does Brentwood compare to other communities in New Hampshire? The table below summarizes the results of similar studies done over the last eight years (most recent studies listed first):

Community	Open Space % of Town Acres	Residential Tax Deficit	Open Space Tax Surplus	Commercial/ Industrial Tax Surplus
Brentwood	***54%***	***-17%***	***+17%*** includes some open space preservation cost already	***+76%***
Groton	71%	-1%	+21%	+88%
Sutton	72%	-1% high retiree & seasonal homes	+79%	+60%
Lyme	78%	-5%	+77%	+72%
Fremont	64%	-4%	+64% cost skewed by expense of forest fire during year studied	+6% commercial properties hard to estimate due to lack of zoning
Deerfield	52%	-15%	+65%	+78%
Meredith	40%	-6% (-57% year round; +49% seasonal)	+71%	+52%
Alton	55%	-6% (-53% year round; +57% seasonal)	+48%	+46%
Stratham	35%	-15%	+60%	+81%
Peterborough	55%	-8%	+46%	+69%
Exeter	25%	-7%	+18%	+60%
Dover	35%	-15%	+6% cost increased by forest fire training during period studied	+37%

Source (other than Brentwood data): Dorothy Tripp Taylor, NH Wildlife Federation, 2000[2].

Some observations on the numbers:

- Brentwood's tax deficit of -17% for residential property is at the high end in comparison to other NH towns, but comparable to that of several towns in the region (Dover, Stratham, Deerfield).
- The real economic value of open space is in keeping it open: that is, avoiding conversion to residential use, which generates large tax deficits. (Open space by itself generates total taxes of just $26,277[3].) Open space of course also carries aesthetic, environmental and groundwater protection value.

[2] Cost of Community Services studies traditionally present findings in terms of the ratio of costs per dollar of town income, whereas we present the *same* information as a percentage tax surplus or deficit (the percentage by which income exceeds or falls short of income). Brentwood findings are presented both ways in the attached detailed analysis.

[3] Open space would show a much higher tax surplus than the 17% shown, except for the effect of the $25,000 warrant article to support creation of conservation easements. In other words, some land protection costs are already factored in.

- To offset high tax rates, commercial/industrial property in commercially-zoned areas is capable of generating significant tax surpluses. Brentwood commercial property, valued at only 23% of the residential tax base, generates 76% tax surpluses, sufficient to subsidize nearly all the residential tax deficits.
- Absent the subsidy of residential tax deficits by commercial/industrial property taxes, Brentwood's tax rate of $30.64 per $1,000 of assessed valuation[4] would have to be about 13% higher (between $34 and $35 per $1,000) to close the gap.
- Some towns may show a that residential land use is in a breakeven situation (small or no residential land use tax deficit), but that appears to be true in towns without a substantial commercial/industrial tax base. Towns with substantial commercial/industrial taxes (Dover, Stratham, Brentwood) can use those taxes to avoid some tax rate increases.

What is the impact of a surplus or deficit? Well, if everything stays the same, not much, since the town's *overall* tax rate blends the surpluses and deficits associated with particular types of land use into a single set of tax rates that guarantees the town, on whole, will break even in any year. However, the underlying tax deficits of residential property become very apparent if land use is *switching* from open land to residential as the years go by: the town tax rates have to be recalibrated *upward* each year as land use becomes more residential.

What's behind the numbers? Primarily the cost of schools, as one might expect:

Brentwood 2002 Municipal & County Budget	$ 2,132,073	29%
Brentwood 2002 Net School Budget	***5,218,012***	***71%***
Total Brentwood 2002 Budget	$ 7,350,715	100%

Source: Brentwood Budget Committee

School costs not only constitute 7/10 of the school budget; they have an even greater impact on the property tax rate than this fraction might imply. Whereas municipal and county government costs (i.e. the costs of town management, fire, police, jails, etc.) constitute 29% of the Town budget, they claim only 16% of the property tax rate. The reason is that the Town also collects significant fee income other than property taxes, most significantly DMV motor vehicle registration payments. The result is that fully 84% of the tax rate is driven by school costs.

2002 Components of Brentwood Property Tax Rate (per $1,000 of Assessed Valuation)		% of Total
Town Government	$ 2.96	10%
County Government	1.74	6%
School (Local & State)	***25.94***	***84%***
Total	$ 30.64	100%

Source: Brentwood 2001 Town Report.

[4] All tax rate figures used here are before the 2002 reassessment of Brentwood properties. The effect of reassessment should be to increase valuations by about half and to conversely reduce the tax rate / $1,000 by about a third, given that the current Town assessment ratio (assessed valuation / fair market value) is now .65 and would be at 1.00 after reassessment.

Implications:

- Given that a new home with one or two school-age children will bring an average net school cost to the Town of $7,918 for each student[5], then the required assessed residential property valuation is $305,243 *for each school-age child* in order for the Town to break even on their schooling[6]. This seems a tall order, considering that the average valuation per student in Brentwood is now only $207,367[7].
- If the New Hampshire statewide property tax for schools were repealed (and all five declared candidates for Governor are opposed to it), Brentwood taxpayers would be penalized by another $1,024 per student. This is because Brentwood currently receives $675,000 from the State as a school "adequacy grant", a transfer to Brentwood from other communities under the Statewide property tax system. Absent the grant during the current budget year, the $25.94 school portion of Town's tax rate per $1,000 would be almost 13% higher, by about another $3.36 per $1,000 in assessed value. In other words, *Brentwood has been artificially sheltered from the full tax impact of recent residential development by the effect of the statewide property tax.*

We have confirmed that school cost – specifically the *growth* of school cost with rising enrollments – drives over 80% of the growth in Brentwood's property tax rates, due to the shortfall of tax revenues from new homes compared to the incremental school expenses. What is the rate of growth in school enrollments? Unfortunately, Brentwood's school enrollment is growing significantly faster than other towns in its SAU16 school district:

	Brentwood	SAU16
1991 K-12 Enrollment	389	3,977
2001 K-12 Enrollment	607	5,369
Growth Past 10 years	56%	35%
Projected 2006 K-12 Enrollment	844	5,832
Growth Projected Next 5 years	***39%***	***9%***

Source: NESDEC projections cited in "2002 Update Report: Calculation of Capital School Impact Fees", April 2002.

[5] This figure is the net school cost on the town's budget $5,218,012 divided by K-12 enrollment of 659. The actual cost per student is higher, but the $7,918 figure is the net cost which impacts Brentwood's town budget after various other sources of school income are received. Source of net school cost: School Manager Walter Pierce. Source of K-12 enrollment: actual 2001-02 actual enrollment of 607 increased to projected 2002-03 enrollment of 659, as shown in "2002 Update Report: Calculation of Capital School Impact Fees", by Kris Magnusson & Nina Kewley, April 2002

[6] That is, at a school-related property tax rate of $25.94 per $1,000 of assessed valuation, a valuation of $305,243 is required to generate the required $7,918 income to cover school costs ($7,918 / $25.94 x $1,000 = $305,243). Fair market value for property at this assessed valuation is derived by dividing the Town assessment ratio into the assessed valuation ($305,243 / .65 = $469,605).

[7] The $207,367 figure = average assessed valuation as of April, 2002 of $148,682 divided by average students/household of .717. The $240,963 assessed valuation / .65 assessment ratio = $322,519 fair market value. Source of average per dwelling assessed value and of students/household: "2002 Update Report: Calculation of Capital School Impact Fees", by Kris Magnusson & Nina Kewley, April 2002.

These enrollment growth projections are obviously alarming to anyone concerned about open space and taxes.

How reliable are these projections? They are provided by the New England School Development Council (NESDEC), considered the standard for all schools in the district. Although the significant enrollment growth rates projected for Brentwood have been questioned, local school enrollments appear more predictable than many other population statistics, at least for several years out from the present. This is because NESDEC numbers are based first on students already in school (who will predictably flow from grade to grade) and second based on State-reported births by Brentwood families (who will enter grade school on a predictable schedule). And Swasey Elementary School enrollments this year grew about 15%, almost exactly in line with NESDEC projections made before the Swasey building addition was approved last year.

In any event, the near term trend in enrollments is up, probably steeply. The potential fiscal and environmental impact leads naturally to a call to action. But what action? At what cost?

One response is commercial/industrial development, which, our figures show, generates a tax surplus. If past economic relationships hold true into the future, Brentwood could substantially offset the tax deficits of new housing by commercial development at the rate of a $1 in new commercial/industrial property for every $4 in new housing. (However, commercial development may itself draw additional residents or have esthetic or environmental costs that offset the apparent opportunity to expand the Town's tax base.)

Another response is the effort to encourage development of senior housing as an alternative to family housing (no children = no school costs).

A third response is use of capital impact fees (now in force) and other growth management strategies to gain additional income from development or to limit development.

A fourth response is to protect open land from development by direct land acquisition for conservation purposes and by the use of conservation easements.

The first three solutions are being addressed by the Planning Board or other Town bodies. Our concern, as the Open Space Task Force, is with the fourth solution of land protection.

This analysis is primarily a snapshot of where we are. We will have to look forward in order to frame a course of action for open space protection. On the way, we will have to answer these further questions:

- How many developable acres are there in town? What is a feasible goal for acreage to protect from development? And what could be the impact on our tax rate if we don't save some of those acres?
- Open space protection has a cost: what is it? And does open space protection pay off after considering those costs? What will the cost of open space protection do to our taxes?

We will answer these questions in "Part 2: The Payoff from Open Space Protection".

Attachment: Cost of Community Services Analysis for Brentwood

Brentwood Budgeted 2002 Revenues and Expenses, Classified by Land Use

	Total		*From Residential Property*		*From Commercial Property*		*From Open Land Property*		
TOWN REVENUE SOURCES:	$$$	%	$$$	%	$$$	%	$$$	%	Note
Property Taxes:									
Assessed Valuation, 2001	183,675,551	100%	148,779,944	81%	34,117,100	19%	778,507	0%	
Less Exemptions	(612,900)	100%	(612,900)	100%					
Plus Est Add'n from New Bldg Permits	14,612,900	100%	11,836,668	81%	2,714,296	19%	61,937	0%	Estimate as of 5/1/02
Est. Net Assessed Valuation, 2002	197,675,551	100%	160,003,712	81%	36,831,396	19%	840,444	0%	Per 2002 town budget
Tax Rate / $1000			30.64		30.64		30.64		
Property Taxes at Current Rates	6,056,779	100%	4,902,514	81%	1,128,514	19%	25,751	0%	
Plus Projected Yr-End Addition	241,309	100%	195,322	81%	44,961	19%	1,026	0%	Yr-end adjustmt to match rev & exp
Subtotal	6,298,088	100%	5,097,836	81%	1,173,475	19%	26,777	0%	
Proj. Tax Rate by Yr-End			31.86		31.86		31.86		
Default Allocation Ratios:									
Neutral to All Land Uses		100%		80.9%		18.6%		0.4%	Ratios are based on relative property
To Residential & Commercial Only		100%		81.3%		18.7%		0.0%	taxes from each land use.
Other Taxes									
Land Use Change Taxes	140,000	100%	140,000	100%	-		-		Residential
Resident Taxes	-	100%	-	100%	-		-		Residential
Timber Taxes	10,000	100%	-		-		10,000	100%	Open land
Int. & Penalties on Del. Taxes	32,000	100%	25,902	81%	5,962	19%	136	0%	Neutral allocation
Escavation Tax	400	100%	-		-		400	100%	Open Land
Impact Fees	-	100%	-	100%	-		-		Residential
Subtotal	182,400	100%	165,902	91%	5,962	3%	10,536	6%	
Licenses, Permits, Fees:									
Business Licenses	12,000	100%	-		12,000	100%	-		Commercial
Motor Vehicles	475,000	100%	380,560	81%	94,441	19%	-		Residential & commercial
Building & Code Permits	45,000	100%	36,580	81%	8,420	19%	-		Residential & commercial
Other Licenses	6,000	100%	4,877	81%	1,123	19%	-		Residential & commercial
Subtotal	538,000	100%	422,016	78%	115,984	22%	-	0%	
Intergovernmental:									
Federal Government	-	100%	-	81%	-	19%	-	0%	Neutral allocation
New Hampshire	167,227	100%	135,358	81%	31,158	19%	711	0%	Neutral allocation
Subtotal	167,227	100%	135,358	81%	31,158	19%	711	0%	
Other Municipal Revenues:									
Revenues from Town Depts	30,000	100%	24,283	81%	5,590	19%	128	0%	Neutral allocation
Sale of Town Property	10,000	100%	8,094	81%	1,863	19%	43	0%	Neutral allocation
Interest on Investments	60,000	100%	48,566	81%	11,179	19%	255	0%	Neutral allocation
Other Misc. Revenues	65,000	100%	52,613	81%	12,111	19%	276	0%	Neutral allocation
Subtotal	165,000	100%	133,555	81%	30,743	19%	702	0%	
TOTAL REVENUES	7,350,715	100%	5,954,667	81%	1,357,323	18%	38,726	1%	

Brentwood Budgeted 2002 Revenues and Expenses, Classified by Land Use

	Total		*Benefiting Residential Property*		*Benefiting Commercial Property*		*Benefiting Open Land Property*		
TOWN SERVICE EXPENSES:	$$$	%	$$$	%	$$$	%	$$$	%	Allocation Note
Municipal Operating Budget:									
Town Administration	380,606	100%	308,072	81%	70,915	19%	1,618	0%	Neutral allocation
Cemetaries	8,611	100%	8,611	100%	-		-		Residential
Police	263,496	100%	213,280	81%	49,095	19%	1,120	0%	Neutral allocation
Fire	156,262	100%	126,483	81%	29,115	19%	664	0%	Neutral allocation
Loss Committee	1,431	100%	1,158	81%	267	19%	6	0%	Neutral allocation
Code Enforcement	42,114	100%	34,088	81%	7,847	19%	179	0%	Neutral allocation
Civil Defense	551	100%	448	81%	103	19%	-		Commercial & residential
Road Mainenance/Plowing/Lighting	202,779	100%	164,135	81%	37,782	19%	862	0%	Neutral allocation
Solid Waste Collection/Disposal	185,122	100%	185,122	100%	-		-		Residential
Animal Control	3,162	100%	3,162	100%	-		-		Residential
Health Agencies; Health Office	14,437	100%	14,437	100%	-		-		Residential
General Assistance	2,774	100%	2,774	100%	-		-		Residential
Parks & Recreation	17,172	100%	17,172	100%	-		-		Residential
Library	105,984	100%	105,984	100%	-		-		Residential
Conservation Commission	343	100%	278	81%	64	19%	1	0%	Neutral allocation
Economic Development	4	100%	3	81%	1	19%	0	0%	Neutral allocation
Debt Service	104,537	100%	84,615	81%	19,478	19%	444	0%	Neutral allocation
Contingency	12,500	100%	10,118	81%	2,329	19%	53	0%	Neutral allocation
Subtotal	1,501,885	100%	1,279,940	85%	216,996	14%	4,949	0%	
Warrant Articles:									
WA CR PD Computer Software	8,500	100%	6,880	81%	1,584	19%	36	0%	Neutral allocation
WA Fire Alarm for Grange	5,000	100%	4,047	81%	932	19%	21	0%	Neutral allocation
WA Impact Fee Feasibility Study	7,000	100%	7,000	100%	-		-		Residential
WA CR Bridge Repairs	5,000	100%	4,047	81%	932	19%	21	0%	Neutral allocation
WA Road Repairs	50,000	100%	40,471	81%	9,316	19%	213	0%	Neutral allocation
WA USGS Water Study	5,000	100%	4,047	81%	932	19%	21	0%	Neutral allocation
WA New Outlook	700	100%	700	100%	-		-		Residential
WA Cons & Agri Easements	25,000	100%	-		-		25,000	100%	Open Land
WA C.R. Police Cruisers	25,000	100%	20,236	81%	4,658	19%	106	0%	Neutral allocation
WA C.R. Recycling Fees	474	100%	384	81%	88	19%	2	0%	Neutral allocation
WA CR Library Addition	25,000	100%	25,000	100%	-		-		Residential
WA CR Dump Truck(s)/Equip	29,980	100%	24,267	81%	5,586	19%	127	0%	Neutral allocation
WA CR Repair/Refurb Vehicles	35,000	100%	28,330	81%	6,521	19%	149	0%	Neutral allocation
WA CR to Replace Equipment	40,000	100%	32,377	81%	7,453	19%	170	0%	Neutral allocation
WA CR Ambulance Fees	36,555	100%	29,715	81%	6,840	19%	-		Residential & commercial
WA CR Ballfield Facilities	5,160	100%	5,160	100%	-		-		Residential
Subtotal	303,369	100%	232,661	77%	44,841	15%	25,867	9%	
School & County Budgets									
Rockingham County	327,449	100%	265,046	81%	61,011	19%	1,392	0%	Neutral allocation
Swasey Elementary School	2,792,483	100%	2,792,483	100%	-		-		Residential
Coop Middle & High Schools	2,425,529	100%	2,425,529	100%	-		-		Residential
Subtotal	5,545,461	100%	5,483,058	99%	61,011	1%	1,392	0%	
TOTAL EXPENSES	7,350,715	100%	6,995,658	95%	322,848	4%	32,209	0%	
REVENUES LESS EXPENSES	-		(1,040,991)		1,034,474		6,517		
% Surplus (Deficit)	0.0%		-17%		76%		17%		
Expenses-to-Revenues Ratio	1.00		1.17		0.24		0.83		= "Cost of Community Services Ratio'

Notes to Cost of Community Services Analysis:

In completing Brentwood's Cost of Community Service Study (COCS), we followed a standard methodology developed by the American Farmland Trust:

1. Identify land use categories to study … here residential, commercial/industrial and open space (farms, forest, gravel pits).
2. Collect data on local expenditures and revenues.
3. Group revenues and allocate to land use categories (first page of our spreadsheet).
4. Group expenditures and allocate them to land use categories (second page of our spreadsheet).
5. Analyze the data and calculate revenue-to-expenditure ratios for each land use category (bottom of second page of our spreadsheet).

The sources of data include Town property tax reports and the Town budget for 2002. (Projected tax revenues to year end have been increased above that which the current town property tax rates will yield. This is to recognize that some catch-up increase in tax rates will be required on the last property tax bill of the year to match income with Town expenses.)

The budgeted school expense represents only the portion of school costs that is funded by the Town property taxes, net of other school revenue sources. This is the same presentation used in the Town budget[8].

The process of allocating revenues and expenses to land use categories requires the use of some judgment about the nature of those revenues and expenses in relation to land use. The allocation rule for each line item is shown in the right column in the spreadsheets. We made these land-use allocation judgments as follows:

1. Taxes can be traced to land use quite clearly in most cases. Property taxes are by far the largest income source and are based on assessed valuations of land and buildings classified by land use. Land use change taxes and impact fees are primarily associated with residential development and so are not charged to open space. Timber taxes are associated with open space (forest).
2. Town income from permits and licenses is also traceable to land use. Business licenses are commercial/industrial in origin. Motor vehicle registration income is associated with residential and commercial/industrial properties, although there is not a report breaking out commercial vs. residential vehicle fees. To allocate the fees between commercial and residential sources, we split the difference between two estimates that weren't far apart: (a) relative property values associated with each land use, which we felt would be a good rough proxy

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[8] The flow of funds for State property taxes for schooling is handled as follows:

1. The State's portion of Brentwood property taxes is *in*cluded in property tax revenues.
2. Since the State returns to the school somewhat more funds than it claims from Town property taxes (the "Adequacy" grant), this excess is considered an offset to total school costs and is subtracted from school costs, as though it were a separate school revenue item.
3. School costs are also reduced by the amount of local school income sources other than property tax (e.g cafeteria income).

The net school cost thus represents [Total Cost] less [State Adequacy Grant in Excess of Property Taxes Received] less [Other Local School Income].

for motor vehicle valuations for various reasons (and which yields almost $89,000 in commercial registration fees); and (2) the Town Clerk's rough estimate based on number of permits in each category (which was up to $100,000 in commercial fees).

3. Town income from other sources (intergovernmental, town departments, sale of property, interest on investments, and other) was considered not associated with a particular land use. For these sources of income, we used neutral allocation percentages among land uses, based on the same proportions as property taxes from the three land uses. This is consistent with standard methodology, affording an allocation that does not bias the bottom line tax surplus or deficit by land use in situations where the income or expense item is not naturally associated with a particular land use.

4. Certain Town expenditures can be traced to a single land use. By far the largest Town expenditure is for schools, which benefits residential land uses only. Other expenditures benefiting only residential properties include the line items for solid waste collection/disposal, cemeteries, animal control, health agencies, general assistance, parks & recreation, library and several warrant articles as noted on the spreadsheets. The warrant article to fund agricultural & conservation easements benefits only open land.

5. Other Town expenditures have no traceable quantitative relation to particular land uses (e.g. many Town government overhead costs), or are traceable to all land uses (e.g. fire protection), or in a few cases are traceable to only two out of three land uses (e.g. civil defense preparedness cost for residential and commercial/industrial land uses). In these cases, there is the question of how to allocate the expenditures to multiple land uses.

   The American Farmland Trust methodology sometimes encourages departmental interviews and detailed data collection to determine allocation percentages. However, this methodology also recognizes that, say, counting actual police calls by land use in a given year may skew results by not recognizing the full 'standby' protection offered by the police patrol to all properties in all land use categories. Also, some governmental overhead costs cannot be directly attributed to particular land uses. In such cases the Farmland Trust methodology recommends use of 'neutral' allocation ratios, based simply on the relative proportion of property taxes paid by properties in each land use. In Brentwood's case, such a property-tax-based allocation will distribute expenses in accordance with underlying property value: mostly to residential properties, secondarily to commercial properties and in a small way to open space. Such allocation ratios are 'neutral' in that they do not skew the relation of property tax revenues to underlying municipal expense when there is not a clearly better allocation method. Each town completing a Cost of Community Services study must determine whether it is better to use detailed use statistics or a neutral allocation ratio for each budget line item.

   We considered detailed interviews and data collection in this analysis, but in most cases rejected it as unnecessary and in fact potentially misleading when allocating costs among multiple land uses. Instead, we often used neutral allocation ratios; or in some cases, used allocations to only two land uses, using an apportionment ratio that is tax neutral between just the two uses.

   The first reason for this approach is that the results of this analysis are dominated by school costs (allocated 100% to residential land use), and many other line items are small enough to be immaterial to that effect, making use of neutral allocation ratio expedient for those smaller departments. And for some departments, there is not a valid, multi-year statistical basis to allocate costs. For small departments, or when there is not a better statistical basis, it seems common sense that many public expenditures should tie to the amount of property involved in the land use, which in turn reflects the public need involved or indirectly reflects the number of people housed or employed in

the land use category (e.g. road maintenance; Pine Road is really the only Town-maintained road that receives unusual abuse from trucks, but it also has high commercial property values associated with it to more-than-offset road maintenance costs through property taxes).

The second reason we often used a neutral allocation ratio to allocate line-item costs among multiple land uses is that even though the time spent by government employees in any year may be devoted more or less to particular land use types, it still is the case that over long time periods, as noted in the American Farmland Trust methodology, government costs really represent 'standby' costs, based on the government's readiness to address adversities or needs in any quarter during a particular period in time.

This is particularly true of two of the largest departmental expense line items, police and fire protection. For example, we considered analyzing police and fire call data to determine how many calls were made to homes vs. businesses vs. fields and forest lands. However, we agreed with the view that much of the police and fire department overhead is really a standby, public-protection cost which benefits all land uses continually, and is applied in different doses to different land uses from year to year on a call-by-call basis. A good example of the bias caused by sampling actual land-use costs in a particular year is the Cost of Community Services analysis in Fremont (done in the mid '90's), which showed an extraordinarily high allocation of fire protection costs to open land, based on a forest fire in the year studied…such an allocation would certainly not be representative of fire protection costs of open land over several years. Fire and police protection is really insurance; and insurance is not paid for by the fire or by the theft, but is paid for in advance, based mostly on property values involved. A property tax based allocation ratio for fire and police expenses, based ultimately on property values by land use, probably represents well the risk exposure involved with the properties protected, as well as reflecting indirectly the number of people who are involved with each land use and who create the risks.

The largest Town budget items applicable to multiple land uses are Town & County administration, police, road maintenance/plowing, and fire. Town and County administration overhead costs were allocated using a tax-neutral allocation ratio to all three land uses. As noted, for Police and Fire, we used a tax-neutral allocation ratio to all three land uses. Road maintenance benefits all land uses, with no basis available to consider allocation other than the tax-neutral ratio for all three land uses. Other, smaller line items not already mentioned used similar allocations as shown on a line item basis in the spreadsheets.

In summary: the relative tax surpluses/deficits are skewed toward particular land uses primarily for line items where there is an obvious, common sense reason to allocate all revenues and costs to particular single land uses, or where there is an obvious reason to exclude a particular land use. Where there was not a decisive basis to allocate in favor of or against a particular land use, we used an allocation ratio that was neutral to measurement of relative bottom line tax deficits and surpluses among land uses … the results were already dramatic enough! We consider this a conservative analysis approach.

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