

## **IMPACTS OF GROWTH IN PINE PLAINS**

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### **An Assessment of the Short- and Long-term Fiscal Impacts of Residential Growth on the Town of Pine Plains and the Pine Plains Consolidated School District**

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# 1 Introduction

As a community grows, changes occur that go beyond the simple increase in households and residents. Municipal and school budgets, which are dependent upon local taxes and must be brought into balance each year, can be impacted in a variety of ways by an increase in households and population, particularly when the new growth is different from existing development. This can be especially true in rural areas, where local governments and institutions accustomed to a relatively static population may find themselves unexpectedly confronted with the need to service an expanding resident base. It is therefore important that communities take the opportunity to plan proactively for such growth as is likely to occur.

Pine Plains is a rural community that saw little significant new development for decades. However, the growth rate has accelerated in recent years, and the Town has recently been on the receiving end of development proposals involving hundreds of units. Clearly, the community can no longer assume a continuation of the status quo. In recognition of this, the Town has undertaken two significant planning efforts. The first, already complete, was to formulate and adopt a full update to the Town's Comprehensive Plan. The second, still ongoing, is to bring zoning to Pine Plains for the first time. This latter effort is well underway, with a specific zoning framework now undergoing public comment, one that it is hoped will eventually evolve into a complete zoning ordinance and map for the Town.

The work of the Town's Zoning Commission to date has been exemplary. However, it has focused on the physical aspects of zoning, using a detailed build-out analysis methodology to estimate housing unit yields under different density assumptions. Absent from the discussion has been an assessment of the impacts of growth on the Town's demographics, the local school district, and the taxpayer. The purpose of this report is to complement the work of the Zoning Commission by filling in these missing pieces of information.

The following report summarizes the findings of four interrelated tasks performed by Phillips Preiss Shapiro Associates, Inc. on behalf of Pine Plains United to assess the likely impacts of future growth on the Town and its residents. These tasks have been as follows:

- Projecting future population levels of the Town under different build-out scenarios, including the most current scenario proposed by the Zoning Commission. The scenarios, which are based upon certain assumptions as to base densities in different parts of the Town, have been applied to developable lands to yield a build-out estimate, which takes into account physical and environmental constraints such as wetlands and slopes. The population projections cover both total population and school-age population.
- Projecting the near-term fiscal impacts of incremental residential growth through the use of an average-cost fiscal impact model. The model examined modules of 100 new homes in a variety of categories, including townhomes and single-family homes on half,

five and ten acre lots (note that the proposed zoning framework does not specify lot sizes). This method should be applied with caution when projecting large-scale growth or growth over a long time horizon.

- Qualitatively and, where possible, quantitatively examining the long term fiscal impacts and community character of future growth through interviews with Town officials and other sources.
- Lastly, addressing the same issue through a review of the relevant literature on the subject as applied to rural towns.

The major findings of the study are as follows:

- Based on the fiscal analysis presented in this report, the larger the Town grows, the larger the estimated impact on taxpayers of Pine Plains in the form of higher overall real property tax levies.
- Under a zoning framework under consideration that would target densities of one unit per half-acre in hamlet areas, one unit per five acres outside of hamlets, and one unit per ten acres on certain farmlands, a total of 2,256 homes could be added to the 1,122 residential units which currently exist in the Town.
- Based on demographic multipliers developed for this study, this would increase the population by nearly 7,000 people, of which over 1,700 would be of school-age.
- New residential development in Pine Plains will almost certainly impose an additional financial burden on the Pine Plains Consolidated School District that will register throughout the District (not just in Pine Plains) in the form of increased tax levies and, eventually, the need for new school construction. This study estimates the fiscal shortfall for the School District to be about \$2,000 per new home; and that a full build-out of the Town under the current zoning proposal would precipitate the need to expand school capacity to house an additional 1,200 students over the 1,860 students the schools could currently accommodate.
- The school district impacts are compounded by growth in per-pupil school expenditures, which have been a long term trend not only in the Pine Plains CSD, but nearly everywhere else as well. This trend is unrelated to growth.
- At the municipal level, new development results in a fiscal surplus which can be used to offset costs and may help fund services and programs beyond what the Town currently provides. *However, this surplus, at \$900 per home, is not sufficient to offset the deficit at the local schools, and there are non-monetary costs associated with growth, including increased traffic and loss of rural character.*
- The aggregate tax impact (municipal plus schools) will be negative under any growth scenario. For individual taxpayers, the end result will be higher taxes.
- It is difficult to accurately estimate the cost to individual tax payers. However, a rough estimate of the impact of the total projected school deficit under a full build-out scenario under the current zoning proposal on a homeowner assessed at \$215,000 would be

about \$1,400 per year. The actual figure would also vary depending upon decisions at the municipal level as to how any increase in local taxes would be spent, i.e., whether to lower municipal tax rates or provide additional services.

The remainder of this report is structured as follows. Chapter 2 provides an overview of how the build-out projections developed by the Zoning Commission and their consultants were converted into particular distributions of unit sizes and types, and from there how population impacts were projected using custom demographic multipliers derived from detailed 2000 Census returns. Chapter 3 summarizes the near-term fiscal impacts of growth. Chapter 4 describes, in a more qualitative fashion, the long term impacts were the Town to approach its theoretical build-out. Chapter 5 summarizes the results.

## 2 Population Impact Projections

The following chapter summarizes the projected impacts of three growth scenarios for the Town of Pine Plains. The scenarios are based upon build-out projections by the Zoning Commission and their consultant. Demographic impacts are based on a detailed analysis of the Public Use Microdata Samples from the 2000 Census.

### **CURRENT DEMOGRAPHICS**

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As a baseline to the population impact analysis, basic demographic variables from the 1990 and 2000 Census have been obtained for two geographic areas: the Town of Pine Plains, and the Pine Plains Census Designated Place (CDP), which corresponds roughly to Pine Plains Hamlet, which is the historic center of the Town. Subtracting this area from the entire town produces demographics for a third area—the Town less the Hamlet (Pine Plains Rural). Census demographics for all three areas are summarized in **Table 1**.

As of 2000, Pine Plains was home to 2,569 residents occupying 988 households. The average household size was 2.6, and about one-third of these households were families with children aged 18 or younger living at home. These figures stay roughly the same for households both within and outside of the hamlet area.

The housing stock occupied by Pine Plains households is generally old. Over half the houses in the Town were built before 1960, a figure which is higher for the hamlet area which was historically the center of population. Only 104 houses were recorded by the Census to have been built between 1990 and 2000, an absorption rate of about 10 houses per year. The majority of this new construction (about 56 percent) occurred outside of the hamlet, but it is significant that as much as 44 percent occurred within Pine Plains Hamlet, meaning that growth in Pine Plains has not been exclusively occurring through the conversion of rural lands, but has been more centered.

The vacancy rate for housing in Pine Plains is higher than normal, largely due to the presence of seasonal homes. Over 8 percent of homes in Pine Plains were recorded as being vacant by reason of seasonal occupancy in the last Census. These figures were 11.5 percent for the areas outside of the hamlet, and 5.3 percent within the hamlet, indicating that the second home market prefers a rural location to a location within the historic center.

This second home market mutes the demographic impact of current development patterns. While the ratio of school-age children to occupied housing units is 0.55, this figure drops to 0.47 when vacant units, including second homes, are factored in.

**Table 1: Selected Demographics, Pine Plains Town and Hamlet<sup>1</sup>**

	<u>Pine Plains Town</u>		<u>Pine Plains Hamlet</u>		<u>Pine Plains Rural</u>	
	Number	Percent	Number	Percent	Number	Percent
<b>Total housing units</b>	<b>1,161</b>	<b>100.0%</b>	<b>622</b>	<b>53.6%</b>	<b>539</b>	<b>46.4%</b>
<b>Total population</b>	<b>2,569</b>		<b>1,412</b>		<b>1,157</b>	
Population aged 5 to 18	541	21.1%	304	21.5%	237	20.5%
Population aged 55 and older	627	24.4%	362	25.6%	265	22.9%
Average household size	2.600		2.590		2.612	
Persons per housing unit <sup>2</sup>	2.213		2.270		2.147	
School-age children per housing unit	0.466		0.489		0.440	
<b>Total households</b>	<b>988</b>		<b>544</b>		<b>444</b>	
Family households w/ children under 18	331	33.5%	179	32.9%	152	34.2%
Vacant—seasonal occupancy	95	8.2%	33	5.3%	62	11.5%
<b>Housing units by type</b>						
Single-family detached	919	79.2%	470	75.6%	449	83.3%
Single-family attached	15	1.3%	13	2.1%	2	0.4%
Duplex	61	5.3%	40	6.4%	21	3.9%
Multiple	81	7.0%	59	9.5%	22	4.1%
Mobile home	85	7.3%	40	6.4%	45	8.3%
<b>Housing units by age</b>						
1990 or newer	104	9.0%	46	7.4%	58	10.8%
1960 to 1990	425	36.6%	178	28.6%	247	45.8%
Older than 1960	632	54.4%	398	64.0%	234	43.4%

Source: U.S. Census

<sup>1</sup> The Pine Plain Census Designated Place serves as an approximation of the hamlet area.

<sup>2</sup> Differs from Average Household Size, as this is the ratio of population to all housing units, including vacant units.

## GROWTH SCENARIOS

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The Zoning Commission has been exploring a number of zoning options for the Town, each of which produces different build-out numbers depending upon the densities called for. However, each of these zoning options has had the following common features:

- Density is controlled not by minimum lot sizes, but by a dwelling unit per acre(s) standard, with the buildable land area used in the density calculation adjusted downward by an environmental control formula which assigns “weights” to different environmental features (open waters, wetlands, steep slopes, etc.).
- Significantly higher densities are contemplated in hamlet areas as opposed to everywhere else in the Township. This is intended to reinforce historic development patterns and provide for “centered” growth patterns.
- Considerable flexibility as to use is contemplated in the zoning framework, meaning that new housing need not be entirely single-family detached.

Build-out projections are based upon these density frameworks as applied to developable parcels, accounting for constraints such as wetlands and topography. They represent a realistically feasible density that would be obtainable if every property owner were to seek to maximize the development yield of their particular property under the proposed zoning.

The most current zoning framework under discussion calls for a base density of one unit per five acres outside of the hamlets, and densities ranging from one unit per half acre to one unit per acre within the hamlets. Further, a 10-acre overlay would be applied to fields in the farmlands. The Zoning Commission’s build-out analysis of this proposal results in a capacity to absorb 772 units within the hamlets, and close to 1,490 units outside of the hamlets. The total is very close to twice the number of housing units within the Town as of the 2000 census, meaning that the size of the Town could triple.

Other zoning scenarios have been studied in the past that would be either more or less restrictive. In order to get a sense of the alternatives, the latest Zoning Commission build-out has been bracketed for this analysis by two additional scenarios: a doubling of the Town’s size, and a quadrupling of the Town’s size. For the split between hamlet and rural, it was assumed to be the same proportion as the Zoning Commission’s current alternative. However, when applied to the quadrupling scenario, this resulted in a number of hamlet units greater than the estimated ultimate build-out of the hamlets under the current subdivision regulations. For this reason, the yield under current regulations was used as the upper limit for hamlet units, with the balance units under the quadrupling scenario assumed to be located outside of the hamlets.

The resulting number of new units, and the percentage of existing units that this represents, is shown in **Table 2**.

**Table 2: Projected New Units, Three Growth Scenarios**

	May 2006 Zoning		
	Quadrupling	Proposal	Doubling
Hamlet	1,128	772	397
Non-hamlet	2,355	1,485	764
Total	3,483	2,257	1,161
Percent increase	400%	294%	200%

Source: Pine Plains Zoning Commission; Phillips Preiss Shapiro Associates, Inc.

From this base, assumptions were made regarding the type of units that would comprise this projected growth. A working hypothesis, as of yet unaddressed by the Zoning Commission, is that all the growth outside the hamlets would be in the form of single-family detached homes, but that within the hamlets, some townhouses and mixed-use/multi-family flats would be developed. The assumed percentages within the Hamlets call for 10 percent flats, 20 percent townhouses, and 70 percent single-family detached. The result of applying these numbers to the above scenarios is shown in **Table 3**.

**Table 3: Projected Unit Mix, Three Growth Scenarios**

	May 2006 Zoning		
	Quadrupling	Proposal	Doubling
Single-family detached	3,145	2,025	980
Townhouse	226	154	121
Multi-family/mixed-use	113	77	60
Total	3,484	2,256	1,161

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

The third step is to project the number of bedrooms in these units. The bedroom mix has been based on a trend analysis of Public Use Microdata Samples (PUMS) data<sup>3</sup> from the U.S. Census for the bedroom mix of units constructed in Dutchess County in 1990 and 2000. The projected bedroom mix is as shown in **Table 4**.

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<sup>3</sup> The PUMS data are created from a 5 percent sample of all long-form census returns. They are available at varying levels of geography including county and sub-county regions. They represent one of the best sources for demographic multipliers because (1) unlike traditional census data they can be used to create custom cross tabulations of demographic variables for units with specific characteristics; and (2) they represent a large sample from which to draw, and therefore have a high degree of statistical reliability.

**Table 4: Project Bedroom Mix, Type of Unit**

	<b>1 BR</b>	<b>2 BR</b>	<b>3 BR</b>	<b>4+ BR</b>
Single-family detached	1%	3%	37%	59%
Townhouse	14%	66%	21%	0%
Multi-family/mixed-use	59%	32%	4%	4%

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

## **DEMOGRAPHIC MULTIPLIERS**

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The process of converting these housing unit projections into demographic impacts involves the construction of demographic multipliers relating housing type and size to the average characteristics of inhabitants. The analysis here focuses on total population, and school-age population subdivided by grade level. The purpose is to analyze the impacts on both public services and the Pine Plains Consolidated School District.

The construction of the multipliers was based on a sophisticated analysis of the Public Use Microdata Samples from the 2000 Census for Dutchess and Putnam Counties. Unlike traditional multiplier analyses, this analysis separates rural from urban areas, and takes into account the fact that newer homes may attract families at a different rate than older homes. It therefore incorporates a trend analysis that looks at the difference between units that were 10 years old and newer in 2000 and other units. The use of the Dutchess/Putnam study area does contain a significant assumption, however—namely that if Pine Plains experiences significant future growth, the demographic impacts will be similar to communities located to the south that have also seen growth from 1990 to 2000.

A summary of the specific demographic multipliers used in this analysis is shown in **Table 5**. These are summary multipliers—more detailed multipliers are used in the analysis to project students by age grouping.

***Note that these multipliers predict the new homes in Pine Plains will generate more school-age children than existing units—the current ratio of school-age population to housing units is 0.466, as opposed to 0.71 projected for new single-family homes, and 0.56 for new townhouses.***

**Table 5: Demographic Multipliers, 5 percent PUMS Sample, Dutchess/Putman Counties**

	<b>1 BR</b>	<b>2 BR</b>	<b>3 BR</b>	<b>4+ BR</b>	<b>All Units</b>
Single-family detached					
All School-age Children	0.04	0.22	0.65	0.96	0.71
All Persons	1.71	2.16	2.94	3.45	3.02
Townhouse					
All School-age Children	0.17	0.13	0.94	1.13	0.56
All Persons	1.39	2.23	3.20	4.22	2.72
Multi-family/mixed-use					
All School-age Children	0.10	0.38	1.00	0.91	0.33
All Persons	1.50	2.25	3.50	3.55	2.08

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

## **CORRECTING FOR SEASONAL UNITS**

The two-county sample used to construct the multipliers already includes vacant units, including those vacant by reason of seasonal occupancy. However, it is surmised that units built in northern Dutchess County are more likely to be second homes. Data collected from the 2000 Census bears this out. Based on a sample of northeastern Dutchess towns<sup>4</sup>, the proportion of single-family units which are vacant by reason of seasonal occupancy is 8.5 percent versus 2.7 percent overall in Dutchess/Putnam Counties. This figure is 9.2 percent in Pine Plains, and over 16 percent in Milan.

For the purposes of the estimates contained here, the projected impacts are calculated using the multipliers presented above and then adjusted to account for the greater concentration of seasonal units in the northern end of the County. The magnitude of the adjustment is based on the difference in the total vacancy rate between the “nearby towns” study area and Dutchess/Putnam combined, based on the assumption that the difference in the vacancy rates is largely due to the variation in seasonal units. The adjustment factors vary from 7 percent for single-family homes to 1 percent for multi-family units.

The number of seasonal units was also estimated, based on vacancy rates in the nearby towns, subtracting out the average vacancy rate in Dutchess/Putnam. The results are shown in **Table 6**.

<sup>4</sup> Amenia Town, Clinton Town, Milan Town, North East Town, Pine Plains Town, Pleasant Valley Town, Stanford Town, Washington Town

**Table 6: Estimated Seasonal Units, Three Growth Scenarios**

	<b>May 2006 Zoning</b>		
	<b>Quadrupling</b>	<b>Proposal</b>	<b>Doubling</b>
Single-family detached	305	196	101
Townhouse	12	8	4
Multi-family/mixed-use	5	4	2
<b>Total</b>	<b>322</b>	<b>208</b>	<b>107</b>

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

## **DEMOGRAPHIC PROJECTIONS**

Based on the forgoing, population and school-age child projections have been performed for all three growth scenarios. These projections do not count part-time residents. **Table 7** shows summary projections for all three scenarios. **Table 8**, by way of illustration, shows growth impacts by type of unit for the current Zoning Commission scenario.

**Table 7: Population Projections, Three Growth Scenarios**

	<b>May 2006 Zoning</b>		
<b>Age Cohort</b>	<b>Quadrupling</b>	<b>Proposal</b>	<b>Doubling</b>
Younger than 4-years	695	482	248
Elementary School-Aged	1,136	787	405
Middle School-Aged	212	147	76
High School-Aged	1,122	777	400
Older than 18-years	6,922	4,799	2,470
Total School-Aged	2,470	1,712	881
Total Non-School-Aged Persons	7,618	5,281	2,718
<b>Total population impact</b>	<b>10,088</b>	<b>6,993</b>	<b>4,195</b>
Percent of existing population	393%	272%	163%
Percent of existing school-age population	457%	316%	163%

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

**Table 8: Impacts by Type of Unit, Current Zoning Commission Scenario**

	Single-family detached	Townhouse	Multi-family/mixed-use
Younger than 4yrs.	460	13	9
Elementary School Age	762	15	10
Middle School Age	135	11	1
High School Age	747	22	9
All School-Aged Children	1,644	48	20
Older than 18yrs.	4,383	299	116
All Persons	6,487	360	145

Source: U.S. Census 5 percent Public Use Microdata Samples; Phillips Preiss Shapiro Associates, Inc.

***As these tables show, all three of the growth scenarios will have a significant impact on the population of Pine Plains, even accounting for seasonal units. The number of school-age children sent by the Town to the local schools will nearly double using the most restrictive growth scenario, and will increase by well over four times using the least restrictive scenario. The current Zoning Commission scenario would result in an approximate tripling of the Town’s total population, and increase the school age population by a factor of three and a half.***

### 3 Fiscal Impacts of Incremental Growth

A standard “average cost” methodology—the “per capita multiplier” method developed by the Center for Urban Policy Research at Rutgers University—has been employed to project the fiscal impacts of new residential growth on the finances of both the Town of Pine Plains and the consolidated school district. ***For reasons related to current assessment practices and tax rates, these impacts are quite negative, as well be detailed below.***

The methodology employed is simple, and assumes that new residents will demand municipal services at the same rate as existing residents. This assumption is reasonable so long as the growth is relatively modest compared with the size of the community in which it is occurring. More significant growth would tend to precipitate the need to make significant new investments—a new school, a sewer system, a widened roadway—that would not be taken into account using the average cost method. These results are most valid when applied to near-term, incremental growth in the Town. The methodology also assumes the current costs are a good proxy for future costs—again, a sound assumption in the near term, less so for the distant future.

Population impact from new growth has been projected using the same demographic multipliers used to project the population impacts of the build-out scenarios. Revenues are estimated based on current tax rates. Future assessed values (the basis for property tax payments) have been estimated using formulas provided by the Town’s assessor, Jim Mara. Assessments in Pine Plains are based upon a replacement cost formula, not market values. The formula takes into account things such as square footage and number of bathrooms, but not other attributes that can impact a unit’s value, such as location, quality of fixtures, etc. In today’s market, the resulting assessed value is often very much lower than the market value for the housing unit.

Pine Plains and the consolidated school district do not raise all of their revenues from real property taxes—intergovernmental transfers (primarily State aid) comprise a significant share of total revenues. Based on a regression analysis of all Towns in Dutchess County, each additional person added to the Town’s population should result in about \$67 in additional monies from the State of New York. Other sources of revenue, such as fees, have been projected forward on a per capita basis. For the school district, only costs offset by local property taxes are considered—a liberal assumption which may underestimate the true fiscal impacts.

Detailed fiscal impact results for modules of 100 units are provided in an attached table. The results show a significant negative impact in every category of housing. A brief case study will show why.

## SINGLE FAMILY DEVELOPMENT

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The following considers a single-family home on a five-acre lot. The assessed value for such a house is a function of its replacement cost plus the underlying land value. Using the formulas provided by the Town's assessor, the assessed value for an average home would total about \$215,000. The combined tax rate from the Town and Fire District is \$8.68 per \$1,000 of assessed value; the rate for the consolidated school district is \$21. The taxes paid by this average house would total \$1,900 to the Town and Fire District; and \$4,500 to the school district.

As noted earlier, there are other sources of revenue on the municipal side other than property taxes, including sales taxes and state aid. State aid (both general purpose and highway aid) accounts for approximately 19 percent of total revenues. Based on the projection of \$67 in additional aid per person, State aid could be expected to increase by about \$200 per house.<sup>5</sup> Further, fees (such as water fees) and sales taxes account for about 21 percent of municipal revenues. Assuming that these revenues increase linearly with increasing population, each new house would bring about \$310 in additional non-property tax revenues. Municipal revenues for this average house would therefore total \$2,400.

**Table 9: Sample Revenue Calculation**

1	Assessed value	\$215,000
	<u>Tax Rates</u>	
2	Town + Fire District	\$8.68/\$1,000
3	School District	\$21.01/\$1,000
	<u>Property Tax Revenues</u>	
4	Town + Fire District (line 1 x line 2)	\$1,870
5	School District (line 1 x line 3)	\$4,500
	<u>Other Town revenues</u>	
6	Total new residents	3
7	State aid per capita	\$67
8	New state aid (line 6 x line 7)	\$200
9	Pro rata share of non-tax revenues	\$310
	<u>Total revenues</u>	
10	Town + Fire District (sum of lines 4, 8 & 9)	\$2,400
11	School District (line 5)	\$4,500
12	Total (line 10 + line 11)	\$6,900

The next step is to compare these revenues with expenditures. The latest municipal budget for Pine Plains was approximately \$1.4 million, or very close to \$500 per full-time resident. School revenues raised by property taxes total \$9,640 per student (up from \$8,616 the previous year).

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<sup>5</sup> State aid versus population has been plotted for all towns in Dutchess County. A linear regression line fits the resulting data with an r-squared of 92 percent, meaning that 92 percent of the variation of state aid payments in Dutchess County can be explained by population. The regression line has a slope of \$67 per additional person.

Each average single family house is expected to generate close to three full-time residents and 0.7 public school students. The costs associated with the average house will therefore be about \$1,500 on the municipal side, and over \$6,500 on the school side.

**Table 10: Sample Expenditure Calculation**

1	Municipal expenditures per capita	\$500
2	School expenditures raised from property taxes per student	\$9,640
3	Total persons per unit	2.98
4	Total public school children per unit	0.68
	<u>Expenditures associated with unit</u>	
5	Municipal (line 1 x line 3)	\$1,500
6	Schools (line 2 x line 4)	\$6,550

The reconciliation of total costs and revenues is shown in **Table 11** below. As the table illustrates, new housing growth creates a surplus at the municipal level. However, there is a significant deficit with regards to the public schools. ***The total impact (municipality plus school district) is significantly negative.*** This deficit would have to be closed through a higher tax rate, an increase in taxable non-residential development, or a change in assessment practices leading to higher effective taxes.

**Table 11: Reconciliation of Costs and Revenues**

	<b>Town</b>	<b>School District</b>	<b>Total</b>
Revenues	\$2,400	\$4,500	\$6,900
<u>Expenditures</u>	<u>\$1,500</u>	<u>\$6,500</u>	<u>\$8,000</u>
Net impact	\$ 900	(\$2,000)	(\$1,100)

How large an impact would 100 new homes have on local property taxes? The consolidated school district raised a total of \$13.4 million from property taxes throughout the nine Towns which it covers. A hundred new homes would increase school costs by \$660,000 (or about 5 percent) to over \$14 million, an increase which would have to be raised through property taxes.

Taxes are paid to the Pine Plains Consolidated School District from the nine towns, with the tax burden apportioned out to each town based on a formula that includes the percentage within each town of total real property values within the District. The end result is that the tax burden resulting from new growth within Pine Plains may not be fully borne by Pine Plains taxpayers, but may in fact fall partially upon taxpayers in other towns.

Of the nine towns located in whole or part within the Pine Plains Consolidated School District, in 2005 Pine Plains contributed 19.4 percent of the total levy raised from property taxes, implying that it contained 19.4 percent of total real property value in the District (the town with the highest

contribution was Stanford, at 37.7 percent). With 100 new homes in Pine Plains, this percentage would increase—a rough estimate, based on current equalization ratios, is that it would increase to 21.7 percent. This means that Pine Plains would take on a greater share of the *total* school budget, which includes the increase in the budget due to the new students coming from Pine Plains. ***This greater share is not enough to offset all the increased costs—in fact, it is estimated that about 68 percent of the total increase in school costs would be borne by Pine Plains taxpayers, with the remaining 32 percent borne by taxpayers in other Towns.***

As per **Table 11**, 100 new homes would create a net fiscal deficit of \$110,000 (\$1,100 per home), of which \$200,000 is attributable to the schools, offset by a \$90,000 surplus at the municipal level. However, only 68 percent of this schools deficit, or \$136,000, falls on Pine Plains taxpayers, while the entire \$90,000 surplus is enjoyed by the Town’s taxpayers. The net deficit accrued at the Town level is therefore only \$46,000 per year. Based on projected assessments, taxes on a typical home valued at \$215,000 would increase by about \$60 per year to make up this deficit.

The lesson is that while incremental growth results in fiscal deficits, the bottom line impact to Pine Plains taxpayers is initially manageable, since the impact is spread around existing tax payers, and also shouldered by other municipalities to a certain degree. However, with further growth, the impact can become significantly larger, particularly when the school district begins to incur capital costs related to new school buildings (as will be discussed below).

## **OTHER TYPES OF UNITS**

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The above sample analysis covered a typical single family home on 5 acres of land. The proposed zoning scenarios also contemplate half-acre lots in the Hamlets, and 10 acre lots on certain rural lands. The analysis does not assume any demographic differences among these units—therefore, the only change is in assessed valuation, which is lower for properties with less acreage and greater for properties with more acreage. Based on the same calculation as detailed above, the impacts are as follows:

- For homes on half-acre lots, the Town experiences a surplus of \$720 per house, the school district a deficit of \$2,550, for a total deficit of \$1,730 per home.
- For homes on ten-acre lots, the Town experiences a surplus of \$1,020 per house, the school district a deficit of \$1,710, for a total deficit of \$690 per house.

The analysis also looked at townhouse and apartment (multifamily units). Both types are negative on average:

- Townhomes, assuming a bedroom mix comparable to countywide averages, induce a municipal deficit of \$230, a school deficit of \$410, for a total deficit of \$640 per unit.

- However, it should be noted that the estimated impact of one- and two-bedroom townhouses is positive for both the Town and the schools—only the three bedroom units are negative. The overall negative impact results from the estimated mix of one, two and three bedroom units.
- Multifamily units on average are negative for both the Town and Schools, with a total deficit of about \$900 per unit: \$300 at the municipal level, \$600 for the schools. However, one-bedroom units are positive in their impact.

## EXTRAPOLATING INTO THE FUTURE

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As noted in the caveats to this analysis, it is not good practice to project incremental average cost fiscal impacts far into the future and for very large developments, as too many variables are subject to change, and major capital investments are not accounted for (a topic addressed in the next section). However, this sub-section will do so anyway, just to get an impression of the orders of magnitude involved.

**Table 12: Total Impacts of Current Zoning Commission Growth Scenario, Average Cost Extrapolation**

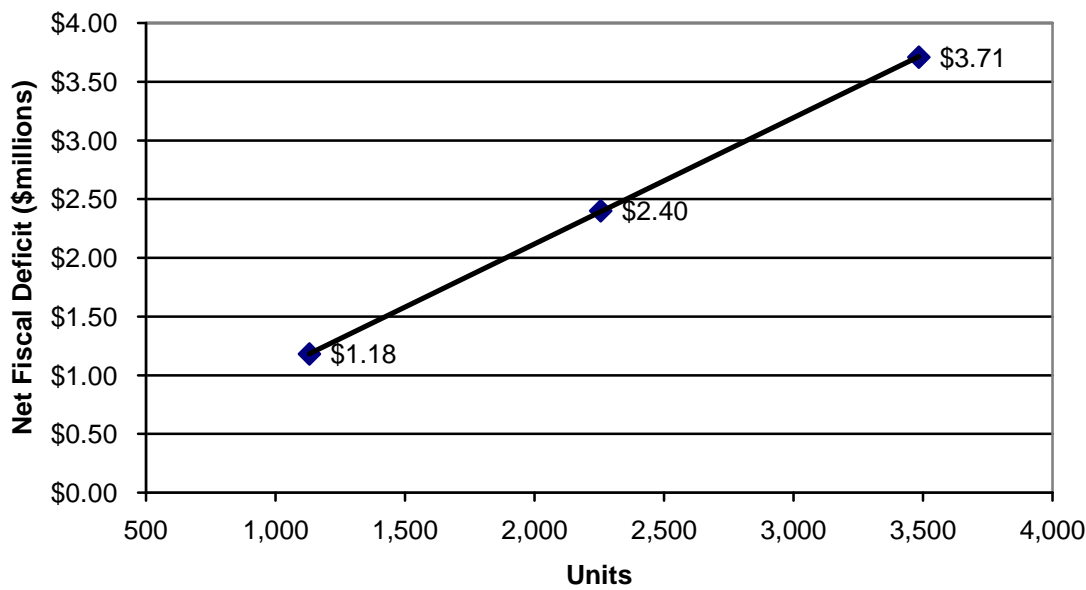
		<u>Impact per Unit</u>		<u>Total Impact</u>	
		<u>Town</u>	<u>School</u>	<u>Town</u>	<u>School</u>
Single-family detached	2,025	\$900	(\$2,000)	\$1,822,500	(\$4,050,000)
Townhouse	154	(\$230)	(\$410)	(\$35,420)	(\$63,140)
<u>Multi-family/mixed-use</u>	<u>77</u>	<u>(\$300)</u>	<u>(\$660)</u>	<u>(\$23,100)</u>	<u>(\$50,820)</u>
Total	2,256			\$1,763,980	(\$4,163,960)

The above table suggests that a full build-out of the Town will provide municipal government with \$1.8 million a year; assuming half goes to operating costs, the remainder would be sufficient to service debt on 30-year bonds of up to \$14.6 million. The school district will experience an operating deficit of over \$4 million, or about 20 percent of its most recent budget, not counting the need for significant new capital expenditures to house all the new students (addressed in the following chapter). ***The total impact would be a combined shortfall of \$2.4 million annually that would have to be made up through increases in local taxes. For comparison purposes, the total Town budget is currently about \$1.4 million.***

The above impacts have addressed the existing zoning scenario under consideration by the Zoning Commission at the time of writing. As an average costing approach has been used to arrive at these findings, any assumptions that change the number of units projected would also impact the estimated fiscal shortfall, with the amount of the shortfall varying in a linear fashion with the number of units. The following chart illustrates this relationship for the doubling and quadrupling scenarios as well as the current zoning proposal. As the chart shows, the net fiscal

impact varies from \$1.8 million at the low end to over \$3.7 million at the high end, with the current zoning proposal falling in the middle, as discussed above, at \$2.4 million.

**Chart 1: Estimated Net Fiscal Deficits, Three Growth Scenarios, Pine Plains**



## **COMPARISON WITH OTHER RECENT STUDIES IN THE REGION**

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### **RHINEBECK FISCAL ANALYSIS**

A similar analysis was performed for Rhinebeck as part of their comprehensive planning effort, using the same average cost analysis. Like this analysis, the Rhinebeck analysis concluded that growth positively impacts the fiscal bottom line of the municipality and negatively impacts the school district. However, in the case of the Rhinebeck analysis, the overall impact was positive, while the overall impact here is negative. Differences in assessment practices, taxing policies, and the demographic multipliers used can all impact the analysis.

### **DUTCHESS COUNTY ECONOMIC DEVELOPMENT CORPORATION STUDY**

Dutchess County Economic Development Corporation prepared a report entitled “Real Estate Development in Dutchess County: A Cost/Benefit Study.” The study looks at the estimated fiscal impacts of five case study developments. An exhaustive review of the results is beyond the scope of this report; however, the following comments are made which raise potential questions regarding the results and their applicability to specific municipalities such as Pine Plains:

- Fiscal impacts of a given development type will vary depending on where the development occurs. None of the case study developments was located in Pine Plains, and therefore they do not provide a guide to local impacts.
- Much of the estimated fiscal benefit accrues to the County. Since the County is a large taxing jurisdiction, it is unlikely that more than a minor share of this benefit would register within the municipality in the form of better services or reduced County tax rates.
- Municipal impacts were estimated on a per household, rather than a per capita, basis. The latter is customary in fiscal impact analysis. Otherwise, an implicit assumption is introduced that the demographics of the new homes are the same as existing homes.
- Only municipal expenditures raised, and revenues generated, from real property taxes, were considered. This assumes that all other expenditures and revenues scale linearly with the addition of new households. Research undertaken for this report indicates that this is not necessarily the case.
- It is not stated in the report how school-age children in the developments were estimated. It is of interest, however, that the effective school-age multipliers for the single family developments were 0.85 and 0.74, actually higher than the multipliers developed for Pine Plains in this study.
- The study assumes that local mil rates will increase as per recent trends—i.e., it assumes higher local tax rates in the future. In fact, certain case study projects which are negative in their impacts in Year 1 become positive in Year 5. This is because revenues are assumed to grow much faster than costs (in one example, by 13 percent as opposed to 3 percent). However, these tax rate increases are precisely what municipalities would prefer to avoid. It is curious that future increases in the mil rate are factored into the “benefit” side of the balance sheet.

## 4 Long Term Impacts of Growth

The forgoing analysis has examined the short-run impacts of incremental growth. However, the long term impact of a tripling of the Town’s population would be significantly different than the incremental impacts discussed above, which would impact local tax rates but little else.

### **IMPACTS ON THE PINE PLAINS CONSOLIDATED SCHOOL DISTRICT**

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Current enrollments in Pine Plains CSD schools total 1,349 as of 2005. Under the current zoning alternative, a full build-out of Pine Plains would increase the student population by an estimated 1,711, more than doubling current enrollments to a total of about 3,060. Of this, enrollments at the elementary schools and the high school would each increase by 780 students, while about 150 additional students would be enrolled in the middle school(s). (Note that currently the high school and middle school share a common facility.)

**Table 13** compares projected enrollments with current capacity to understand impacts on the school district in terms of new classroom space needed. The table shows existing enrollments with the maximum capacity of elementary and middle/high schools. The difference between the two, if positive, represents the *excess capacity* in the system. The table suggests that the elementary schools could theoretically accommodate 308 additional students without adding classrooms, while the middle and high schools can accommodate 203 additional students. However, a full build-out of the town under the current Zoning Commission growth scenario would significantly exceed this excess capacity. ***Based on the projections detailed in Chapter 2, the elementary schools would have to find space for 479 students beyond their current capacity, while the middle and high schools would have to expand classroom space sufficient to accommodate 721 students. The total for all grades would be 1,200 students.***

**Table 13: Pine Plains CSD Capacity Impacts: Current Zoning Commission Scenario**

Line	Variable	K - 6	7 - 12	Total
1	2005 enrollment	639	710	1,349
2	Capacity (High range) <sup>6</sup>	947	913	1,860
3	Excess capacity (line 2 - line 1)	308	203	511
4	Projected new students	787	924	1,711
<b>5</b>	<b>Amount over capacity (line 4 - line 3)</b>	<b>479</b>	<b>721</b>	<b>1,200</b>

Sources: Seversky, Dr. Paul M. (2006). “School Building Pupil Capacity Analysis Study for the Pine Plains Central School District,” New York State School Boards Association.  
Phillips Preiss Shapiro Associates Inc.

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<sup>6</sup> The high range here refers to the largest class size consistent with local school district policies, which in Pine Plains is between 23 and 28 students per classroom, depending on the grade level. As a practical matter, capacity will be somewhat lower as it is impossible to provide for a situation where every class is at this level without exceeding it.

To accommodate this influx of students would require significant new school construction. The State of New York estimates that new classroom construction costs on average about \$19,000 per student served. With capacity needed for 1,200 students, this translates into about \$23 million in new construction for classrooms alone (State Aid may offset a significant portion of this, but then again this estimate does not include gyms, auditoriums, dining areas, or other non-classroom facilities). A local bond issue for \$23 million would, at a 30-year term and at 4.5 percent interest, cost local taxpayers \$1.4 million per year in debt service. If 70 percent of this cost accrued to Pine Plains taxpayers (based on earlier estimates discussed in Chapter 3), an increase in the local property tax rate of 1.64 per \$1,000 would be required (taking into account the significant increase in the overall tax base). **Applied to a typical house assessed at \$215,000, the annual cost to the taxpayer would be about \$350 in additional taxes for capital expansion alone, not counting operating expenditures.**

Including the operating deficit at the school district (which is based on current, not future, costs) raises this cost significantly. As per the extrapolation at the end of Chapter 3, the total operating deficit under current tax rates would be in excess of \$4 million per year. Again assuming that 70 percent of this cost fell on Pine Plains, making up this shortfall would require an increase in the local mil rate of \$4.87 per \$1,000 assessed value. Applied to the typical home, the annual cost to the tax payer would be about \$1,050. **The total school costs would therefore be approximately \$1,400 in extra taxes per average homeowner per year.**

In short, the evidence points towards significant impacts on the school district both from the capital and the operating sides, requiring future increases in school tax rates to accommodate the impacts of future growth.

## **IMPACTS ON THE TOWN**

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As per the fiscal impact analysis, the Town would incur surpluses from additional growth that would allow the Town to either lower its tax rates or to fund additional services. Experience suggests that the latter outcome would be more likely, as a larger population would create pressure to provide more, and different, services than it currently provides. There would be tax revenues available to offset these costs, meaning that at the municipal level the debate may revolve around community character issues as much or more so than fiscal issues.

Interviews with Town officials have suggested some of the likely changes. Bob Harpp at the Highways department has noted that just the proposed Carvel development (884 housing units in Pine Plains within a concentrated area, with 67 more units in the neighboring Town of Milan) would have created 15 additional miles of roadway to maintain. A tripling of the Town's population would require not only new roadways to service the new development, but widenings and other improvements to existing roadways to accommodate the significant increases in traffic. This would require a commensurate increase in both staffing and equipment at the

Highways department. Mr. Harpp estimates the need for a new truck with a back hall sweeper to clean drainage catch basins; at least 3 additional fulltime staff along with three more outfitted trucks, and additional space to house equipment and staff, in order to serve this expanded population.

Increased administrative functions at the Town level would certainly precipitate the need for a larger and more modern municipal building for the Town, at a cost of \$2 million or more. The positions of Assessor and Town Supervisor would move from part to full time, and require additional clerical staff. More building inspectors would be needed. Overall, staffing costs might increase by at least \$110,000 per year, and likely more, as significant new development would increase need for staff to review plans, process approvals, and enforce zoning codes.

Perhaps the biggest capital cost that could be incurred by the Town would be the need to move towards centralized waste water disposal in the hamlet areas. However, it should be stressed that this is a local decision—Pine Plains is not required to provide sewers, and modern on-site disposal systems can service developments, at densities higher than would be feasible with individual septic systems, without having to go to public sewers.

While wastewater could continue to be handled by private systems, the Town would likely have to move to municipal garbage collection and disposal—not only because of the increase in population, but because the new residents would have likely relocated from suburban areas and would have an expectation of this type of service. It is not known whether the disposal solution would take the form of a municipal landfill or tipping fees at some landfill located within the region. The former would be difficult to site within Pine Plains; the latter would require ongoing expenditures, which would likely be covered through a special tax or fee (like the water tax).

The Fire chief could not be contacted for this report, but with growth there might be increasing need to consider moving from a volunteer to a paid fire department. This is less due to size—Towns larger than a fully developed Pine Plains have managed to maintain a volunteer fire department and ambulance corps—but the fact that the pool of volunteers would not increase proportionately with the new population. The new residents would likely be relocates from Westchester and other more built up areas, would not be attuned to volunteerism, and would have little excess time in any event if they were commuting to points south every day for work. Moreover, the training requirements have increased such that the time commitments involved have become even more significant, further narrowing the potential pool of volunteers.

Could the required improvements be funded without substantial increases in municipal taxes? This seems likely, as the new development is projected to yield a \$1.8 million surplus if all per person service costs remain the same. However, there is no doubt that the *character* of the community would be impacted—roads would be widened, traffic would be heavier, rural intersections would be upgraded with traffic lights and turning lanes, and the overall appearance of the community would be altered by all the new development. On the positive side, however,

the Town might offer more in the way of services to its residents, including a greater breadth of recreation facilities and programs.

## **GROWTH INDUCING IMPACTS**

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This report has only addressed the potential for residential growth. However, a significant increase in the residential population of the Town will likely lead to an increase in the demand for commercial development as well. How much commercial development would actually occur is impossible to predict—however, demand can be readily estimated based on the anticipated disposable income of the 2,260 new households. A rough estimate of the new demand based on the amount of spending that would occur locally leads to about 100,000 to 120,000 square feet of new commercial space. Whether such a plaza would be built, or whether this demand would be accommodated in another form, would depend upon local zoning, regional demand, and other factors beyond the scope of this report. ***Regardless, this amount of growth would help mitigate the negative fiscal impacts of residential development, but would not be of sufficient scale to come anywhere close to fully offset these impacts.***

To demonstrate, offsetting the \$2.4 million fiscal shortfall without a rise in taxes would require commercial development assessed at about \$80 million to occur somewhere within the Town. With the current equalization rate of 0.52, this would require the commercial development to have *market* value of about twice this, or \$160 million. Assuming commercial space in Pine Plains might be worth about \$120 per square foot, this would correspond to over 1.3 million square feet of new development, or more than 10 times what might be induced by the local population growth.

## **OVERALL IMPACTS TO THE TAX PAYER**

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The impact analysis above shows that while the impacts of growth could likely be accommodated with appropriate investments at the municipal level without a significant change to local tax rates, the situation with the schools is quite different. ***Even if the Town is able to accommodate growth with a tax rate similar to today's rates, from a taxpayer's perspective, the overall property tax burden would increase due to the rise in the tax rate associated with the Pine Plains school district. The municipal surplus would be modest compared with the impacts of the large capital costs of school construction, operating expenses associated with educating new students, and the long term trend of rising per pupil expenditures.***

## 5 Literature Review: Costs of Growth

Pine Plains is not the only rural town which has been faced with addressing the stresses which come from rapid and substantial growth. The following is a review of some of the recent literature on the subject, with a specific eye towards communities similar to Pine Plains.

### **INTRODUCTION**

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Through the late 1970s, growth was generally viewed to have a positive economic impact on communities. Perceived benefits included increased tax base, expanded job and economic development opportunities. But as the pace of development has increased over the last 30-years, research has focused on the cost of growth (Molnar and Taylor 2005). For many communities, the opportunities associated with growth still hold true; for other areas, especially those in rural and outlying urban areas experiencing rapid growth in the form of low-density residential development, the perception that growth is good has changed.

Several factors must be considered in understanding the connection between population growth and a community's fiscal expenditures. These include the type of development expected (residential, commercial, etc.), the physical form that it takes, and its location. These factors affect the magnitude of impact and the kind of local services that will be affected. Most of the studies reviewed in the literature analyze hard services such as roads, utilities, sewer, waste treatment, refuse removal, and water supply. Less discussed is growth's impact on soft services such as local government administrative costs, schools and education, and the provision of social/safety services. Factors affecting the provision of hard services include residential form and density: physical characteristics of development have been the primary focus of the "smart growth" discussion to date, with much of the literature calling for higher density development in an effort to curb infrastructure costs. Factors affecting the cost and provision of soft services such as schools and social services are best determined by the analysis of demographic factors such as household composition, age of population, and other social factors.

### **FISCAL IMPACT OF POPULATION GROWTH, DENSITY AND URBAN FORM**

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The cost of growth literature has focused primarily on low-density, single family residential development and its fiscal impacts (Nelson, Duncan et al. 1995) (Frank 1989a) (Frank 1989b). At the heart of the discussion lies the question of residential density, considered an important determinant in service provision costs. In general, studies suggest that higher density development, for a given number of units, consumes less expenditure than low-density development because it demands less on-site infrastructure (e.g. less street frontage per unit, etc.).

Early studies on the cost of growth (see, for example, Wheaton and Schussheim 1955; Isard and Coughlin 1957) focused on the provision of hard services such as water supply, sewer and water treatment, and transportation infrastructure. Working for the US Environmental Protection Agency, the Real Estate Research Corporation examined the impact on infrastructure and other costs for six hypothetical new communities of 10,000 dwelling units ranging from high density (19–20 units per acre) to intermediate density (three to four units per acre) (RERC 1974). The authors estimated that road and street systems cost 33 percent less to build and 51 percent less to maintain in a neighborhood of townhouses than in a neighborhood of conventional single-family units. Comparable figures for utilities (water, sewer, storm drainage, gas, electricity, and telephone and underground cables) are 58 percent less to build and 30 percent less to maintain. However, costs for other infrastructure, such as parks, public buildings, and schools, do not vary much across density levels. Despite a number of technical criticisms of this study, including not holding constant unit size and occupancy levels, subsequent studies throughout the 1980s support its general findings (see TCRP 1998, 15).

One notable study that balances these findings uses 1985 data for 247 large county areas to determine the separate impacts on local government spending for residential development with respect to rapidity of population growth and gross residential development (Ladd 1992). Documenting a U-shaped relationship between spending and density, Ladd found that, except in sparsely populated rural areas, higher density development typically increases public sector spending. Public sector costs decline as population increases to a threshold of about 250 persons per square mile, at which point any increase in density results in higher per capita costs in most situations. Ladd summarizes as follows: "The increasing per capita spending as the density of counties rises above 250 people per square mile provides important evidence to counter the view, which emerges from engineering and planning studies, that higher density reduces public sector costs (pp. 291-292)" (Ladd 1992) (Conklin 2004). Note that the population density in Pine Plains today is about 82 persons per square mile, on the falling side of this curve; and its density at full build out under the current Zoning Commission scenario would be roughly 300 persons per square mile, which is on the rising side of this curve.

If density matters to fiscal costs, so does the timing and rate of development, especially in rural areas. Ladd found that for most of the 247 counties studied, rapid population growth imposes fiscal burdens on established residents in the form of lower service levels. For sparsely settled counties, the results were different. The net fiscal impacts of population growth on established residents in less populated areas are more ambiguous: increased density reduces fiscal costs initially, but rapid population growth could lead to a deterioration in service levels as local governments adjust slowly to the change in population (Ladd 1992). Other studies suggest that communities can generally accommodate a 1 to 2 percent annual growth rate without impeding a community's capacity to provide essential services such as roads, sewer, refuse disposal, and schools (Molnar and Taylor 2005). Another more recent study determined that annual growth spurts of over three percent are far more likely to result in negative outputs such as traffic congestion, over crowded schools, and higher taxes and utility bills (Mullen 2002).

Research suggests that the location of development relative to existing infrastructure and community facilities affects the cost of providing hard services such as roads, sewer and water. If new development is located further away from existing facilities, the density differential noted above tends to understate the cost differential. Conversely, development that is located in close proximity to existing facilities may not produce appreciably higher costs for infrastructure than higher density development that is located further away. Downing and Gustely (1977) estimate that the capital cost of more piping for water and for sewage and storm drainage adds about \$500 per household for every mile away from the central plants (although this study failed to account for economies of scale that might be accrued from larger service pipes and centrally located treatment facilities). Despite the dissenting views on the differential costs associated with varying densities and location, a recent comprehensive review of the US literature concludes that analysts generally agree that density is linked to infrastructure costs (TCRP 1998, 50). There is less agreement on the interrelationship of sprawl (low-density dispersed development) and infrastructure costs, however, the study attributes this lack of consensus largely to a lack of agreement on how to define sprawl (Slack 2002).

Another important factor in determining rising fiscal costs associated with growth is the physical form that new development takes. Frank (1989) conducted one of the most comprehensive studies by evaluating public facility costs of different urban forms examined in all major studies ranging from Isard and Coughlin (1957) to National Association of Homebuilders (1986). His analysis suggests that urban form matters, but is not as significant a determinant as density. Examining densities ranging from 0.25 to 30.0 dwelling units per acre (DU/acre), Frank found that the greatest savings to public infrastructure service costs could be found at the 15-to 30-DU/acre levels (note that this is much higher than what will ever be found in Pine Plains, although townhouse development can be accomplished at densities of 15 DU/acre). Densities of 10 DU/acre are approximately 10 percent more expensive than development at 15 DU/acre but nearly a quarter less expensive than development at 5 DU/acre (Nelson, Duncan et al. 1995). Rural residential development of large lots (1 to 5 acres) on septic systems and private wells does not require the full array of public services, but Nelson and Dueker (1989) found that long term effect of continued low-density growth will eventually require capital investment in public facilities to provide roads, sewer, water and schools.

### **FISCAL IMPACT OF THE LOSS OF OPEN SPACE AND RESOURCE LAND: COST OF COMMUNITY SERVICE STUDIES.**

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For rural communities, the influx of development usually means the loss of open space and resource lands such as farms and forests, and a growing body of literature has focused on the fiscal impacts associated with this conversion. The most important of these are the Cost of Community Services (COCS) studies, first sponsored by the American Farmland Trust (AFT). These generally divide land use into three categories—residential, commercial/industrial, and farmland/open space—and calculate a COCS ratio for each land use category. The ratio

compares how many dollars worth of local government services are demanded per dollar collected in tax revenue: a ratio greater than 1.0 suggests that for every dollar of revenue collected from a given category of land, more than one dollar is spent in association with it (Prindle and Blaine 2000).

While many of the early COCS studies were either sponsored or conducted by the AFT, a significant number of other researchers from a variety of backgrounds have undertaken such studies in recent years. There have been approximately 83 COCS reports completed for cities and rural communities around the country, and the results seem to corroborate one another. Virtually all of the studies show that for residential land, the COCS ratio is substantially above 1.0. That is, residential land is a net drain on local government budgets. One analysis of COCS studies reports that the average estimate ranges from about 1.15 to 1.50, which means that for every dollar collected in taxes and non-tax revenue, between \$1.15 and \$1.50 gets returned in the form of services by the local government and school district (Prindle and Blaine 2000). Another study conducted on 70 COCS studies found revenue-to-expenditure ratios for residential development to be higher than commercial and industrial development, with residential ratios ranging from 1:2.13 to 1:1.02 (see Table 1) (Dorfman, Black et al. 2002). Note that the prototypical house in Pine Plains has an estimated revenue-to-expenditures ration of 1:1.16, which is very close to the median value shown below.

**Table 13: Summary of Cost of Community Services Studies (American Farmland Trust) in US: Revenue-To-Expenditures Ratios (in dollars)**

	<b>Residential Development</b>	<b>Commercial and Industrial Development</b>
<b>Minimum estimate</b>	1:2.13	1:0.97
<b>Median estimated</b>	1:1.15	1:0.29
<b>Maximum estimate</b>	1:1.02	1:0.05

Figures derived from 70 COCS studies that are compiled on the website of the American Farmland Trust (<http://www.farmlandinfo.org/fic/tas/tafs-cocs.html>) as cited in (Dorfman, Black et al. 2002).

Eleven COCS studies were conducted for New York state communities between 1989 and 1996. These studies show revenue-to-expenditure ratios for residential development averaging 1:1.32, and ranging between 1:1.05 in Kinderhook (Columbia County) and 1:1.88 in Reading (Schuyler County). Most relevant to Pine Plains was a COCS study completed for Northeast Township in 1989, which found that service provision for residential development cost \$1.36 for every dollar raised in revenue (see Table 2) (Trust 2002).

**Table 14: New York State Communities: Summary of Cost of Community Services Studies (American Farmland Trust) Revenue-To-Expenditures Ratios (in dollars): 1989-96**

Community	Residential	Commercial & Industrial	Open and Working Lands	Source	Year
Amenia	1:1.23	1:0.25	1:0.17	Bucknall	1989
Beekman	1:1.12	1:0.18	1:0.48	American Farmland Trust	1989
Dix	1:1.51	1:0.27	1:0.31	Schuyler County League of Women Voters	1993
Farmington	1:1.22	1:0.27	1:0.72	Kinsman et al.	1991
Fishkill	1:1.23	1:0.31	1:0.74	Bucknall	1989
Hector	1:1.30	1:0.15	1:0.28	Schuyler County League of Women Voters	1993
Kinderhook	1:1.05	1:0.21	1:0.17	Concerned Citizens of Kinderhook	1996
Montour	1:1.50	1:0.28	1:0.29	Schuyler County League of Women Voters	1992
Northeast	1:1.36	1:0.29	1:0.21	American Farmland Trust	1989
Reading	1:1.88	1:0.26	1:0.32	Schuyler County League of Women Voters	1992
Red Hook	1:1.11	1:0.20	1:0.22	Bucknall	1989
Mean	1:1.32	1:0.24	1:0.36		

Source: Author's tabulation of data from American Farmland Trust Fact Sheet: Cost of Community Services Studies (2002)

While COCS studies imply that rural communities spend more in expenditures for residential development than they gain in revenues, the methodology employed has certain inherent flaws. COCS studies fail to capture several important positive economic multipliers associated with residential growth such as the money new residents contribute to the local economy. For example, new residents do more than simply consume governmental services: they work, spend money and contribute to the local economic base (Prindle and Blaine 2000). Critics also discount COCS studies because many of them fail to acknowledge workers or residents living on farms, or governmental services such as road improvements, refuse collection and protective/emergency services assigned to agricultural uses (Edwards 2006). Despite these shortcomings, COCS reports provide a valuable reference point for what different types of development cost local governments in terms of revenues to expenditures for services.

One notable *value* of the COCS reports is the fact that they include the costs for the provision of hard and soft services. The largest single expenditure category for communities, according to the COCS studies, is the public school system, accounting for 60 to 70 percent of spending (Prindle and Blaine 2000). Since open space and commercial development do not place any burden on the schools, it should not be surprising that their ratios are less than the residential category. This accounts for much of the differential between these development types.

COCS reports do not, however, account for household composition or unit size, which can affect demand for soft services such as schools and social services. Several studies suggest that, when soft services (such as education and social services) are included, fiscal impact studies conclude that small, one- and two-bedroom high-rent multifamily housing (as well as office, industrial, warehouse, and retail properties) typically generate more in local tax revenues than

they require in expenditures. This positive impact on municipalities is a consequence of these buildings' less-than-average demand for education and social services (see Black and Curtis 1993, 18).

## **OTHER FACTORS INFLUENCING PUBLIC COSTS**

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Population growth and development is only one contributing factor to increases in infrastructure and public education costs, and research suggests that it may not be the most important factor contributing to local governments' fiscal shortfalls. Other factors include increasing salaries, wages, healthcare and retirement benefits for workers, and costs associated with the rising demand for individualized and special education. According to the New York State Comptroller's recent annual report, local government expenditures increased 30 percent between 1998 and 2003—twice the rate of inflation for this five-year period. Much of the upward pressure on spending was caused by increasing healthcare, wages and salaries, and employee benefits costs. Local government expenditures totaled \$118.4 billion in 2003, a 3.7 percent increase over 2002 and a 30 percent increase from 1998 to 2003—twice the rate of inflation for this five-year period. The upward pressure on spending was primarily caused by Medicaid and health care costs, wages and salaries, and employee benefits. However, it should be noted that after the recent rise in pension costs, pension contributions declined and have now stabilized (Hevesi 2005).

Rising demand for individualized education and/or special education is a growing part of service provision for many school districts. Nationally from 1988 – 89 to 1998 – 99, special education enrollments grew about twice as fast as those of all students (33 percent versus 15 percent growth) and have continued to increase since then (Parrish 2001). Special education is expensive, and it is unclear as to whether increases in special education costs can be attributed solely to increased special education enrollment or to growing expenditures per special education student. Lankford and Wycoff (1999) found that in New York (excluding New York City), 90 percent of rising costs were attributed to increased enrollment not per pupil spending. Research suggests that there are at least two contributing factors to this phenomenon: 1) improved identification of those in need and 2) students not making appropriate progress in general education with respect to rising state and federal student achievement standards (Berman, Davis et al. 2001). These should be strongly considered in tandem with the fiscal impacts associated with infrastructure provision in evaluating the costs of growth for local governments.

## 6 Overall Conclusions

The forgoing report has examined the costs of new growth in Pine Plains from a number of different perspectives, all of which provide valuable insights into the future of the Town. The following are the overall conclusions of the analysis:

- Future growth is likely inevitable. The purpose of this report is not to argue that all growth should be halted, but to provide a realistic assessment of the impacts of such growth from a public finance perspective.
- Pine Plains is to be commended for taking an important step in defining new zoning for the Town which balances concerns over preserving rural character with the needs of property owners.
- Further, the growth patterns contemplated in the current Zoning Commission density zoning framework, whereby a significant share of future growth would be accommodated in the hamlets, will help minimize local service costs, consistent with the findings of various studies, but assuming that the need for centralized public wastewater provision can be avoided.
- New residential development in Pine Plains will almost certainly impose an additional financial burden on the Pine Plains Consolidated School District that will register throughout the District (not just in Pine Plains) in the form of increased tax levies and, eventually, the need for new school construction.
- These impacts are compounded by growth in per-pupil school expenditures, which have been a long term trend not only in the Pine Plains CSD, but nearly everywhere else as well.
- At the municipal level, new development results in a fiscal surplus which can be used to offset costs and may help fund services and programs beyond what the Town currently provides. *However, this surplus, at \$900 per home, is not sufficient to offset the deficit at the local schools, and there are non-monetary costs associated with growth, including increased traffic and loss of rural character.*
- The aggregate tax impact (municipal plus schools) will be negative under any growth scenario. For individual taxpayers, the end result will be higher taxes.
- It is difficult to accurately estimate the cost to individual tax payers. However, a rough estimate of the impact of the total projected school deficit under a full build-out scenario on a homeowner assessed at \$215,000 would be about \$1,400 per year. The actual figure would also vary depending upon decisions at the municipal level as to how any increase in local taxes would be spent, i.e., whether to lower municipal tax rates or provide additional services.

Moving forward, there are several mitigation strategies that the Town could look to incorporate into its future planning:

- **Controlling the pace of growth:** Studies have shown that rapid growth increases local fiscal impacts as public entities can be slow to respond to changes in demand for services, resulting in inefficiencies.
- **Mix of housing types:** Although the fiscal model projects negative impacts for most development types, one- and two-bedroom townhomes are a notable exception. Pine Plains may wish to consider permitting townhomes as conditional uses within certain sections of the hamlets, provided that they can be adequately serviced by on-site wastewater disposal. In general, planning for housing types that appeal to households other than traditional families will help mitigate the fiscal impacts of growth. Moreover, the Zoning Commission should also explore the advisability of requiring developers to set aside some units within major developments that are priced to be affordable to moderate income buyers or renters, and that are deed restricted to maintain future affordability.
- **Non-residential development:** New residents will bring with them new buying power and increased demand for local retail and services. Zoning should seek to accommodate commercial growth within hamlet centers in a manner which is consistent with community character, and Town policy should encourage the continued viability of agricultural use within the Town.
- **Developer contributions:** The Town can offset some local costs by requiring developers to provide for the infrastructure necessary to support new development. While New York State law does not permit impact fees, for larger developments, the SEQR process provides an opportunity for such investments to be made as part of the mitigation of unavoidable project impacts.
- **Change in assessment practices:** A move from the current replacement cost methodology to one based on market value would likely increase the tax yield from new development, and mitigate impacts on existing homeowners, as these new homes would likely assess higher than many of the existing homes.
- **Overall density.** While it is not the intent of this report to prescribe how Pine Plains should be zoned, there is clearly a fiscal rationale for preserving farmlands and open space and limiting the overall amount of new development. This may provide a further reason for considering the extension of the 10-acre overlay to additional agricultural lands.

## Attachment 1: List of References

### References for the Chapter 5

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## Attachment 2: Fiscal Impact Detailed Summary Tables

### 100 Single Family Homes: 0.5 Acre Lots

	Bedrooms				Total (100 units)
	One	Two	Three	Four +	
Proportion of units	1%	3%	37%	59%	100%
<u>Revenues</u>					
Town	\$1,287	\$4,255	\$76,607	\$138,754	\$220,904
Pine Plains CSD	\$2,284	\$7,801	\$143,380	\$257,169	\$410,633
<u>Costs</u>					
Town	\$1,000	\$3,000	\$50,500	\$94,500	\$149,000
Pine Plains CSD	\$0	\$9,640	\$192,800	\$453,080	\$655,520
<u>Impacts</u>					
Town	\$287	\$1,255	\$26,107	\$44,254	\$71,904
Pine Plains CSD	\$2,284	(\$1,839)	(\$49,420)	(\$195,911)	(\$244,887)
Total	\$2,571	(\$584)	(\$23,313)	(\$151,657)	(\$172,983)

### 100 Single Family Homes: 5.0 Acre Lots

	Bedrooms				Total (100 units)
	One	Two	Three	Four +	
Proportion of units	1%	3%	37%	59%	100%
<u>Revenues</u>					
Town	\$1,461	\$4,776	\$83,031	\$148,996	\$238,264
Pine Plains CSD	\$2,704	\$9,062	\$158,927	\$281,961	\$452,653
<u>Costs</u>					
Town	\$1,000	\$3,000	\$50,500	\$94,500	\$149,000
Pine Plains CSD	\$0	\$9,640	\$192,800	\$453,080	\$655,520
<u>Impacts</u>					
Town	\$461	\$1,776	\$32,531	\$54,496	\$89,264
Pine Plains CSD	\$2,704	(\$578)	(\$33,873)	(\$171,119)	(\$202,867)
Total	\$3,165	\$1,197	(\$1,342)	(\$116,623)	(\$113,603)

**100 Single Family Homes: 10.0 Acre Lots**

	<b>Bedrooms</b>				<b>Total (100 units)</b>
	<b>One</b>	<b>Two</b>	<b>Three</b>	<b>Four +</b>	
Proportion of units	1%	3%	37%	59%	100%
<u>Revenues</u>					
Town	\$1,591	\$5,166	\$87,848	\$156,678	\$251,284
Pine Plains CSD	\$3,019	\$10,007	\$170,588	\$300,555	\$484,168
<u>Costs</u>					
Town	\$1,000	\$3,000	\$50,500	\$94,500	\$149,000
Pine Plains CSD	\$0	\$9,640	\$192,800	\$453,080	\$655,520
<u>Impacts</u>					
Town	\$591	\$2,166	\$37,348	\$62,178	\$102,284
Pine Plains CSD	\$3,019	\$367	(\$22,212)	(\$152,525)	(\$171,352)
Total	\$3,610	\$2,533	\$15,136	(\$90,347)	(\$69,068)

**100 Townhomes**

	<b>Bedrooms</b>			<b>Total (100 units)</b>
	<b>One</b>	<b>Two</b>	<b>Three</b>	
Proportion of units	14%	66%	20%	100%
<u>Revenues</u>				
Town	\$13,159	\$82,443	\$33,592	\$129,194
Pine Plains CSD	\$24,008	\$140,186	\$54,148	\$218,342
<u>Costs</u>				
Town	\$9,415	\$71,277	\$32,610	\$113,303
Pine Plains CSD	\$20,325	\$73,647	\$165,641	\$259,613
<u>Impacts</u>				
Town	\$3,743	\$11,166	\$982	\$15,891
Pine Plains CSD	\$3,684	\$66,539	(\$111,493)	(\$41,271)
Total	\$7,427	\$77,705	(\$110,512)	(\$25,380)

**100 Multi-Family Units**

	<b>Bedrooms</b>				<b>Total (100 units)</b>
	<b>One</b>	<b>Two</b>	<b>Three</b>	<b>Four +</b>	
Proportion of units	59%	33%	4%	4%	100%
<u>Revenues</u>					
Town	\$48,595	\$35,015	\$5,575	\$5,954	\$95,139
Pine Plains CSD	\$81,132	\$55,066	\$7,724	\$8,556	\$152,478
<u>Costs</u>					
Town	\$43,812	\$35,643	\$6,929	\$7,031	\$93,415
Pine Plains CSD	\$49,096	\$103,950	\$34,145	\$31,046	\$218,237
<u>Impacts</u>					
Town	\$4,783	(\$628)	(\$1,354)	(\$1,077)	\$1,725
Pine Plains CSD	\$32,037	(\$48,884)	(\$26,421)	(\$22,490)	(\$65,758)
Total	\$36,820	(\$49,512)	(\$27,775)	(\$23,567)	(\$64,034)