

The Land Use – Property Tax Connection

A Guide and Workbook on the Tax Implications of Development in Vermont

Written by Deb Brighton and Brenda Hausauer

for

the Vermont Natural Resources Council



and

the Vermont League of Cities and Towns



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89 Main Street, Suite 4
Montpelier, VT 05602-2948
(802) 229-9111
(800) 649-7915
<http://www.vlct.org>

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Project Steering Committee

Stephen Holmes, Sustainable Communities Program Director, VNRC
Karen Horn, Director of Membership and Legislative Services, VLCT
Steven Jeffrey, Executive Director, VLCT

EPA Project Officer

Rosemary Monahan, Livable Communities Coordinator

Copies of *The Land Use – Property Tax Connection* can be obtained from VLCT and VNRC. Please direct any questions or suggestions to:

Stephen Holmes
VNRC
9 Bailey Avenue
Montpelier, VT 05602
802-223-2328
sholmes@vnrc.org

Karen Horn
VLCT
89 Main St., Suite 4
Montpelier, VT 05602
802-229-9111
khorn@vlct.org

Deb Brighton
Ad Hoc Associates
RD 98, Shard Villa Road
Salisbury, VT 05769
802-352-9074
brighton@sover.net

The Land Use – Property Tax Connection was researched and prepared by Deb Brighton, Partner, Ad Hoc Associates, and Brenda Hausauer.

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EXECUTIVE SUMMARY

The Vermont League of Cities and Towns (VLCT) and the Vermont Natural Resources Council (VNRC) recognize that there is a great deal of confusion and uncertainty about the relationship between land use decisions and property taxes. We believe town officials and interested citizens will be able to make better decisions if they have better information. VNRC and VLCT have cooperatively undertaken this project to bring local officials more information on the tax implications of growth and land conservation.

The study examines the relationship between the **municipal tax bill** on the average-value house in each Vermont town and various characteristics of the town. The school tax is not considered because, as a result of Act 60, school tax rates do not depend on the tax base, but rather on the district's per-pupil spending.

Summary of findings:

- The municipal tax bill on the average-value house is higher, on average, in the Vermont towns that:
 - Have the most year-round residents
 - Have the largest tax bases
 - Have the most commercial and industrial taxable property
- The municipal tax bill on the average-value house is lower, on average, in the Vermont towns that:
 - Have a greater proportion vacation property making up their tax base
 - Have fewer residents
 - Have smaller tax bases
 - Have less commercial and industrial taxable property
- There is a greater range from town to town in the tax bill on the average-value house now than there was a decade ago. The towns in which the municipal tax bill increased the most in the last decade were:
 - Likely to be larger, both in terms of population and tax base, at the beginning of the decade.
 - Likely to be categorized as “traditional centers” or “new growth towns” according to the Vermont Forum on Sprawl definitions.
- While the general rule seems to be that development does not lead to lower tax bills, we looked more closely at the towns in which growth did not result in higher tax bills. In the past decade, the taxable value of commercial property in Vermont as a whole increased by about \$32,000 for each new resident. However, this was not distributed evenly. The towns that lost commercial property value, or that gained a below-average amount of commercial property value per new resident, were more likely to see large increases in the tax bills. The towns that gained a higher-than-average amount of commercial property value per new resident were more likely to see small increases in their tax bills.

- While the towns that experienced the most growth in commercial tax base (as opposed to growth per capita) were likely to have the smallest increase in *tax rates*, this did not hold true for *tax bills* because the market value of property tended to increase in these towns as well.

Summary of Conclusions:

In general, towns with more development have higher tax bills. However, not every development will increase taxes, at least not immediately.

Taken to the extreme, the obvious way to lower taxes is to make sure there are no people to serve, or to lure commercial development away from the neighboring town so that the employees don't move with it. But these are neither possible nor desirable planning goals. A more realistic goal would be to maintain balance between different types of land uses.

The central conclusion of this study is that **property taxes should not drive or justify land use planning**. When planning for a town's future, property taxes are just one of many concerns. Most communities strive to create a prosperous and healthy environment in which to raise the next generation—not solely to maintain low tax rates. The challenge when evaluating planning options is to strike a balance between what improves the community, what is responsible, and what taxpayers can afford. This guide and workbook are designed to clear up some of the myths and mystery so that townspeople can make more informed decisions.

Part 1: A Guide to the Tax Implications of Development in Vermont

About the only way a Vermont town can fund its schools, police department, highway work, recreation program and general government is through the property tax. As the name implies, the tax is dependent on property—making the use of property of concern to all taxpayers in town. Responsible town officials, attempting to offer their citizens a balanced program of services without exorbitant taxes, often strive to increase the tax base by encouraging development. As the theory goes, a larger tax base means there are more people and/or businesses paying for the budget.

In the late 1990s, Act 60 changed the way towns pay for education and, at the same time, the incentive to look for tax base to lower school taxes. Now, the school effective tax rate depends on the per-pupil spending and not on the tax base. Doubling the tax base in a school district wouldn't change the school tax bill of taxpayers (regardless of whether they pay based on income or property), if the district continues to spend the same amount per pupil. So, recently, town officials have been asking a very different question than they asked in the 1980s. Now they wonder why a town would want any development at all if it doesn't lower taxes?

The Vermont League of Cities and Towns (VLCT) and the Vermont Natural Resources Council (VNRC) recognize that there is a great deal of confusion and uncertainty about the relationship between land use decisions and property taxes. They believe town officials and interested citizens will be able to make better decisions if they have better information. VNRC and VLCT have cooperatively undertaken this project to bring local officials more information on the tax implications of growth and land conservation.

Although this study focuses on the property tax effects of land use decisions, we do not want to give undue importance to the tax bill as a factor in deciding how a town should grow. In fact, the main conclusion of this study is that taxes tend to be higher in towns that have the most developed property, and there seems to be no magic way to develop that will keep taxes low over the long term. Perhaps the best long-term strategy is to maintain a balance between population growth, commercial development, and land conservation.

The real purpose of this report is to clear up some of the misconceptions and mystery about property taxes so that a more accurate idea of the expected tax consequences can be factored into land use decisions. When planning for a town's future, property taxes are just one of many concerns. Most communities strive to create a prosperous and healthy environment in which to raise the next generation—not solely to maintain low tax rates. The challenge when evaluating planning options is to strike a balance between what improves the community, what is responsible, and what taxpayers can afford.

Short-term Tax Implications of Land Use Decisions

This report includes many references and tables to help estimate the short-term tax consequences of different types of land use changes. In general, there are two things that must be kept in mind:

the cost of municipal services that the land use change will require, and the gain (or loss) in taxable property that will result in a gain (or loss) in property tax revenues.

It is important to note that Act 60 has dramatically changed this calculation for the school portion of the property tax—which represents, on average, about 72 percent of the property tax bill. Because the effective school tax rate is based on the spending per pupil, in the long term there would be no change in the tax rate resulting from changes in the Grand List unless the spending per pupil changes.¹ This is true for all property taxpayers, including those who pay according to the “income sensitivity” provisions of the law. The “income sensitized” tax bill depends on the taxpayer’s household income and the district’s spending per pupil, and it does not change if the Grand List in town changes.

In the short term, however, there may be changes in the equalized school tax rate resulting from changes in the Grand List for three reasons:

- The state uses the prior year’s Grand List to calculate the amount the town must raise. Therefore, for the first year in which there are changes in the Grand List (before the state accounts for the changes), the costs and revenues resulting from the change will affect the actual school tax rate in town.
- It is difficult for a school system to maintain exactly the same per-pupil spending with changing enrollment. In some cases, a few new students could be folded into the classroom without any change in the school budget—resulting in a decrease in the average spending per pupil. In other cases, those new students may mean it is time to hire a full-time music teacher—resulting in an increase in the average spending per pupil. In other cases, when the student count declines but the budget remains constant, the per-pupil spending (and therefore the tax rate) will increase.
- The new students may mean that the district will need to bond for a new school. This would increase the per-pupil spending.

In addition, although the school equalized tax *rate* does not change, the property values in town may increase (or decrease) as a result of land use changes, and therefore the same rate applied to a different property value would yield a different tax bill.

There is an explanation of Act 60 and how the school tax relates (or doesn’t relate) to the Grand List in Appendix 2.

Long-term Implications of Land Use Decisions

The long-term implications of land use decisions are more important, yet more difficult to predict with accuracy. In this report we have used actual tax and development information for all the Vermont towns to give a general idea of the trends.

To provide a context for the short-term calculations, we have examined the tax base of each Vermont town, and looked at the relationship between different types of land uses and municipal

¹ Each year, the tax rate required to raise each \$1 per pupil is fixed for the state as a whole. This means that, in any town, the tax rate will depend on the per-pupil spending and not on the Grand List. The tax rate required to raise each \$1 per pupil is set at the state level and will vary from year to year.

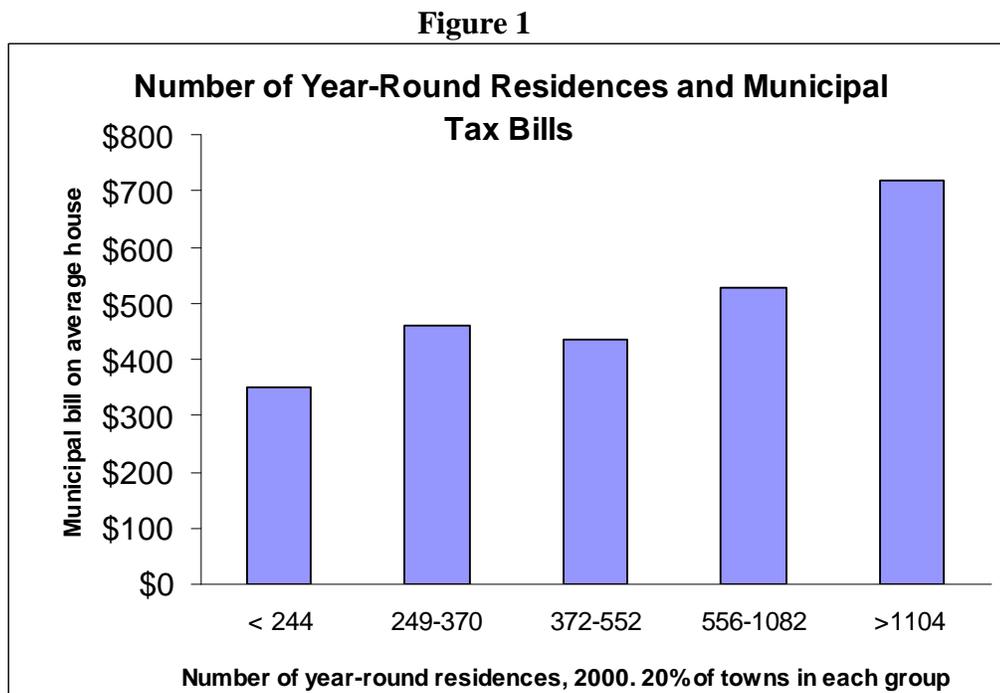
property tax bills. (We did not include the school tax because, as explained in Appendix 2, it no longer depends on the Grand List).

To compare taxes between towns, we have used two measures: the municipal tax bill on the average-value house, and the effective municipal tax rate. The effective municipal tax rate is the amount of municipal taxes levied divided by the fair market value of the taxable property (as determined by the Division of Property Valuation and Review). This represents what the municipal tax rate would be if all the property in each town were assessed at 100% of fair market value—allowing a comparison between towns. Some people feel that this measure hides the true tax burden in towns where property values are high. For this reason, we also measure the tax bill on the average-value house (with less than six acres). The graphs use the second measure—tax bills—but the statistics in the footnotes indicate that the relationship is similar for the tax rate measure.

Houses

The most likely type of development a community will experience is housing. While new housing increases the tax base, it also requires municipal services—thereby increasing the municipal budget.

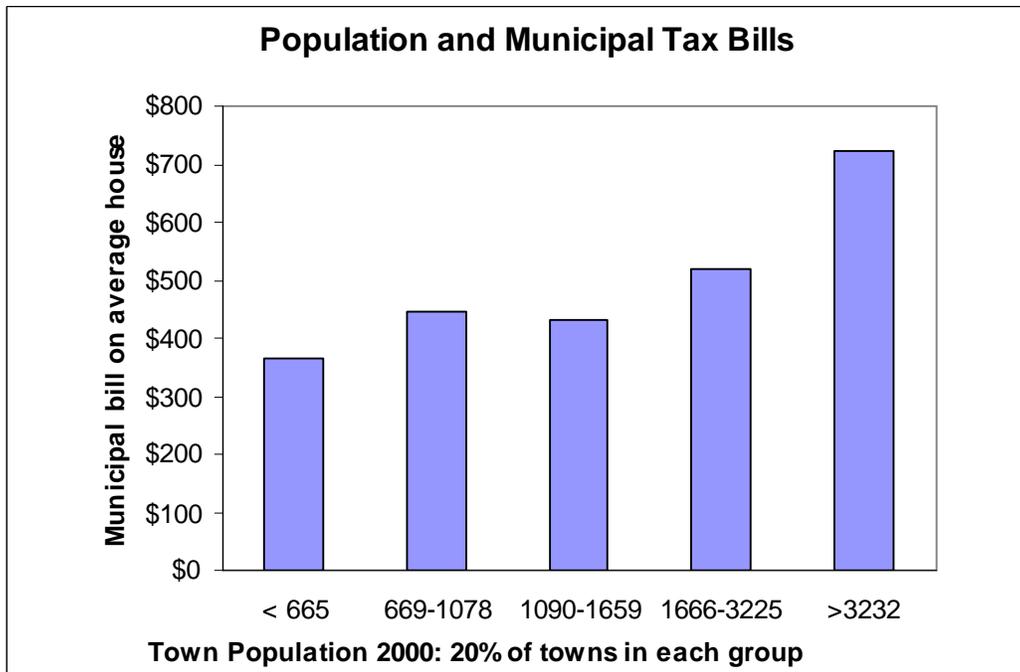
To examine the relationship between residential development and municipal taxes, all Vermont towns were ranked according to the number of year-round houses and divided into five groups. The municipal (not school) tax bill was calculated for the average-value house in each town and averaged for each group.



On average, the municipal tax bill was lower in the group containing the towns with the fewest year-round residences and higher in the group containing the towns with the most year-round residences.²

We also looked at the relationship between population and the municipal tax bill on the average-value house. As would be expected from the graph above, the towns with the most residents have higher municipal tax bills, on average.³

Figure 2

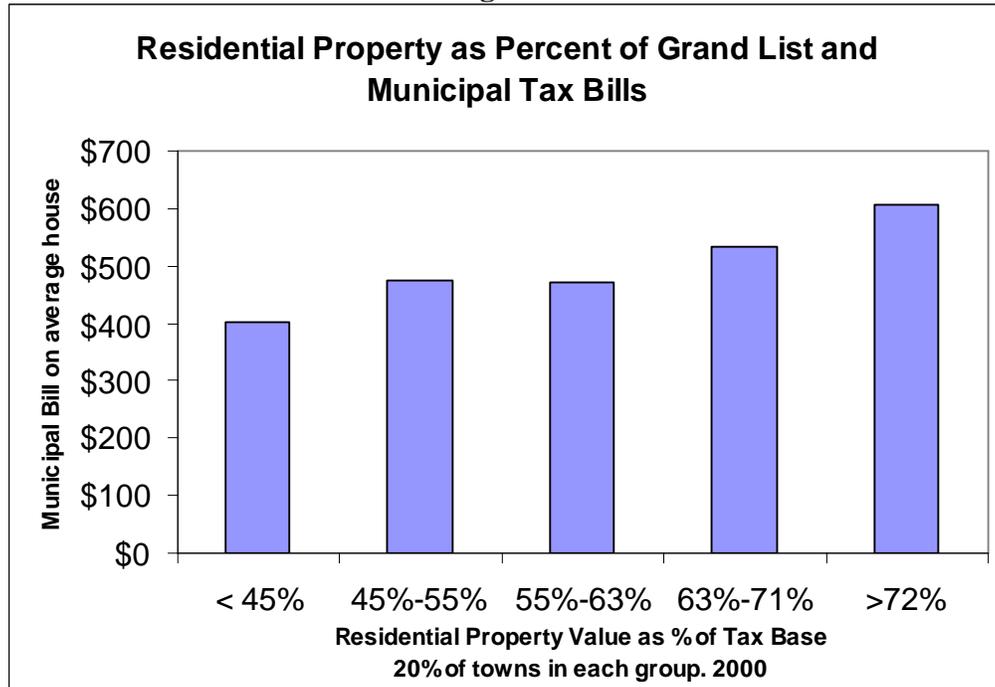


Finally, we looked at residential property as a percent of the tax base. Towns were ranked according to the percent of their tax base that was made up of residential property, and divided into five groups with 20% of the towns in each. The municipal tax bill on the average-value house in each town was calculated, and averaged for each group.

²Pearson correlation coefficient showing the association between number of year-round residences and the municipal tax bill on the average-value house =0.536, P=0.00. Source of data: Property Valuation and Review.

³ Pearson correlation coefficient showing the association between population and the municipal tax bill on the average-value house =0.511, P=0.00. Sources of data: U.S. Census; Property Valuation and Review.

Figure 3



In general, the tax bills are lower in the towns in which residential property makes up the lowest percentage of the tax base.⁴ This is consistent with the findings of the Cost of Government Services studies which document that residential property has the highest ratio of cost to value; that is, residential property costs the municipality more per \$100 of taxable value than most other types of property.⁵

The three graphs above do not indicate that population growth necessarily means higher taxes; however, they do indicate that, on average, towns with more year round residents have higher taxes. Of course, there is a great deal of variation depending on the type of town, spending decisions, growth rate, and other unique situations.

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The graphs on pages 8 and 9 show the relationship between population and municipal tax bills for each of the four types of towns as classified by the Vermont Forum on Sprawl:⁶

- Traditional Centers, with established downtown areas and compact settlement patterns.
- New Growth towns, communities that usually lie outside a Traditional Center, and have absorbed much of their area's recent growth.
- Outlying Towns, primarily rural communities that are not in resort areas.

⁴ Pearson correlation coefficient showing the association between residential property value as a percent of tax base and the municipal tax bill on the average-value house = 0.309, P=0.00.

⁵ See the Cost of Government Services reports prepared by the American Farmland Trust, Herrick Mill, No. 1 Short Street, Northampton, MA 01060. See also: Robert W. Burchell. 1992. *Fiscal Impact Analysis and the Fiscal Impact Hierarchy: A Glimpse at the Argument*. Prepared for the Lincoln Institute of Land Policy, Cambridge, MA.

⁶ Vermont Forum on Sprawl. *The Causes and Costs of Sprawl in Vermont Communities*.

- Resort Communities, towns with a major ski resort and/or with a high ratio of seasonal to year-round homes.

On the charts, there is a dot for each town; however in some cases there are actually several towns represented by the same dot. In each graph, the line represents the “trend” for that type of town.

To see the classification of a particular town, refer to Appendix 1.

Figure 4

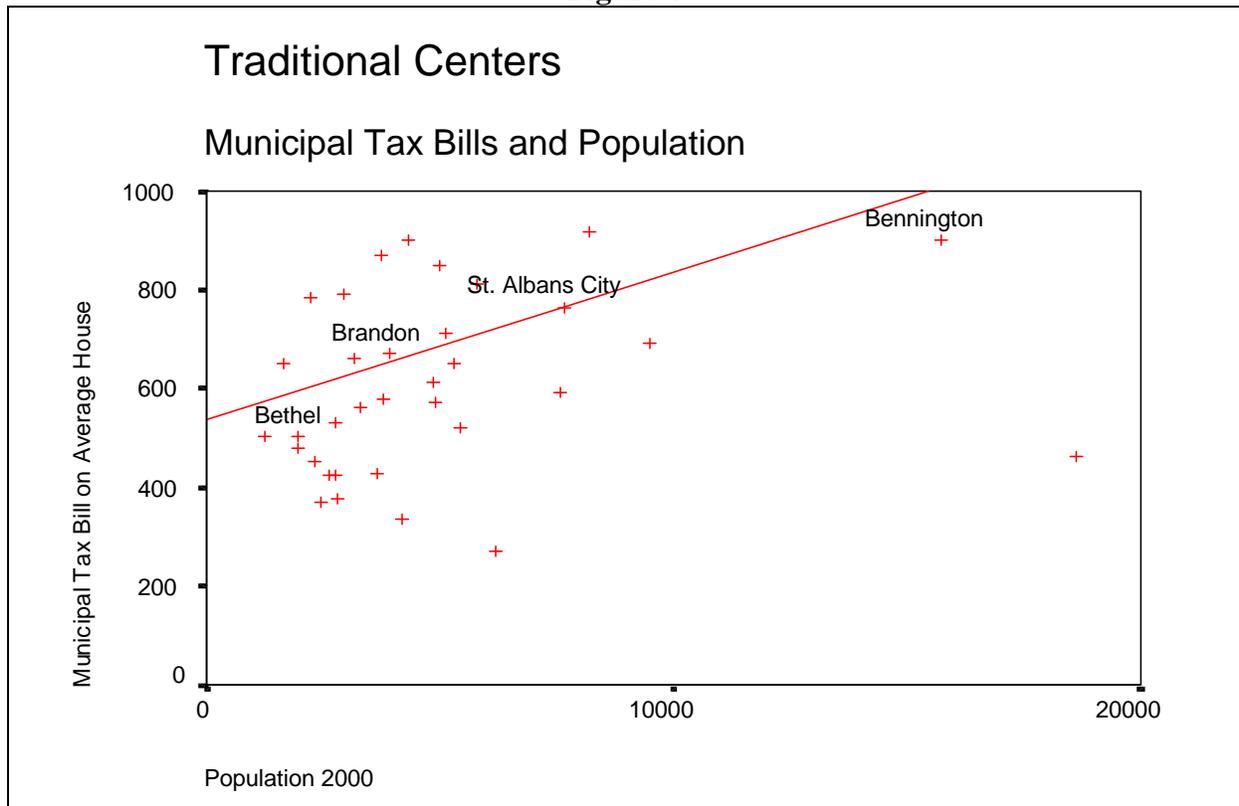


Figure 5

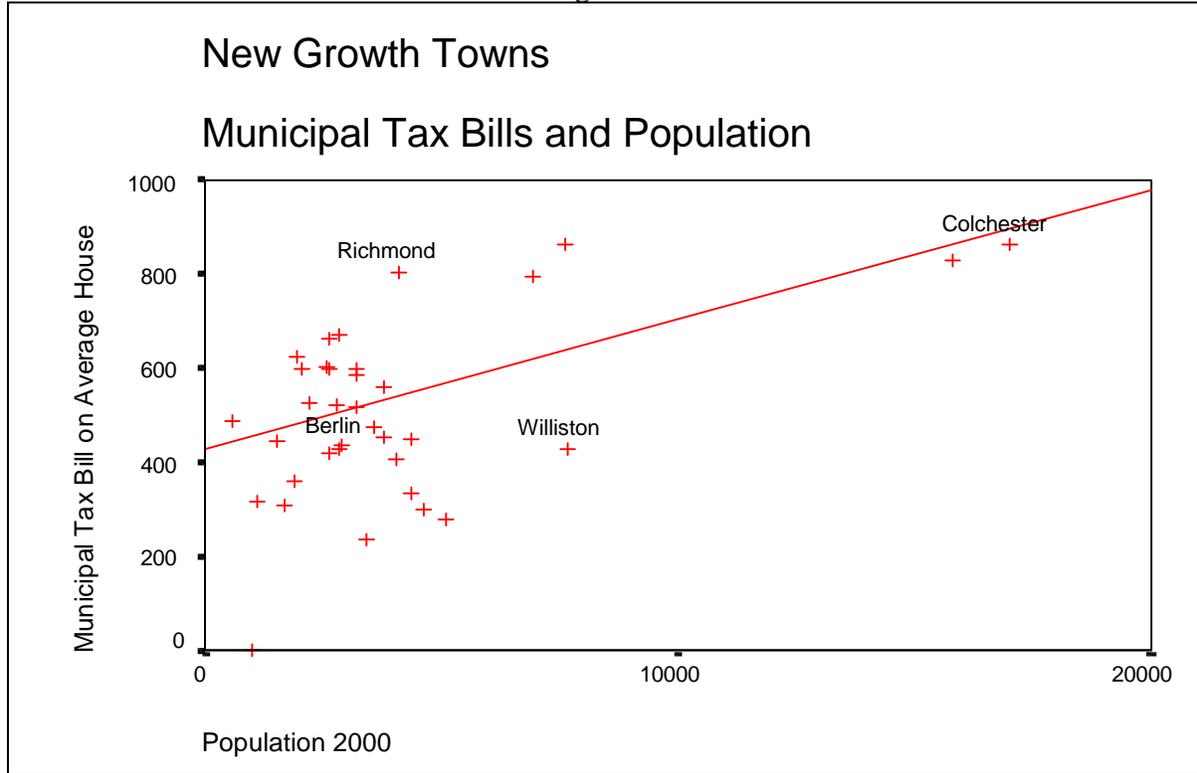


Figure 6

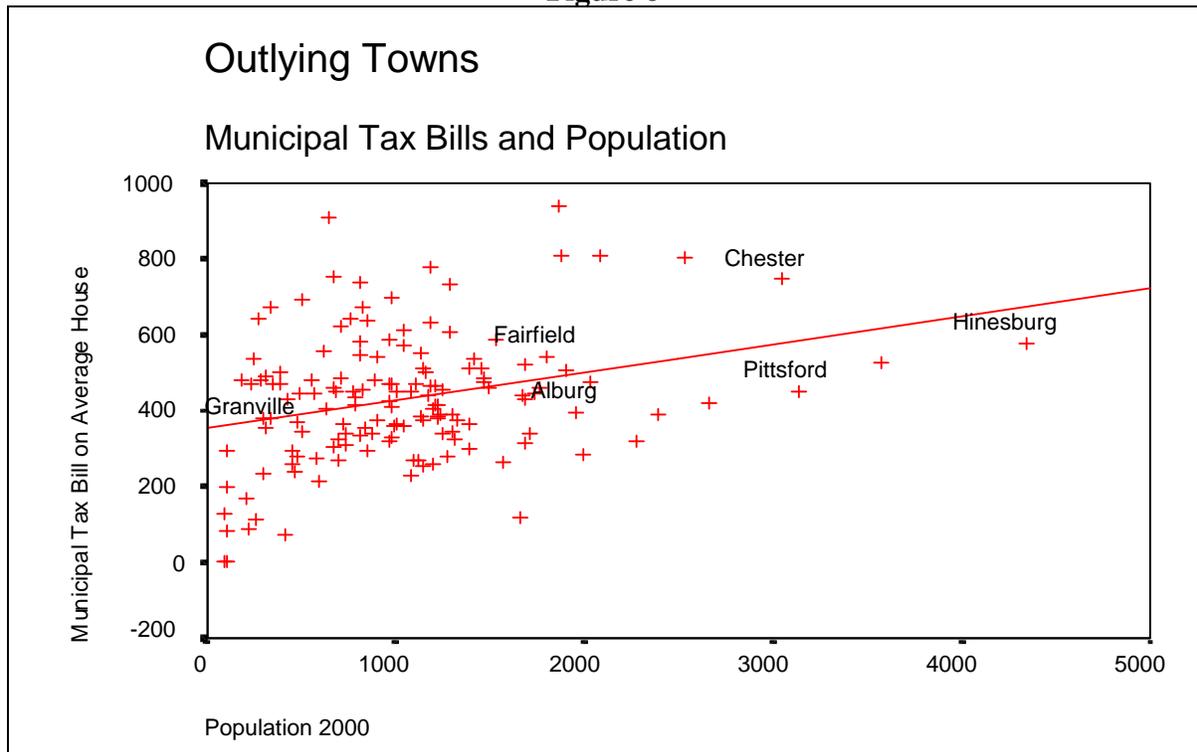
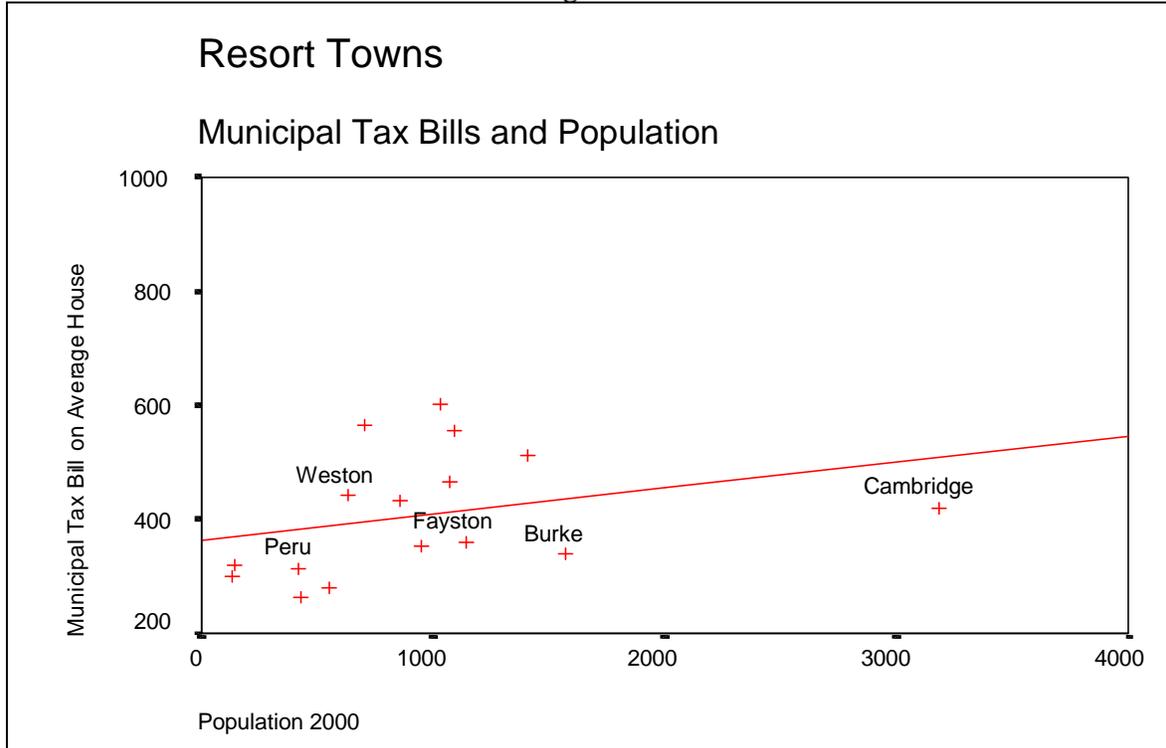


Figure 7



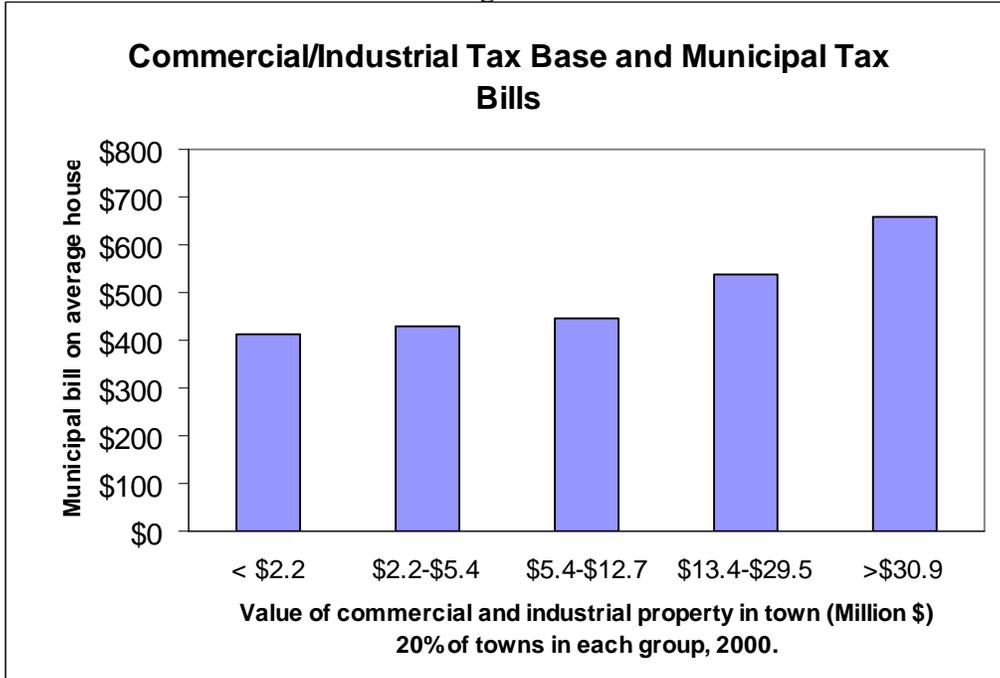
It is interesting to note that the trend is the same, regardless of the type of town: the more people, the higher the tax bill.

Commercial and Industrial Development

It is frequently assumed that commercial and industrial developments pay more in taxes than they cost the town in services. These are the developments that towns had been competing for. Prior to Act 60, filling out a worksheet showing the costs and tax revenues from a commercial development would generally show that the development paid more in taxes than it cost in services. This was mainly because of the school tax. Commercial and industrial developments paid school taxes without increasing the school budget—directly at least. On the municipal side these developments pay taxes and require services, prompting people to wonder whether or not the town’s taxpayers benefit.

To look at the relationship between commercial/industrial development and municipal taxes, all Vermont towns were ranked according to the fair market value of taxable commercial, industrial and utility property and divided into five groups. The municipal (not school) tax bill was calculated for the average-value house in each town and averaged for each group.

Figure 8



As shown in the graph, the municipal tax bills tend to be higher in the towns that have the most commercial and industrial property value and lower in the towns that have the least.⁷

It should be pointed out that the increase in tax bills is not necessarily a direct result of the commercial or industrial development. Municipalities that have commercial and industrial development generally have jobs and residences. Most fiscal impact analyses, when determining that a commercial development is tax-positive, do not consider these “secondary impacts.”

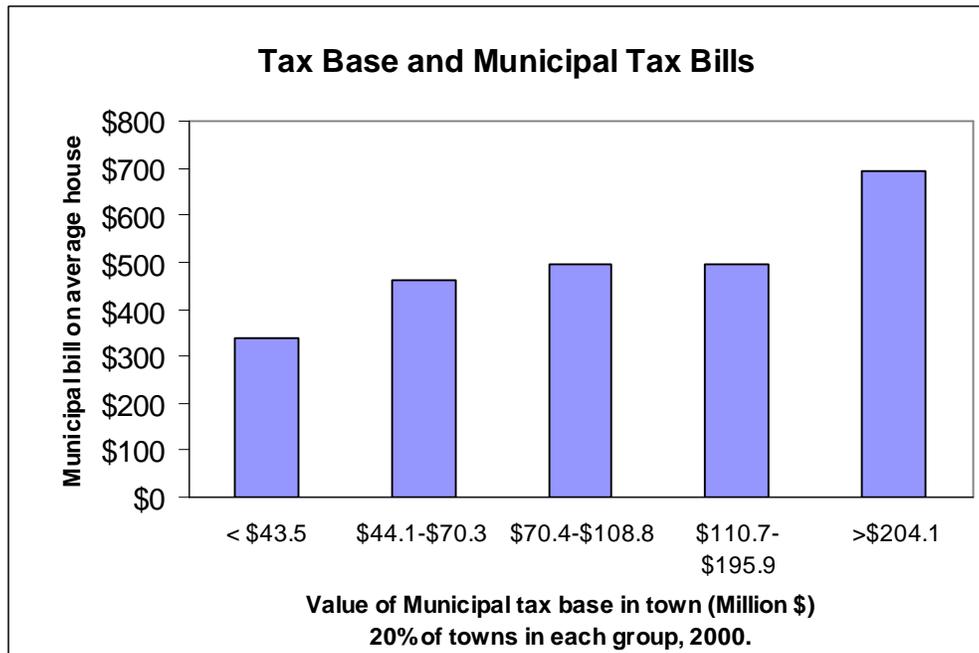
It was mentioned earlier that in towns in which residential property makes up a larger proportion of the Grand List, tax bills tend to be higher. In contrast, there is no clear relationship between the proportion of the Grand List that is commercial and the tax bill.

Tax Base

Similarly, the towns that have the biggest tax base, and therefore can collect the most taxes at a fixed rate, have higher, rather than lower taxes on average than the smaller towns. In the graph below, all Vermont towns were ranked according to the fair market value of their Grand Lists and divided into five groups. The municipal (not school) tax bill was calculated for the average-value house in each town and averaged for each group.

⁷ Pearson correlation coefficient showing the association between the fair market value of taxable commercial, industrial and utility property and the municipal tax bill on the average-value house in town = 0.400 P=0.0. Sources of data: Property Valuation and Review.

Figure 9



The graphs indicate that taxes tend to be higher in more developed towns.⁸ However, it is important to recognize that communities with larger tax bases offer more services. In some cases, additional services are required to deal with the additional demands of growth and there is no net benefit to residents. In other cases, an additional level of service provides new or improved benefits to residents (such as 24-hour police protection or a municipal swimming pool).

In several of the charts showing the association between tax bills and the components of the tax base, there is little difference in the tax bills in the “middle” towns. This is mainly because there is a mix of town types in the middle. Many resort communities with low year-round populations have fairly large tax bases and show up in the middle groups, along with some of the mid-sized Traditional Centers and some of the larger Outlying Towns. Although all the charts in this report reflect associations that are statistically significant, the strongest relationship is that between population and tax bills.

Vacation Homes

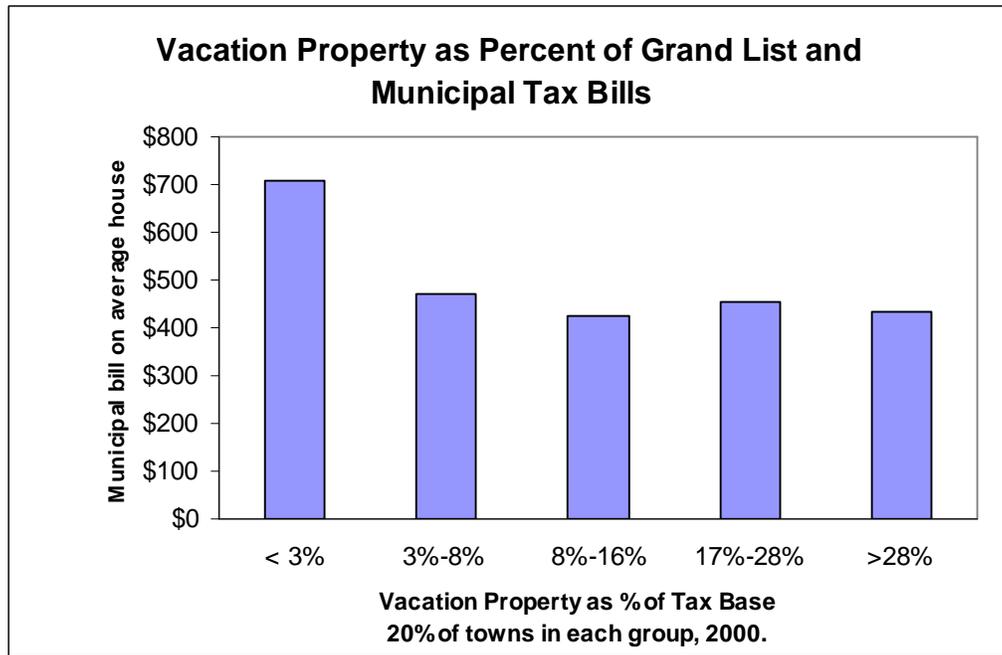
Prior to Act 60, vacation homes were Vermont’s main “tax-positive” type of development. They paid both school and municipal taxes, demanded few services, and didn’t put children in school. Since Act 60, the state as a whole rather than the host town benefits from the school taxes on second homes. Looking at municipal taxes alone, there is not a clear pattern between either the *number* of vacation homes or the total *value* of vacation property and tax bills. However, it is

⁸ Pearson correlation coefficient showing the association between the fair market value of taxable property and the municipal tax bill on the average-value house = 0.468, P=0.0. Sources of data: Property Valuation and Review.

true that towns in which vacation property makes up a larger *proportion* of the Grand List tend to have lower municipal tax bills, as shown in the chart below.

In the chart, all Vermont towns were ranked according to the percentage of their Grand List made up of vacation home property and divided into five groups. The municipal tax bill on the average-value house in each town was calculated, and averaged for the group.

Figure 10



While it is generally true that a seasonal home requires less in municipal services than a year-round home does, the towns that have the *most* vacation home property to tax do not necessarily have lower municipal tax bills. Vacation property is associated with lower tax bills when it represents a higher *percentage* of the total Grand List.⁹ This tends to be the case in the smaller, more rural resort towns.

Land Conservation

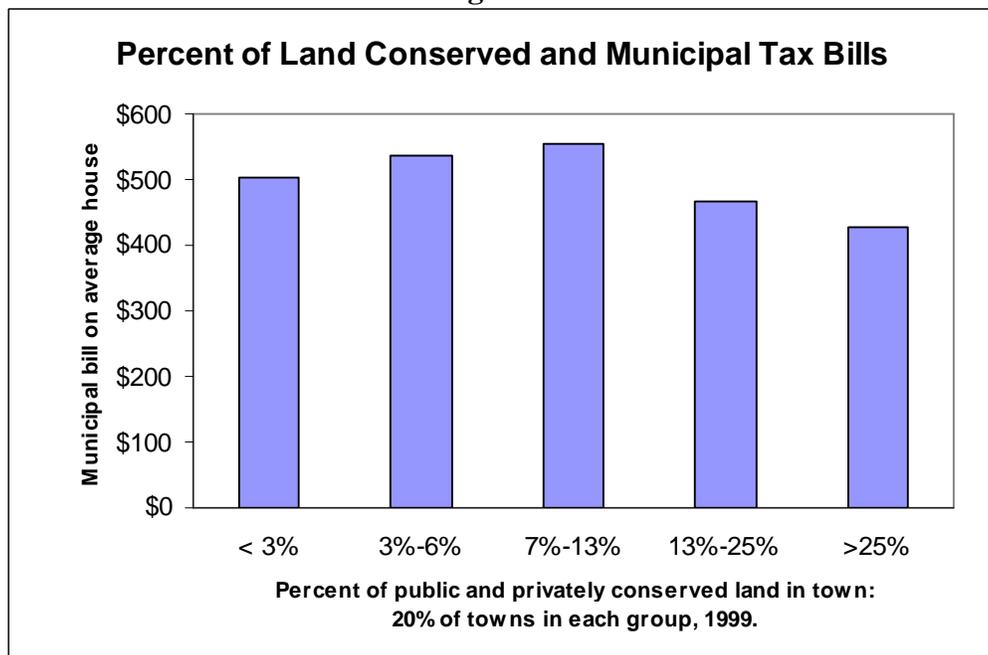
Land conservation can affect taxes in two ways. First, if the town pays to acquire land or an easement, taxes will increase to raise the acquisition money. Second, once the land is permanently protected, it (or a portion of its value in the case of an easement) generally comes off the tax rolls—shifting municipal (not school) taxes to other taxpayers in town. (The school taxes are shifted to taxpayers throughout the state). The short-term local property tax consequences can be easily calculated.

⁹ Pearson correlation coefficient showing the association between vacation property value as a percent of total fair market value of taxable property and the municipal tax bill on the average-value house = -0.267, P=0.0. The association between the number of vacation homes and the municipal tax bill is not statistically significant. Sources of data: Property Valuation and Review.

There are additional long-term concerns about land conservation. One is that it locks up the land and therefore precludes the possibility that the town may see some development that would be more beneficial. However, as shown in the preceding graphs, it is not entirely clear that development would be a tax benefit since the passage of Act 60. Another concern is that, while conservation of an individual parcel may not make much difference, at some point land conservation could reach the point where the town didn't have enough tax base to pay its bills.

To examine the relationship between conserved land and municipal taxes, all Vermont towns were ranked according to the percent of land that was publicly or privately conserved, and divided into five groups. The municipal (not school) tax bill was calculated for the average-value house in each town and averaged for each group.

Figure 11



The graph makes it clear that the towns with a great deal of conserved land have not been driven to exorbitant taxes. This is mainly because these towns are more rural and have fewer people to serve.¹⁰

When estimating the effect of permanent land conservation on the tax bills, it is important to differentiate between easements (which only remove a portion of the land value from the tax base) and acquisition by a tax-exempt organization. And then, it is important to consider payments in lieu of taxes on land acquired by the U.S. Forest Service or the Agency of Natural

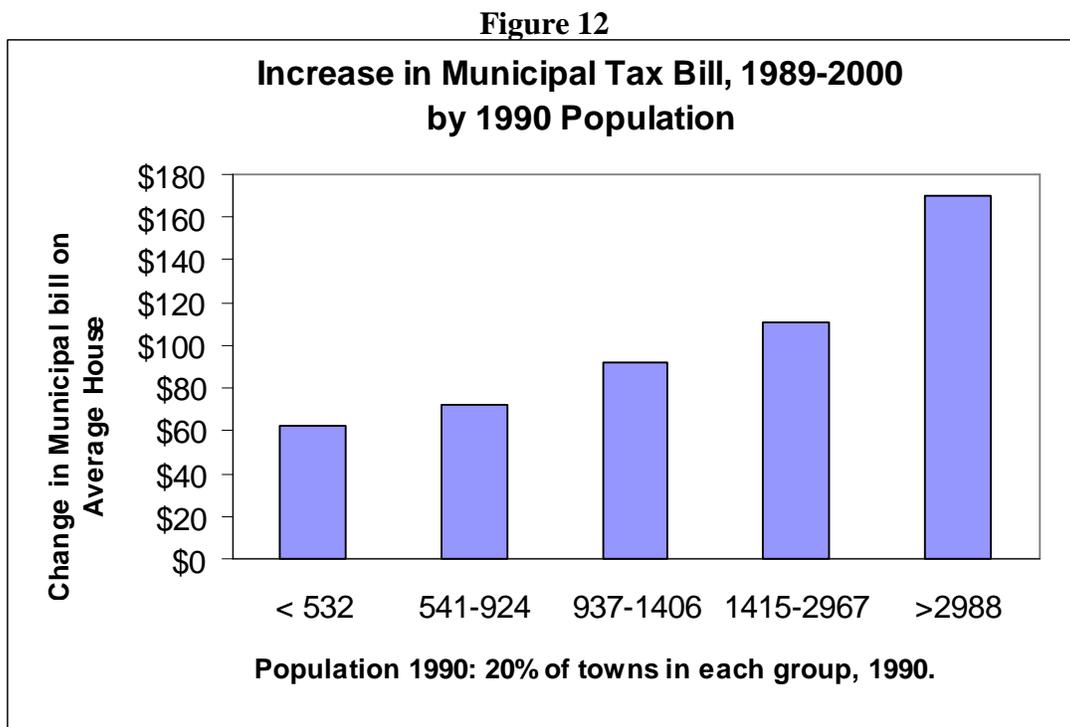
¹⁰ The Pearson correlation coefficient showing the association between the percent of land that has been conserved and the municipal tax bill on the average-value house = -0.24, P=0.0. Sources of data: Property Valuation and Review; Center for Rural Studies.

Resources. In some cases, a town receives more revenue from these payments than it would from the land if it remained in private ownership.

Growth and Change

The relationships presented in earlier sections of this report are really snapshots at one point in time. Looking at the relationship between the change in tax bills and the changes in the tax base sheds some light on which towns have been gaining and which have not.

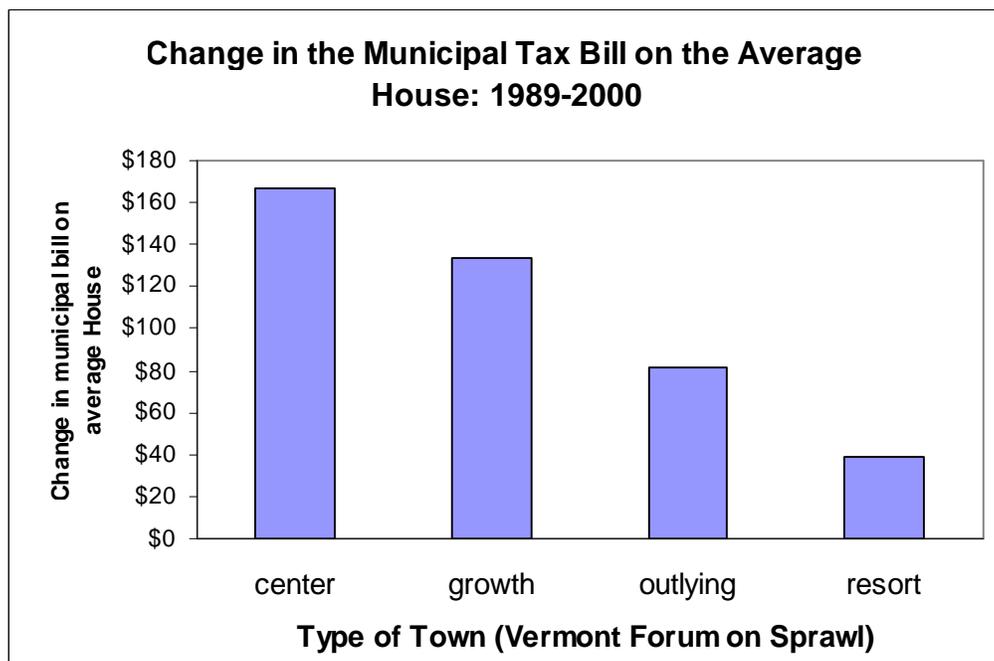
In general, as would be expected from the preceding charts, towns that saw the greatest increase in municipal tax bills in the past decade were the largest towns, both in terms of population and tax base.¹¹



The types of towns in which the municipal tax bills increased most were the Traditional Centers and the New Growth towns. The tax increases in the Resort Towns and the Outlying Towns tended to be less.

¹¹ Pearson correlation coefficient showing the association between 1990 population and the change in the tax bill on the average-value house between 1989 and 2000 = 0.276, P=0.00. Pearson correlation coefficient showing the relationship between 1989 Grand List and the change in the tax bill on the average-value house between 1989 and 2000 = 0.246, P=0.00. Sources of data: Property Valuation and Review; U.S. Census

Figure 13



It is important to note that the chart above looks at the increase in the municipal tax *bill* on the average-value house. In the New Growth towns, the effective tax *rate* increased less, on average, than it did in the Outlying Towns. However, because property values tended to increase more in the New Growth towns, the *bills* rose more in New Growth towns.

The question is frequently posed: what type of growth is most likely to keep taxes down? In general, the towns that had the lowest increase in their municipal taxes grew in such a way that commercial property represented a larger proportion of the Grand List in 2000 than it did in 1989.¹² These were more likely to be small towns than large towns. In general, the towns that had the highest increase in their municipal taxes grew in such a way that the proportion of commercial property shrank. These were more likely to be the larger towns.

The tables below show the differences between the 20 percent of towns in which the municipal tax bills either decreased or increased the least and the 20 percent of towns in which the municipal tax bills grew the most. In 1989, the towns that would have the greatest increase in municipal tax bills were roughly twice as large (in terms of population and tax base) as the towns that would have the least increase. In 1989 the taxes were fairly similar in the two groups of towns.

¹² Partial correlation coefficient showing the relationship between the increase in the tax bill on the average-value house 1989-2000 and the change in commercial/industrial/utility property value as a percent of the Grand List 1989, controlling for Grand List value in 1989 was -0.175 , $P=0.007$. Pearson correlation coefficient showing the relationship between the increase in the tax bill on the average-value house 1989-2000 and the change in commercial/industrial/utility property value as a percent of the Grand List 1989 was -0.202 , $P=0.002$.

Figure 14
Difference between 20% of towns in which tax bills increased the least and the most
between 1989 and 2000

Beginning of Decade					
	Population (% of State)	Tax Base (% of State)	Commercial Tax Base (% of State)	Average Municipal Tax Bill	Average Municipal Tax Rate
Decrease or Lowest Increase	13%	17%	16%	\$457	0.50
High Increase	37%	34%	45%	\$455	0.48

Growth 1989-2000				
	Population (% of State Growth)	Tax Base (% of State Growth)	Commercial Tax Base Growth (% of State Growth)	Commercial Tax Base Growth per Additional Resident
Decrease or Lowest Increase	22%	22%	29%	\$42,126
High Increase	28%	28%	14%	\$16,658
State Average				\$32,215

End of Decade		
	Average Municipal Tax Bill	Average Municipal Tax Rate
Decrease or Lowest Increase	\$375	0.42
High Increase	\$764	0.69

During the decade, both types of towns saw growth in population and in tax base. The striking difference, however, is in the distribution of new commercial taxable value. In the state as a whole, there was about \$32,000 growth in commercial taxable value for each new person. In the towns that showed the smallest increase in municipal tax bills, the growth in commercial taxable value per new resident was higher than average. In the towns that showed the largest increase in municipal tax bills, the growth in commercial taxable value per new resident was well below average. By the end of the decade, the municipal tax bills in the high increase towns were, on average, twice those in the low increase towns.

It is difficult to determine how much of the increase in commercial taxable value is due to appreciation and how much is due to new commercial development. However it is clear that the

increase in commercial tax base in some towns came at the expense of other towns. Many of the Traditional Centers lost commercial property value in the decade, while the surrounding towns gained.

In Chittenden County, for example, Burlington and Winooski lost commercial tax base and the tax bills increased significantly over the decade. Nearby Williston and Hinesburg gained commercial tax base and the tax bills did not increase.

Figure 15
Example: Change in Commercial Tax Base and Municipal Tax Bills, 1989-2000

	Tax bill on average house 1989	Change in commercial property value	Tax bill on average house 2000	Change in tax bill
Burlington	\$746	-\$140,000,000	\$1,066	\$320
Winooski	\$712	-\$9,000,000	\$1,031	\$319
Williston	\$433	\$205,000,000	\$430	-\$3
Hinesburg	\$574	\$8,000,000	\$575	\$1

These findings are consistent with the Vermont Forum on Sprawl research that documented the erosion of the economic base of the Traditional Centers. According to their research, 70 percent of the state’s jobs were found in the Traditional Centers in 1980, but this percentage declined to 56 percent by 1996.¹³

Although it may seem that these statistics indicate that pursuit of commercial tax base is a wise decision, it’s important to keep in mind that, in general, commercial tax base is associated with higher tax bills rather than lower. This is because commercial developments mean jobs and jobs generally bring new residents—at least over time. Increasing commercial tax base without increasing population is the exception rather than the rule, and is most likely to happen if the jobs are taken by people already living in the area, as in the case of a closing or relocating company.¹⁴ It is also important to keep in mind that this strategy seems to have limits; the towns that are worse off now are those that had once been most successful in gaining commercial property. In addition, many of the New Growth towns are only able to keep their taxes down because a nearby Traditional Center is supporting the costly tax-exempt services that make growth possible.

Conclusions

Reconciling the findings about growth with the findings about larger towns and larger tax bills leads us to the following conclusions.

¹³ Vermont Forum on Sprawl. Economic, Social and Land Use Trends Related to Sprawl in Vermont.

¹⁴ Pearson correlation coefficient showing the relationship between commercial/industrial/utility tax base and residential tax base is 0.851, P=0.00 and between commercial/industrial/utility tax base and municipal tax bills is 0.444, P=0.00.

In general, towns with more development have higher tax bills. However, it is clear from the discussion on growth, not every development will increase taxes, at least not immediately. All other things being equal, a town's taxes are likely to be lower if its tax base has a high proportion of non-residential property to help offset the costs of residents.

The study does not conclude that development is bad. Taken to the extreme, the obvious way to lower taxes is to make sure there are no people to serve. But this is neither a possible nor a desirable planning goal. There are many good reasons that a town may want development—and land conservation. The property tax implications should be only one part of the evaluation of what a town would like to see in its future.

This general section of the report is designed to document general trends. The accompanying workbook includes information to help work through land use decisions in individual towns.

Part 2: A Workbook for the Fiscal Impacts of Development in Vermont

New development and changes in land use bring both benefits and costs to towns. For example, a new shopping area may give consumers more choice and convenience. A large business might offer Vermonters new jobs, and permanently conserving land may give current and future generations places to hunt, hike, and snowmobile. The costs of development and land use changes also can be diverse. For instance, a large business might bring new employees, residents, and visitors to the town, eventually making an expanded police force and fire department necessary and ultimately increasing property taxes. A popular shopping area that people from surrounding towns also use might bring related development such as service stations and restaurants, requiring traffic signals and wider roads.

Most changes in land use have benefits and costs over the short and long terms. For example, a new commercial development might look attractive over the short term because it increases the tax base, providing more money to pay for the budget and lowering the tax bill for all town residents. But development almost always has affiliated direct costs as well, whether it's an increased need for wider roads, a new sewer line, or a larger school facility to serve a growing population. In addition, Vermont's Equal Education Opportunity Act (Act 60) has changed the way towns fund education, and as a result towns are starting to look more closely at both the short-term and long-term costs and benefits of development.

Local officials now make decisions about their future development and land use changes based on a wide array of considerations. Ultimately, land use decisions are about what local residents and officials want and what will make the town successful in their eyes. Finding the balance between the benefits of development and the costs and negative impacts to residents is the challenge for every town.

There are both fiscal and non-fiscal benefits and costs of development. Non-fiscal impacts are not the main topic of this workbook, but some of the non-fiscal impacts are outlined in Appendix 3. Fiscal impacts can be direct or secondary; direct impacts are those that the development itself brings, and secondary impacts occur when a development brings changes in the surrounding land uses. Development can cause fiscal impacts to municipal budgets and property taxes, to the state (through changing sales tax revenues, for example), and to local or regional economies and industry sectors. This workbook focuses on one portion of the fiscal impacts of development: the fiscal impacts to the municipality in which the development occurs. Ultimately, however, land use decisions should be based on a broad range of considerations of other types of impacts as well.

This workbook helps municipal officials and citizens develop rough estimates of the changes to property taxes from development. First, the main factors that influence individual towns' tax rates and average tax bills are discussed. Then, a set of worksheets leads readers through a process of envisioning development scenarios and estimating changes to property taxes from the development. The appendices assist with this process. Appendix 1 provides tables of average costs and standards to assist with the worksheets and information about taxes for each Vermont town. Appendix 2 gives a description of how Act 60 works. Appendix 3 outlines some of the

non-fiscal impacts of development, and Appendix 4 is a list of other resources. Part 1 of *The Land Use – Property Tax Connection* contains research about taxes and the fiscal impacts of development for Vermont towns.

Uses for this Workbook

- A citizens’ workbook detailing the fiscal impacts of land development
- A worksheet and suggestions to help towns envision development scenarios and fiscal impacts
- A resource in Act 250 hearings
- Background information for calculating impact fees

Fiscal Impacts of Development: Public Services, Facilities, and Infrastructure

New development provides both revenues and costs to local government. Revenues are generated from the property taxes and other fees paid to the town by the new development and secondary development; costs are generated when the town must provide more services, facilities, and infrastructure to the development and secondary development. The categories of local government costs are listed in Figure 16. Fiscal impact analysis is the practice of analyzing the costs and revenues to local government generated by development, and the resulting effect on property taxes and services provided.

Figure 16. Public Facility, Infrastructure, and Services Costs

Facilities, operating costs, personnel, equipment and other capital costs, maintenance and repair, and all other costs for the following institutions, services, and programs:

- 1) Schools
- 2) Local government, including town clerk, treasurer, tax collector, property assessors, planning and zoning, and others
- 3) Public works, including roads, sidewalks, recreation paths, public transit, sewer, water, stormwater drainage, solid waste, and others
- 4) Public safety, including police, rescue, fire, ambulance and animal control
- 5) Library
- 6) Parks, recreation, and youth and senior programs
- 7) Cemetery
- 8) Grants to social service and cultural organizations

The results of growth to local governments may manifest themselves in several ways. Tax revenues can increase. Tax rates can change. The town’s budget can increase; there may be an overextension in the town’s facilities or infrastructure, or the town may more fully utilize its existing facilities; there may be a reduction or increase in the public services provided; or the town may seek to use municipal bonds to pay for new facilities or other capital purchases.

Every town has different needs. Some towns will be satisfied with a minimum level of services and facilities, while others want amenities like a recreation field, a part-time planner, and better

back road maintenance. Each community's challenge is to balance its needs with what its residents can afford through property taxes.

There are many factors that influence individual towns' tax rates and average tax bills, and determine whether and how much property taxes will increase or decrease when new development occurs. The following sections discuss some of those factors.

School budget

In the past, town officials often worked to increase their tax base in order to lower or maintain property taxes at reasonable levels. But the passage of Vermont's Act 60 changed the way towns fund education, and thus significantly reduced the incentive to increase the tax base to lower school property taxes. Now, school property tax rates are based on the spending per pupil in each school district – not on the local tax base. New development does not change the school tax rate after the first year, unless the development results in an increase (or decrease) in the spending per pupil – for example, when a school expansion is needed. Appendix 2 gives a more detailed description of how school taxes are calculated under Act 60.

If a school expansion is needed, the Vermont Department of Education offers assistance and funding to towns in planning for the expansion. The state covers thirty percent of the expansion project for most types of projects.¹⁵ The remaining funding can come from a bond issue, short-term borrowing of no more than one year, federal grants in some cases, or other sources. Towns must undertake an analysis of their school facilities, along with demographic data, enrollment projections, and a space utilization schedule. In addition, the school expansion must meet a set of performance requirements related to the facilities the school needs to provide the necessary curriculum and services. State funding for a school expansion is limited by the rule known as the Capital Outlay Financing Formula. This rule establishes the minimum and maximum square footage allowances for programs and services by grade range and class size, and the maximum cost for the total construction beyond which the state cannot provide funding. Construction projects can exceed the maximum cost outlined in the rule, but the local district must pay for the additional costs.¹⁶ Appendix 1 lists some of the requirements of the Capital Outlay Financing Formula.

Municipal budget, population, and tax base

Municipal budgets vary widely from town to town for many different reasons. And unlike school tax rates, municipal tax rates are based on the municipal budget and the local tax base. Still, there are some trends among towns that help explain why towns have different budgets, tax rates, and tax bills.

In general, larger towns have higher municipal budgets per capita and higher tax rates and bills than smaller towns, because larger municipalities provide more services. As described in Part 1

¹⁵ In 2002, the Legislature gave a three-year opportunity to school districts to pay for new capital construction entirely on their Grand List, foregoing the 30% state aid. To find out if this method would apply to your school district, contact the Department of Education.

¹⁶ Vermont Department of Education, *Vermont School Construction Planning Guide*.

of *The Land Use – Property Tax Connection*, when all Vermont towns are analyzed, the average municipal property tax bill on the average-value house is higher in:

- Towns with larger numbers of year-round residences
- Towns with larger populations
- Towns with larger property tax grand lists
- Towns with larger commercial and industrial tax bases.

Special land uses

Special land uses within towns' boundaries also can influence municipal budgets and taxes. For example, towns that host ski areas or other seasonal attractions may have a higher tax base per capita. Towns with government offices or other tax-exempt agencies receive fewer tax revenues than they would if those agencies' property was privately owned. See Part 1 of *The Land Use – Property Tax Connection* for more information on this topic.

Location of development

The location of new development also can influence municipal budgets and taxes. Development in areas that already have road, sewer, and water service can be cheaper to provide services to than development in outlying locations that require new infrastructure. Growth in outlying areas can increase road maintenance and repair and police services, and in some cases, can create an inefficient duplication of services to serve the outlying areas. Even when developers pay for new infrastructure related to the development, the municipality still must pay to maintain and support the new infrastructure, which can increase budgets and taxes for everyone over the long-term if the new expenditures exceed the new revenue generated.

Regional considerations

Municipal budgets and taxes also are significantly influenced by activities in the region and nearby towns.

Many older towns serve as regional centers for shopping, services, and jobs. For example, Montpelier's weekly daytime population almost doubles from workers who live in nearby towns, shoppers, visitors to state government, tourists, and others, requiring additional city services and facilities. Other, newer-growth towns such as Berlin provide regional shopping areas and a regional hospital. While such towns provide services to many visitors, the cost of those services usually is paid for exclusively by the permanent residents and local businesses.

In many cases, new development has regional impacts. For instance, jobs at a new office building may attract new residents who will live in a nearby town. A new shopping center may compete with stores in a nearby town, causing them to close. Or, a shopping area may bring secondary commercial development in a nearby town. All these changes will impact the municipal budget and taxes of nearby towns.

Many Vermont towns team up with neighboring towns to share service costs and make purchases together. A Vermont League of Cities and Towns survey found that 55% of towns share some service costs with neighboring towns, and 22% participate in some type of joint purchase with another town.¹⁷ Towns also join with other towns to form special districts such as fire districts, water districts, union school districts, tax increment financing districts, and others. Regional planning commissions allow towns to cooperate with land use planning. Some towns in other states participate in regional tax base sharing, in which the revenues and costs of regional developments are shared among towns, rather than having the benefits and costs fall unequally on towns. This can reduce competition to attract or discourage development among towns.

Community changes over time

Another important set of factors for municipal budgets and taxes are the demographic and other characteristics of each town, and how those factors are changing over time. A town with declining population may have more facilities than it needs in the future when there are fewer people to serve. A town with an aging population may require more services for seniors in the future. The level of affluence and the number of low-income and disabled residents in town all impact the amount of services required, the amount residents can afford, and thus the municipal budget and taxes.

Economic health, inflation, and unemployment levels in towns and regions also influence municipal budgets and taxes. Population growth or declines can accompany new employment opportunities or shutdowns. Rising or falling property values help determine what kind of growth will occur.

Part 1 of *The Land Use – Property Tax Connection* outlines trends for municipal taxes in Vermont’s traditional centers, new growth towns, resort towns, and outlying towns. In general, municipal tax bills in traditional town centers are increasing most, while the bills in resort towns are experiencing the smallest increase. (Appendix 1 lists which Vermont towns fall into each of these categories, according to the Vermont Forum on Sprawl.)

For towns whose populations or tax bases are growing, municipal budgets, taxes, and bonds usually don’t rise gradually and smoothly. In many cases, municipal property taxes in a growing town will hold steady or even decline for a few years, and then jump as a result of a capital purchase, an increased need for services, or a reappraisal of the tax base. While an increasing population means more residents to cover taxes and pay off bonds, it also moves towns closer to the time when they will need more services or another capital purchase. Towns should expect that taxes often undergo a “stair-step” trend as they rise. As a result, it may be wiser to plan for and smooth out increases in taxes as the town grows through careful land use and capital planning, rather than to maximize any current excess capacity in services, facilities, and infrastructure – which may only hasten the arrival of the next “stair-step” increase in taxes.

¹⁷ Vermont League of Cities and Towns, p. 13.

Tools for Development Planning

Planning tools

Capital improvement plans and municipal plans can help towns plan for future changes in development and municipal budgets. Capital improvement plans describe the capital projects to be undertaken during the next 5 or 10 years, their estimated costs, timing, and proposed method of financing. Items commonly included in capital improvement plans are roads and bridges, school buildings, sewer and water lines, wastewater treatment plants, municipal buildings, and police and fire equipment. About 27% of Vermont municipalities have adopted some type of capital budget. Municipal plans, which provide guidance for development and land use in communities, have been adopted by about 73% of Vermont municipalities.¹⁸

New development requires capital improvements, but the availability of capital facilities and infrastructure also influences growth patterns. The areas in which a town expands its roads, sewer, and water lines will usually grow first, even if the infrastructure growth is at odds with the municipal plan. For example, the activities of the Champlain Water District in Chittenden County helped determine where development occurred county-wide. The district was created in 1969 in response to growth in Chittenden County, and its service area increased as towns sought or were required by the state to buy water from the district and as IBM moved into the area. As the district upgraded its capacity and distribution system, it became easier for nearby towns to join the district or increase their water purchases. The control of the local water and sewer line extensions was in the hands of town governments or fire districts, and the extensions were not always coordinated with planning decisions about where growth should occur.¹⁹ Thus, it is important for capital improvement plans and municipal plans to reinforce each other.

During the next several years, some Vermont towns will undertake the effort to make their financial records and audits compliant with the Governmental Accounting Standards Board Statement 34 (GASB 34), which will require reporting of all the municipality's capital assets, including roads, buildings, and infrastructure.²⁰ This practice likely will encourage more towns to undertake capital budgeting.

Planners often advise that development should be permitted only where it can be accommodated by public facilities and services. Some communities around the country have “adequate public facilities and services ordinances,” or concurrency requirements that ensure that public facilities are available before or when development occurs. Others incorporate level-of-service standards to ensure that public services and facilities are maintained at a certain level as development occurs. For example, standards can include a certain level-of-service for all road intersections, a certain average response time for police and fire emergencies, and a certain acreage of land per person for parks and recreation.

There are a number of processes that can help citizens envision their town's future, such as design charrettes, town-wide questionnaires, and other processes. The results of these processes

¹⁸ Vermont League of Cities and Towns, p. 15, 17.

¹⁹ Champlain Initiative, p. 14.P

²⁰ Horn, p. 2.

can provide the basis for municipal plans, ordinances, or standards as described above. Fiscal impact analysis is one tool that can assist in such visioning processes.

Financing tools

Property taxes are impacted (or not impacted) based on the type of financing tools used to pay for the infrastructure and other municipal costs of development. There are a variety of types of financing tools, and each type addresses who should pay for the cost of growth. If a capital project will benefit the entire community, for example, many people believe that all the taxpayers should share the cost. But if only a certain neighborhood or development will benefit, then a financing tool that collects the revenues from that neighborhood or development often is used. If all taxpayers pay for the costs of providing new water lines to a new housing development, for example, old residents are effectively subsidizing new residents. On the other hand, if new residents pay more than old residents for equal services, equity questions arise.

Some of the main types of financing tools are described below, including bonds, impact fees, special assessments, tax increment financing, and tax stabilization agreements. Towns also can apply for state and federal grants to fund some major projects.

Bonds. Towns often use *general obligation bonds* to pay for schools, parks, municipal buildings, and recreation facilities. Approval by the voters usually is required before the town can sell these bonds. The bonds are paid off out of the town's annual revenues, over a time period chosen by the town. *Revenue bonds* are used to finance projects that will produce revenues to the town in the form of user fees – for example, municipal water and sewer lines in which customers pay to use the lines. In this case, the user fees then are used to pay off the bonds.²¹ Under Vermont state law, general municipal and school projects cannot be bonded for more than 20 years, and water and sewer projects cannot bond for more than 30 years. The Vermont Municipal Bond Bank, a quasi-state agency, provides municipalities with assistance in the bonding process and access to municipal bond proceeds.²² Worksheets 2 and 3 in this workbook can help towns estimate average annual bond payments for planning purposes.

Impact fees. Impact fees and development exactions require developers to pay for the net additional municipal and school capital costs that the new development brings. Vermont towns can adopt impact fee ordinances, and about 9% of Vermont communities have done so.²³ Impact fees can be levied to pay for a variety of services and facilities, including schools, recreation, transportation, water, and sewer facilities. Under Vermont law, impact fees must be based on studies of the costs of new development in the individual community (24 V.S.A Chapter 131). A formula must be created to calculate a developer's impact fee, and the formula must reflect the level-of-service for the capital project, and a means of assessing the development's impact, such as its square footage or number of bedrooms. The level-of-service for the capital project must be either an existing level-of-service, a state or federal standard, or a standard adopted in a town plan or capital budget. The impact fee must be equal to or less than the portion of the capital cost which is attributable or will benefit the development, and cannot include costs related to

²¹ The Small Town Planning Handbook, p. 142.

²² Vermont Municipal Bond Bank, untitled brochure.

²³ Vermont League of Cities and Towns, p. 16.

operation or maintenance of the capital project. Because the funds raised through impact fees must be spent within six years, and because the necessary accounting can be difficult, few small towns have used impact fees. The Vermont League of Cities and Towns can provide legal assistance on impact fees for towns.

Special assessments. Towns also can place special assessment charges on property owners in a certain neighborhood to pay for the cost of installing capital improvements (24 V.S.A. Chapter 87). Special assessments can be made when a town purchases, constructs, repairs, reconstructs, or extends a water system, sewage system, or any other public improvement (such as sidewalks and streets) that benefits a limited area of the town to be served by the improvement. The assessment can be apportioned among the properties in the area based on the listed value of the property, the property's frontage, the added value to each property as a result of the improvement, or another method that fairly apportions the costs in relation to the benefits received. Special assessments must be approved by the voters, or approved in writing by all the property owners in the area that will receive the assessment.

Tax increment financing. Tax increment financing occurs when towns increase the tax base in a pre-defined district by encouraging new development or rehabilitation. The town sells bonds to put new capital improvements into the district, encouraging new development. The new improvements raise the property values and taxes in the district, and the increment by which the taxes have gone up is used to pay off the bonds (24 V.S.A. Sections 1891 and following). Tax increment financing (TIF) was originally developed as a method for spurring private development in economically distressed urban areas that otherwise would not be likely to attract development activity.

TIF districts are defined by the legislative body of the town, and their purpose is to provide revenues for improvements located in the district which will encourage development, provide for employment opportunities, improve and broaden the tax base, or enhance the general economy of the municipality, region, or state. In Vermont, TIF district schemes usually have payback periods of 10 or 20 years.

Since the advent of Act 60, proposals for both TIF districts and tax stabilization agreements (described below) require state approval if they will result in fewer education property taxes being paid to the state. In these cases, either the municipality or the entire state must make up the difference in foregone education property taxes to finance the TIF district or tax stabilization agreement. During the 1999-2000 legislative session, legislation was passed enabling a TIF district to be used in Winooski in which the rest of the state must make up the difference in foregone education property taxes. This legislation not only prompted increased applications by other municipalities for TIF district financing, but also increased scrutiny by the state on the long-term effects of tax increment financing and tax stabilization agreements on the education fund. These conversations are still on-going. Some argue, for example, that if the tax burden increases on all state taxpayers to finance a TIF district, there should be widespread public benefits that offset the costs – instead of just local benefits. The worry is that if TIF districts are used widely, they'll drain the state education fund and increase the tax burden on all other state taxpayers.²⁴

²⁴ Kavet, p. 2, 7.

TIF districts probably are most effective at encouraging economic development in Vermont in economically distressed areas, usually downtown centers that are losing commercial space and not attracting private development. In these cases, if the infrastructure necessary to encourage development is provided, a TIF district can be successful. In other situations, the municipal costs from secondary development spurred by a TIF district are greater than the benefits that accrue within the TIF district.

Tax stabilization agreements. Towns also can use tax stabilization agreements to encourage development (24 V.S.A. Section 2741; 32 V.S.A Sections 3834, 3846, 5404a). These agreements stabilize a property owner's taxes at a certain level for a certain period of time, which may allow the property owner to afford to undertake development that otherwise would not occur. Tax stabilization agreements can be used with agricultural land, forest land, open space land, industrial and commercial real and personal property, and alternate-energy generating plants. The agreements can achieve lower taxes in several ways; they can maintain the value of property in the grand list at a set level; maintain the tax rate applicable to the property; set an amount to be paid annually on the property; or set the tax applicable to the property at a percentage of the annual tax. Agreements cannot be for more than ten years, with exceptions for alternate-energy generating plants.

Tax stabilization agreements reduce the liability of the property owner to the town, but as described above under tax increment financing, the foregone education property taxes must be made up either by the municipality or by the entire state. To avoid this, one option is for towns to negotiate a greater tax stabilization agreement only on the municipal property tax liability of the property owner. Municipalities have the power to arrange tax stabilization agreements that affect the municipal portion of the property tax bill, but agreements that also affect the school portion of the bill require state approval, or else the town must make up the balance.

Envisioning Development Scenarios

Calculating fiscal impacts

With so many factors influencing changes in property taxes, predicting exact municipal property tax changes for a specific development project can be complicated. Despite the difficulties, fiscal impact analysis has been used since the 1940s to attempt to predict such changes. Fiscal impact analysis seeks to estimate the additional revenues a proposed development will generate to a town and the additional costs that will be incurred by the town in providing services to the development. If the expected revenues exceed the expected costs, the project is often deemed to be fiscally advantageous; if the costs exceed the revenues, it is assumed the project will not pay its own way and will raise taxes for current residents.

With fiscal impact analysis, costs usually are calculated by multiplying the number of additional people or units generated by the development (such as students, workers, households, vehicles) by an average amount of spending per person or unit, and subtracting any other revenue that will pay for services related to the development (such as impact fees). The average amount of spending per unit is often calculated either by analyzing the amount a town currently spends per

unit, or by using average amounts of spending for other towns, the state, or country as a whole. Revenues usually are calculated by multiplying the new local tax rate (based on the new costs) by the estimated assessed value of the new development.

Fiscal impact analysis in its most rudimentary form can be done by following the above procedure on a simple worksheet. In its more complex form, fiscal impact analysis is done by developing and using a computer model that allows for more detailed inputs and outputs. For example, a model can integrate the projected growth of housing units and commercial space, population and employment projections, demographic, revenue, capital, and service level assumptions, estimated changes in property values, and economic and market-related factors, all under different development scenarios and over given time periods.

There are a number of weaknesses of fiscal impact analysis. Fiscal impact analysis often does not incorporate the secondary impacts caused by the proposed development, such as additional development needed to serve the proposed development. It also usually doesn't consider the costs and benefits to other towns and the region (in Vermont, the Act 250 process requires accounting for net secondary growth impacts in the region).²⁵ In addition, unless a model is used, fiscal impact analysis normally does not incorporate a baseline scenario illustrating what changes already are occurring in the town independent of the proposed development, making it more difficult to gauge when and if taxes will eventually rise partially as a result of the proposed development. A non-modeled fiscal impact analysis also usually does not consider the effect of development over time, but only at the completion of the project. Finally, fiscal impact analysis considers only the direct revenues and costs that accrue to the local government over the short-term, leaving out other considerations, including "fiscal" impacts such as increased state sales tax paid, or the non-fiscal impacts of development discussed in Appendix 3. Economist Helen Ladd concludes, "In sum, most economists agree that fiscal impact analysis...cannot by itself provide appropriate signals about whether new development should be allowed.... Fiscal impact analysis should be regarded as an input to a more comprehensive analysis of the benefits and costs of new development."²⁶

On the plus side, fiscal impact analysis can improve towns' understanding of the costs and benefits of growth and assist citizens and officials with planning decisions. When used in conjunction with other considerations, fiscal impact analysis can be a valuable tool in envisioning the future of a community.

Secondary growth

Many developments change not only the site of the actual development, but also the surrounding land uses through secondary growth. For example, the new employees and customers of a new commercial office building may need goods and services near the development, such as service stations and restaurants. Residents of a new housing development will need goods and services in the area, such as child care, health care, banks, laundromats, cultural facilities, and others. In some cases, existing levels of stores and services may be enough to incorporate the increased demand, and in other cases secondary growth will be necessary.

²⁵ Vermont Environmental Board, *Fiscal and Economic Analyses in Act 250*, p. 6.

²⁶ Ladd, p. 63.

It is important to consider not just the secondary growth a development will bring, but also the *net* secondary growth, which includes current retail, commercial, industrial, or tourist-related businesses, particularly in traditional downtowns, that might be displaced by new development. While net secondary growth is difficult to predict, it is important to estimate with any development because it can impact the tax base of the host town, neighboring towns, region, and/or school district, and therefore the ability over time to absorb costs and provide public services.

The likely secondary growth for different types and intensity of development, as defined by the Environmental Board, are listed below.

Figure 17. Secondary Growth Impacts of Development²⁷

Type of Development	Potential Secondary Growth
Residential	<ul style="list-style-type: none"> • Service commercial (stores, gas stations, other retail), government, public service, related infrastructure (roads, sewer, water, etc.) • Effects on municipal tax base from competition with existing housing
Retail	<ul style="list-style-type: none"> • Residential housing for net new residents • Commercial to serve retailers and shoppers, government, public service, related infrastructure • Spin-off retail, wholesale, distribution • Public costs associated with low-wage employment • Effects on municipal tax base from competition with existing retail establishments
Office space	<ul style="list-style-type: none"> • Residential housing for net new residents • Commercial to serve occupying businesses and new residents, government, public service, related infrastructure • Competition with existing office space
Industrial	<ul style="list-style-type: none"> • Residential housing for net new residents • Commercial to serve new residents and industry, related industrial to serve industry, transportation, government, public service, related infrastructure • Effects on municipal tax base from vacated space, if any, and any direct competitive effects with other in-state firms
Tourism	<ul style="list-style-type: none"> • Residential housing for net new residents • Commercial, especially food and beverage, retailing, and amusement recreational to serve tourists, government, public service, related infrastructure • Public costs associated with low-wage employment • Competition with existing in-state businesses

²⁷ Vermont Environmental Board, *Fiscal and Economic Analyses in Act 250* (draft), p. 8.

PART III

Envisioning development scenarios in your town

The following sets of worksheets will help you to envision development scenarios in your town and estimate corresponding tax rates. The worksheets can be used in several ways: Worksheets 1-6 can be used to estimate the new municipal tax rate from a specific development; Worksheet 7 can be used to estimate the new school tax rate if the per-pupil spending will change; Worksheet 8 can be used to estimate the new municipal and school tax rates from development that may encompass secondary growth, population changes, or town-wide growth over a number of years. The worksheets are intended to be completed by town staff and officials, as well as interested citizens, with consultations and interviews with others.

The worksheets will assist you in thinking about growth and tax implications in your town, but will not give outcomes that will exactly mirror what unfolds in your town in the future. The worksheets do not capture all of the elements that play important roles in development and taxes, such as appreciation and depreciation of properties, inflation, rising or falling property values, and others. But, the worksheets can be completed more than once using different sets of assumptions, giving perhaps a fuller picture of the range of possible scenarios for your town. The outcomes of the worksheets can provide input to one of the many concerns that communities debate when planning for development.

If you simply want to calculate a new municipal tax rate, use Worksheets 1-6. If you want to estimate total tax changes resulting from a broader growth scenario, use Worksheet 8, which will refer you back to the previous worksheets at the appropriate time.

Estimating the municipal tax rate (Worksheets 1-6)

The municipal tax rate is calculated by dividing the municipal budget to be raised from property taxes by the Grand List. The Grand List is one percent of the value of the taxable property.

Example:	1. Municipal budget	\$250,000
	2. Non-tax revenue	50,000
	3. Amount to be raised from property taxes (1-2).....	200,000
	4. Grand List	400,000
	5. Municipal tax rate (3 / 4).....	0.50

Land use changes often affect the municipal budget as well as the Grand List. To estimate the effect of land use changes on the rate, it is important to estimate both changes. The tables and worksheets in this report will help organize the calculation and give you some available data.

Although each analysis is different, and none will require all of the worksheets and sources of data included in this workbook, the basic steps are:

1. Estimate changes in the demand for services. The first step in the process is to estimate the demand for services. In general, this is done by estimating the new “units” such as residents,

school children, vehicle trips, employees. The tables in Appendix 1 include information to help determine the “units” likely to result from the proposed land use change. In some cases, you may only want to look at the demand for services resulting from the development you are analyzing, but for planning purposes it is important to also consider the “secondary impacts” — the likely associated land use changes.

2. Divide the current budget into departments. Once you have determined the municipal services that will be affected, you can look at your town’s most recent budget and separate the departments that you will focus on (fire, water, police, library, etc.). The other departments can be lumped into a “general” category.

3. Divide each department budget into operating costs and capital costs. For each department (including the “general” category), separate the debt payments and capital expenditures from the other operating costs. If there are unusual budget items in the current year, you may want to combine budgets from several years, adjusting prior year’s entries to current dollars. (Figure 18).

4. Divide department operating budgets into residential and non-residential components. For some services, like schools, the entire cost can be attributed to residents. For other services, however, some of the demand results from residents and some results from businesses or from tourists. Municipal officials may be able to provide an estimate; a review of service records may also help.

5. Estimate new unit costs for department operating budgets. The most commonly used method of estimating a new operating budget is to multiply the new “units” (residents, vehicular trips, employees, etc.) by a “unit cost.” For example, if the town will have a population of 1,000 after the new development, and the town spends \$25 per person (unit) for recreation, the recreation budget will be \$25,000.

There are three basic ways to estimate the unit costs:

- a) The first is to look at the current per-capita cost, assume the relationship will continue, and multiply it by the anticipated number of units. This approach can be used as a “default” and Worksheet 1 is designed to help organize and document the calculation. This approach is most applicable for the “general administration” department, and if the development being analyzed is fairly small.
- b) The second method is to look at the unit costs of providing municipal services in other towns, as shown in the tables in Appendix 1. In some cases, the development is significant enough that the town may not be able to provide services as it is currently doing. For many municipal services, including police, recreation, fire protection and general government, per-capita costs swell as the town grows. This is due to many factors: the need for more sophisticated infrastructure to handle more people, greater demand for public services, higher wages, and volunteers being replaced with paid staff. Adjust the dollars to current dollars, if necessary. (Figure 18)

- c) The third method, which is particularly appropriate for planning and build out analysis, is to look at standards. Various professional associations have developed recommendations for service levels, some of which are included in Appendix 1.

6. New capital expenditures. Sometimes a development adds just enough traffic or people to require a new facility, building, or piece of equipment. In some cases, the new facility is paid for in one year; in most cases, the town borrows money (bonds) to pay for the facility over 10-30 years.

There are two worksheets for estimating annual bond payments. Most bonds will be for a period of 20 years or less, and the annual payments will decline over the bond term. (Worksheet 2). For sewer or water projects, however, the bond may extend up to 30 years and there can be equal annual payments. (Worksheet 3).

7. Reassemble the budget by department. Worksheet 4 is designed to combine the operating costs for each component of the department budget (residential, nonresidential, etc) with the capital costs.

Make sure that one sheet is filled out for all departments into which you have broken the budget—especially the general administration category.

8. Estimate the new Grand List. The Grand List (1% of the value of taxable property) should be adjusted to account for the new development. If you have decided to include the costs of both the development itself (direct) and the secondary impacts, be sure to include the Grand List changes for both as well (Worksheet 5).

9. Calculate the New Municipal Tax Rate. Worksheet 6 can be used to reconstruct the budget by summing the department budgets as completed on Worksheets 4. It is crucial that all components of the original budget are included. When the Worksheets 4 are summed on Worksheet 6, the total should represent the entire municipal budget.

After the anticipated non-tax revenue is subtracted, the amount to be raised from taxes is divided by the new Grand List to derive the new municipal tax rate. For comparison purposes, it might be helpful to fill out this worksheet for the “current” situation as well. (If you have adjusted the current budget to account for irregular expenditures or revenue, the “current” situation that you would use for comparison will not be the same as the actual.)

Estimating the school tax rate (Worksheet 7)

Please see Appendix 2 for information on how school taxes are calculated in Vermont since the passage of Act 60.

The Department of Education can give you the information on the school district’s current situation. You will need the following numbers for your school district from them:

- Current budgeted education spending (worksheet line 1)

- Local education spending (worksheet line 5)
- Equalized pupils (worksheet line 6)
- Block grant per pupil (worksheet line 10)
- Yield (worksheet line 12)

The information you will need to estimate for the new situation is:

- Number of additional students expected (line 7)
- Additional cost of educating those students (line 2)

For the additional cost, it is generally safe to assume that these students will cost as much as existing students cost, on a per-pupil basis. An exception may be if there is an existing bond to pay off, if the student count has been dropping and the new students would not result in an increase in students, or if new construction is required.

If there will be new capital construction needed, please refer to the worksheets on estimating the cost of the building, the amount of the bond, and the annual bond payments. It is the annual bond payment (not the entire cost of the construction) that should be added to this worksheet.²⁸

- Additional non-tax revenue expected, if any (line 4). This may include impact fees, for example.

Because the education tax rate is based on the spending per pupil, and not the Grand List, the rate would stay the same if the new students cost as much per pupil as the existing students.

Estimating the municipal and school tax rates under broad development scenarios (Worksheet 8)

The following questions are intended to help you envision the impacts of the development scenario your town is considering. Worksheet 8 will help you organize your answers.

1) Scenario details

- List the name of your town and its current population.
- List the development scenario you are envisioning for your town (e.g., a single specific development with its related secondary development; all expected development that will occur under current economic conditions, etc.).
- List the time period (number of years) under which the development scenario will occur. Answer all of the questions below as if the time period you've chosen has transpired (e.g., change in total population after the chosen time period, change in grand list after the chosen time period, etc.).
- Resources:* For item (a), your town's current population, see Figure 19 in Appendix 1.

²⁸ In 2002, the Legislature gave a three-year opportunity to school districts to pay for new capital construction entirely on their Grand List, foregoing the 30% state aid. To find out if this financing method would apply to your school district, contact the Department of Education. If it does apply, do not subtract 30% state aid in the bonding worksheet; then calculate the resulting tax rate as if it were a municipal (not school) cost.

2) Population changes

- a) Is population in your town likely to go up or down during the chosen time period? By what percentage is the population projected to change?
- b) How many people does this change translate into?
- c) How many households does this change translate into?
- d) How many school-age children does this change translate into?
- e) *Resources:* If your development scenario involves all expected development over a chosen time period, see Figure 21 in Appendix 1, Vermont Population Projections by Town, from the Vermont Health Care Authority's 1993 publication. While these numbers are now somewhat out of date, they may be accurate for some towns. See also Figure 19 in Appendix 1, listing your town's population growth since 1960; this will give you data on your town's historical growth. Town officials know best whether the historical growth or population projections are likely to be accurate, and should choose the percentage increase they believe is most correct. Multiply the percentage increase by the current population for the total number of new persons (line b). Using Figure 22 or Figure 23, which list the average number of people and school children per household for your town or for specific housing types, calculate the number of new households corresponding to the population increase by dividing the total number of new persons (line b) by an average household size. Enter this number into line (c). Finally, multiply the average household size (line c) by the number of school children per household listed in one of the Figures. If your development scenario involves new housing instead of all expected development, skip line (a). Calculate the number of new persons, number of new households, and the number of new school children the project will bring by using the above-listed method and Figures.

3) Residential development

- a) How many new year-round single-family homes do you expect will be built during the chosen time period, given your expected population changes, the number of building permits for single-family year-round homes that have been issued annually for the past several years, and any development plans you know of or expect? Consider the number of people who currently commute into and out of your town for work, and whether these trends are likely to continue. If your development scenario involves all expected development, consider how larger employers in your town or in nearby towns may lead to new residential development in your town; and consider whether some currently existing single-family homes will be converted to commercial or other uses (if so, subtract these homes from your estimate).
- b) How many new multi-family homes do you expect will be built during the chosen time period?
- c) How many new seasonal single-family homes and camps do you expect will be built during the chosen time period?
- d) Calculate an average property value per dwelling unit for year-round single-family homes, and the corresponding grand list increase, in today's dollars.
- e) Calculate an average property value per dwelling unit for multi-family homes, and the corresponding grand list increase, in today's dollars.
- f) Calculate an average property value per dwelling unit for seasonal single-family homes and camps, and the corresponding grand list increase, in today's dollars.

- g) What will be the total increase in your town's residential grand list over the chosen time period, in today's dollars?
- h) *Resources:* For items (a, b, and c), review your estimated number of new households under line (2c). How many of these new households are likely to be year-round single-family homes, multi-family homes, and seasonal single-family homes? Talk with your town's planning or zoning officials, and compare the estimated number of new households with the number of zoning permits issued annually in recent years. For items (d, e, and f), talk with the listers or assessors in your town.

4) Commercial and industrial development

- a) Given your population growth and other factors listed above, list the commercial development you expect over the chosen time period, including the types and sizes of structures.
- b) List the industrial development you expect over the chosen time period, including the types and sizes of structures.
- c) Calculate estimated property values for each new commercial and industrial structure. What will be the total increase in your town's commercial and industrial grand list over the chosen time period, in today's dollars?
- d) Is commercial growth likely in nearby towns as a result of population or commercial growth in your town? If so, your town should work with the nearby towns to manage and plan for the growth.
- e) *Resources:* If your development scenario involves a specific commercial development, include in item (a) the secondary development that the commercial development is likely to bring. The types of secondary development that commercial development is likely to bring are listed in Figure 17 in this workbook. Work with the listers or assessors in your town for assistance in the expected grand list valuation of various types of commercial and industrial development in your town. If your development scenario involves all expected development, consider the following.
 - i) If your town is a traditional center ... some traditional centers whose land area is more limited do not have large amounts of land available for large new commercial and industrial structures. In these towns, however, small-scale commercial development, infill development, and redevelopment of existing underused buildings are options. Other traditional centers do have available land area for commercial and industrial growth. Traditional centers are typically surrounded by towns whose populations are growing, sometimes fairly rapidly, while the population of the traditional center is often declining. Take a look at the towns around you whose residents use your town as a regional center. How quickly are their populations growing? Is any of the commercial growth that will serve the new population likely to be located in other towns, or will it be located in your town? Will commercial growth in nearby towns cause increased secondary development in your town? Or, will commercial growth in nearby towns cause your town to lose some of its commercial tax base from increased competition?
 - ii) If your town is a new growth town, resort town, or outlying town ... most have smaller town centers, or no town centers. Some of these towns may have commercial growth not located in town centers. Residents of these towns often travel to nearby traditional centers or other towns for jobs, shopping, and services. Almost all of these

towns have increasing year-round population, and some have increasing seasonal population. If your town's population is increasing significantly, there is likely to be an increase in your town or neighboring towns in commercial development, including everything from grocery stores, child care services, legal services, laundromats, convenience stores, and many others.

5) Changes to open space

- a) Is more land likely to be conserved in your town? If so, what is the estimated acreage and the type of conservation?
- b) What will be the increase or decrease in your town's grand list over the chosen time period from changes to open space, in today's dollars?
- c) *Resources:* Town officials, especially planning and conservation officials, are best positioned to estimate the likely trend toward conservation if the development scenario includes all expected development. Work with them and the listers or assessors to determine the amount and valuation of conserved land.

6) Municipal spending, school spending, and tax rate

- a) Complete Worksheets 1-6 and enter the new municipal tax rate from Line 6 of Worksheet 6 here.
- b) Complete Worksheet 7 and enter the new school tax rate from Line 15 here.
- c) Add Lines (a) and (b) for the total tax rate.
- d) Multiply Line (c) by the average-value house in your town for the average tax bill.

Part IV Worksheets

Worksheet 1

Calculation of Default Unit Costs for Department

This worksheet is used to calculate the current unit cost for each department. This is a “default” method of estimating the cost of land use changes, and should be used if it can be assumed that the land use change you are analyzing is not likely to change the way services are delivered in your town.

Department _____

Residential Portion

1	Current Department Budget Attributed to Residents	
2	Current Residents	
3	Unit Cost: Cost per Resident (line 1 ÷ line 2)	
4	Current non-property tax revenues Attributed to Residents	
5	Additional non-property tax revenues Attributed to Residents	
6	Total non-property tax revenues (line 4 + line 5)	

Commercial Portion

1	Current Department Budget Attributed to Commercial Enterprises	
2	Current Employees	
3	Unit Cost: Cost per Employee (line 1 ÷ line 2)	
4	Current non-property tax revenues attributed to commercial enterprises	
5	Additional non-property tax revenues attributed to commercial enterprises	
6	Total non-property tax revenues attributed to commercial enterprises (line 4 + line 5)	

_____ Portion

1	Current Department Budget Attributed to _____	
2	Current Units	
3	Unit Cost: (line 1 / line 2)	
4	Current non-property tax revenues attributed to _____	
5	Additional non-property tax revenues attributed to _____	
6	Total non-property tax revenues attributed to _____ (line 4 + line 5)	

Worksheet 2

Calculation of Annual Capital Debt Payments by Rate and Term Equal Principal Payments--Most Municipal Bonds

In general, municipal bonds may be for terms up to 20 years, and a fixed percentage of the principal is repaid each year, along with the interest on the outstanding principal. Because the amount of outstanding principal decreases as payment are made, the interest due also decreases. The annual debt payment is greatest in the beginning of the term, and the “average payment” estimated below is a payment made in the middle of the term.

Annual Payment Per \$1000 Borrowed						
Interest Rate	10 Years		20 Years		30 Years	
	Average Payment	Maximum Payment	Average Payment	Maximum Payment	Average Payment	Maximum Payment
4%	122.00	140.00	71.00	90.00	54.00	73.33
5%	127.50	150.00	76.25	100.00	59.17	83.33
6%	133.00	160.00	81.50	110.00	64.33	93.33

- 1** Total cost of capital project
- 2** Less any non-tax revenue (for school bonds, the state pays 30%)
- 3** Amount to be borrowed (line 1 – line 2)
- 4** Amount to be borrowed divided by 1000 (line 3 ÷ 1000)
- 5** Annual payment per \$1000 borrowed from table above
- 6** Annual payment for your bond (line 4 x line 5)

Worksheet 3

Calculation of Annual Capital Debt Payments by Rate and Term Equal Payments -- Water and Sewer Bonds

Water and Sewer bonds may be for terms up to 30 years, and they can be repaid with equal annual payments. For other types of bonds, use the “equal principal payment” worksheet (Worksheet 2).

Annual Payment Per \$1000 Borrowed			
Interest Rate	10 Years	20 Years	30 Years
4%	123.29	73.58	57.83
5%	129.51	80.24	65.05
6%	135.87	87.19	72.65

- 1** Total cost of capital project
- 2** Less any non-tax revenue
- 3** Amount to be borrowed (line 1 – line 2)
- 4** Amount to be borrowed divided by 1000 (line 3 ÷ 1000)
- 5** Annual payment per \$1000 borrowed from table above
- 6** Annual payment for your bond (line 4 x line 5)

Worksheet 4

Calculation of New Department Budgets

This worksheet is designed to pull together the operating and debt payment costs for each department. You may have divided the operating costs for this department into residential, nonresidential, or other components, in which case you would fill out all three sections under A. If you did not divide the department budget into components, you would fill out only one of the sections under A.

Department _____

A. Operating Costs

Residential Component

1 Existing units (people, vehicle trips, etc.)	
2 Additional Units	
3 Total Units (line 1 + line 2)	
4 Unit cost (Worksheet 1)	
5 Total operating cost (line 3 x line 4)	

Commercial Component

6 Existing units (vehicle trips, workers, etc.)	
7 Additional Units	
8 Total Units (line 6 + line 7)	
9 Unit cost (Worksheet 1)	
10 Total operating cost (line 8 x line 9)	

_____ **Component**

11 Existing units (people, vehicle trips, workers, etc.)	
12 Additional Units	
13 Total Units (line 11 + line 12)	
14 Unit cost (Worksheet 1)	
15 Total operating cost (line 13 x line 14)	

16 Total operating cost (line 5 + line 10 + line 15)	
--	--

B. Capital Costs

17 Annual payment for current debt	
18 Annual payment for additional debt	
19 Total annual debt payment (line 17 + line 18)	

C. Non-Tax Revenue

20 Existing non-tax revenue	
21 Additional non-tax revenue	
22 Total non-tax revenue (line 20 + line 21)	

Worksheet 5

Calculation of the New Grand List

The Grand List is 1% of the assessed value of taxable property

- | | |
|---|----------------------|
| 1 Existing Grand List (1% of assessed value of taxable property) | <input type="text"/> |
| 2 1% of “after” taxable value of new development | <input type="text"/> |
| 3 1% of “before” value of same parcel (value on Grand List before development) | <input type="text"/> |
| 4 Net addition to Grand List with proposed land use change (line 2 - line 3) | <input type="text"/> |
| 5 1% of “after” taxable value of secondary development | <input type="text"/> |
| 6 1% of “before” value of same parcel (value on Grand List before development) | <input type="text"/> |
| 7 Net addition to Grand List for secondary development (line 5 - line 6) | <input type="text"/> |
| 8 New Grand List (line 1 + line 4 + line 7) | <input type="text"/> |

Notes:

In calculating the new Grand List, it is important to remember to account for the way a parcel was listed prior to the change. For example, a new house that is listed at \$200,000 may only add \$170,000 to the Grand List if the parcel on which it was built had been listed at \$30,000. Lines 3 and 6 in the worksheet are designed to subtract the prior listing.

If you are using this worksheet to calculate the Grand List after conserving a parcel, the “after” value (line 2) would be less than the “before” value (line 3), and the result would be a subtraction from the Grand List. (Line 4 would be negative.)

Worksheet 6

Calculation of the New Municipal Tax Rate

This calculates a new municipal budget from the department worksheets and divides it by the new Grand List as calculated on the Grand List worksheet.

1	Operating Costs (Sum of line 16 from Worksheets 4)	<input type="text"/>
2	Annual Debt Payment (Sum of line 19 from Worksheets 4)	<input type="text"/>
3	Non-tax revenue (Sum of line 22 from Worksheets 4)	<input type="text"/>
4	Net to be raised from taxes (line 1 + line 2 - line 3)	<input type="text"/>
5	New Grand List (line 8 from Worksheet 5)	<input type="text"/>
6	New municipal tax rate (line 4 ÷ line 5)	<input type="text"/>

Notes:

Be sure that the department worksheets account for the entire budget. If there are “miscellaneous” categories in the budget, add these back into this worksheet either using a default unit cost or another assumption about how they would (or would not) change as a result of the land use changes you are analyzing.

Worksheet 7

Estimating the school tax rate

	Current Situation	New Situation	Example	
			Current Situation	New Situation
1 Current Budgeted Education Spending (DOE)			657,086	657,086
2 Plus New Spending				36,419.47
3 Less Current Offsetting Revenues			125,794	125,794
4 Less New Revenues				1,000
5 Local Education Spending (LES) (lines 1+2-3-4)			531,292	566,711
6 Current Equalized Pupils (DOE)			75	75
7 Plus new pupils				5
8 Total Equalized pupils (lines 6+7)				80
9 LES per pupil (line 5 ÷ line 8)			7,084	7,556
10 Block Grant Per Pupil (DOE)			5,448	5,448
11 Above-block spending per pupil (lines 9-10)			1,636	2,108
12 Yield (DOE)			42	42
13 Local share percentage (line 11 ÷ line 12)			39%	50%
14 Local Education Tax Rate (line 13 x \$1.10)			0.43	0.55
15 Total Education Tax Rate (line 14 + \$1.10)			1.53	1.65

Note: Most of the numbers needed for this calculation come from the Department of Education (DOE): 802-828-3151

Worksheet 8
Estimating the municipal and school tax rates under broad development scenarios

1) Scenario details		
a) Name of town and current population		
b) Development scenario		
c) Number of years		
2) Population changes		
a) Percentage population increase or decrease		
b) Total number of new persons		
c) Number of new households		
d) Number of new school-age children		
3) Residential development		
a) New year-round single-family homes		
b) New multi-family homes		
c) New seasonal single-family homes and camps		
d) Average property value per dwelling unit for year-round single-family homes in today's dollars, and grand list increase (avg. property value multiplied by number of estimated new homes)	avg. value	grand list
e) Average property value per dwelling unit for multi-family homes in today's dollars, and grand list increase (avg. property value x number of estimated new homes)	avg. value	grand list
f) Average property value per dwelling unit for seasonal single-family homes and camps in today's dollars, and grand list increase (avg. property value x number of estimated new homes)	avg. value	grand list
g) Total increase in residential grand list		
4) Commercial / industrial development		
a) New commercial space, including types and sizes of structures	Use additional paper	
b) New industrial space, including types and sizes of structures	Use additional paper	
c) Increase in commercial and industrial grand list		
e) Will commercial growth be necessary in other towns to serve increases in your population?		
5) Changes to open space		
a) New conserved land, acreage and type of conservation		
b) Change in grand list due to changes in conserved land		
6) Municipal spending, school spending, and tax rate		
a) New municipal tax rate.		
b) New school tax rate		
c) Total tax rate		
d) Tax bill on average-value house		