

CONSERVATION OPPORTUNITIES for CORRIDOR PRESERVATION and COMMUNITY DEVELOPMENT

Cost of Community Services



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I. INTRODUCTION

Between Route 1 and Route 30, Route 41 passes through or near nine communities that contain extensive prime farmland (some of the most productive land east of the Mississippi River); headwaters to five significant stream systems; and/or active, vibrant downtowns and villages. These economically and ecologically productive lands are currently threatened by development, as Chester County is the fastest growing county in the Commonwealth (2000 U.S. Census data). The improvements to Route 41 as proposed by the Pennsylvania Department of Transportation (PennDOT), could exacerbate these threats since increased land accessibility and road capacity result in decreased travel times and increased land development pressures. Major factors in this phenomenon include Route 41's location as a principal connector to Routes 1, 926, 10, 30; the roadway's importance to transporting agricultural (in particular) and other types of goods; the relatively low cost of land; and, people's willingness to drive longer and longer distances for their jobs.

To address these threats, the Brandywine Conservancy's Conservation Opportunities initiative provides a wide range of corridor-wide technical assistance to municipal officials and others. Refer to the Conservancy's "Project Overview" document for broader information regarding Conservation Opportunities.

Although Pennsylvania and Chester County are both leaders in supporting and funding farmland preservation, more acres are currently being lost than protected. While most of the County is still undeveloped and offers a landscape of outstanding natural and cultural beauty, about three-fourths of that is unprotected. Pastoral views are shrinking at the rate of about 14 acres per day, or 5,000 acres per year, according to *Linking Landscapes: The Plan for the Protected Open Space Network In Chester County* (2001, Chester County Planning Commission).

Many municipalities in Chester County are passing through a short period of rapid change when a large amount of land is converted, primarily from farmland to residential uses. Over a 20-30 year period, whole regions and townships dramatically change their 'identities' from rural and agricultural areas to suburban and residential areas. The suburban transformation of the Route 100 corridor north of West Chester, for example, has had enormous implications for those municipalities and their residents. While it is clear that this conversion has an inevitable and irreversible impact on scenic, historic, and natural landscapes it is less obvious what the impacts of this growth of new houses and new residents are to the financial health and stability of that area.

A good business manager knows that growth must be planned carefully and strategically. Too much too soon can overextend human and financial resources. Growth in a western Chester County township is predominantly residential, although some trailing commercial growth may also occur. This growth affects the size and complexity of the local government, the types and qualities of the services it offers, and the taxes and tax rates it must levy. The local public school district is similarly affected, including the class size, the number of school buildings and properties, the number of teachers, and the taxes and tax rates the school district levies.

As such, critical questions come to the forefront:

How does this growth affect the ability of local governments and school districts to deliver services?

What are the impacts to the financial management and tax structures for the residents of these municipalities and their associated school districts?

Are there viable alternatives to or ways to moderate this process?

To help answer these questions, the Brandywine Conservancy has undertaken this special “Cost of Community Services” study, focusing on five townships in parts of two school districts in the Route 41 corridor in western Chester County. These townships are London Grove, Londonderry, Highland, West Fallowfield, and West Sadsbury Townships, and the school districts are the Avon Grove and Octorara School Districts. While this area is already in the throes of rapid change (see Table 1), this pace is likely to accelerate if the widening of Route 41 occurs as proposed by PennDOT, by allowing for increased accessibility to this area.

TABLE 1

Reasons for High Growth in/near Route 41 Communities
Good transportation infrastructure, including Route 41
Relatively inexpensive land and houses
Easy accessibility to jobs and markets
Good schools
Relatively low taxes
Attractive rural landscapes (often unprotected open space)

II. STUDY DESCRIPTION and METHODOLOGY

This Cost of Community Services study analyzes local fiscal impacts of growth in terms of the four major land uses of this area - residential, commercial, industrial, and agricultural. All land uses provide public revenues through taxes and fees and at the same time demand services that require the expenditure of public dollars. All have impacts that affect a local government's and school district's finances and delivery of services. But those impacts are far from equal. The goals of this study are to assess current municipal economic conditions and to help predict future fiscal trends if current trends continue.

The study follows a methodology devised specifically for Pennsylvania by Timothy W. Kelsey, Associate Professor of Agricultural Economics at Penn State University. It uses municipal financial data from 2001, and school district data from the 2001-02 school year. County taxes and services are not included. Specific numeric results will vary somewhat from year to year, though the overall conclusions should not. This work was reviewed for accuracy by Professor Kelsey. The study follows ten steps, followed by four steps of analysis, as shown in Table 2 on the following page.

Actual tax revenues generated by the four different land uses differ from township to township, depending on each township's combination of levied taxes. The tax options include property taxes, real estate transfer taxes, earned income taxes, per capita taxes, and occupational privilege taxes. County taxes are not considered in this study. Non-tax revenues include license and permit revenues, public service fees, highway aid, and funds school districts receive from the Commonwealth, called the Equalized Subsidy for Education. The expenditures spent on these land uses range from police and fire services to parks and recreation to highway, school, planning and zoning, and other government services.

As called for by the study, the municipal and school district revenues and expenditures were allocated or assigned to each of the four land uses, based either on how the funds were actually generated or spent, or by using a "default" allocation method derived from the property tax base.

TABLE 2

Steps in the Cost of Community Services (COCS) Study
<p><u>Background:</u></p> <p>1. Collect data from the municipality, school district, and county tax assessment office.</p>
<p><u>Municipal Calculations:</u></p> <p>2. Determine property tax base percentages by land uses. 3. Determine municipal tax revenues and allocate by land uses. 4. Determine municipal non-tax revenues and allocate by land uses. 5. Determine municipal expenditures and allocate by land uses.</p>
<p><u>School District Calculations</u></p> <p>6. Determine school district tax revenues and allocate by land uses. 7. Determine school district non-tax revenues and allocate by land uses. 8. Determine school district expenditures and allocate by land uses.</p>
<p><u>Results</u></p> <p>9. Calculate the Cost of Community Services (COCS) ratios and actual dollar differences by land uses. 10. Interpret the results.</p>
<p><u>Farmland and Open Space Implications</u></p> <p>11. Determine residential tax shortfall per public school student. 12. Calculate the cost of developing a hypothetical 100-acre farm. 13. Calculate costs of protecting the same hypothetical 100-acre farm. 14. Calculate the preservation costs break-even period.</p>

III. STUDY RESULTS

After all the expense figures were entered, allocated, and tallied, gross revenues and expenditures for each land use were compared, and cost-revenue ratios were calculated. These depict the “net” impact of each land use as a ratio that compares how much was spent on that land use for each dollar it generated. As shown on Table 3, residential uses create a significant deficit while the other uses are a net financial benefit to the Townships.

TABLE 3: Route 41 Communities with Revenue to Expenditure Ratios, by Major Land Uses¹

Township	Residential ²	Commercial ³	Industrial ⁴	Farmland ⁵
London Grove	1 : 1.19	1 : 0.11	1 : 0.03	1 : 0.10
Londonderry	1 : 1.08	1 : 0.02	1 : 0.02	1 : 0.02
Highland	1 : 1.14	1 : 0.05	1 : 0.00	1 : 0.03
West Fallowfield	1 : 1.13	1 : 0.03	1 : 0.03	1 : 0.03
West Sadsbury	1 : 1.33	1 : 0.03	1 : 0.03	1 : 0.03

¹ As of 2001, Highland Twp. did not have any industrial uses; figures include both municipal and school district calculations.

² Residential land contains dwelling units (single-family houses, apartments, townhouses, mobile homes, including farm residences)

³ Commercial land: used for commercial purposes (typically retailing, such as stores or gas stations, and offices)

⁴ Industrial land: used for industrial purposes (typically wholesaling and manufacturing)

⁵ Farmland: agricultural lands of 10 or more contiguous acres

Specifically and for each township, residential land created a deficit, contributing less to the community than it received in expenditures. Each of the other land uses, however, contributed substantially more than they received. For example, in West Fallowfield Township for every \$1.00 collected from the residential community, \$1.13 was spent, equaling a 13percent shortfall. For commercial, industrial, and farmland areas alike, 3 cents (\$0.03) was spent for every dollar collected, generating a 97 percent surplus. Farmland was equivalent to commercial and industrial land uses in the percentage of surplus revenue generated.

In actual dollar figures, the differences were perhaps even more dramatic, as shown in Table 4, below.

TABLE 4: Net Dollar Differences between Revenues and Expenditures, by Land Use

Township	Residential	Commercial	Industrial	Farmland
London Grove	-\$1,757,639	+\$869,402	+\$130,894	+\$202,899
Londonderry	-\$281,146	+\$107,973	+\$12,959	+\$87,139
Highland	-\$407,376	+\$88,541	\$0	+\$195,746
West Fallowfield	-\$602,938	+\$233,521	+\$63,269	+\$183,101
West Sadsbury	-\$1,480,733	+\$691,097	+\$649,236	+\$86,119

Using West Fallowfield Township again as an example, in 2001 a \$602,938 deficit was generated by the residential land use, while a \$479,891 surplus was generated by the commercial, industrial, and farmland areas combined. Farmland contributed almost three times the net revenue that industrial land uses did.

These figures and ratios will vary from year to year. In fact, if current development trends continue, the fiscal disparities described here will become more exaggerated. In the Route 41 corridor as in most places, the great majority of new residential developments are built on farmland. A financially

advantageous land use, from the point of view of the costs of community services, is being replaced by a financially disadvantageous one. Regardless, the general conclusions of this study should not vary. Residential land uses will consistently fall short of covering their full costs, and commercial, industrial, and farmland uses will consistently provide a significant surplus.

These findings correspond to many other similar studies. In Pennsylvania, Professor Kelsey came to the same conclusions in the same studies for eleven townships across the Commonwealth. The American Farmland Trust and others have reached identical conclusions in 72 other studies in eighteen other states. In no case did any other studies contradict these general findings.

IV. The IMPACTS of RESIDENTIAL DEVELOPMENTS on LOCAL SCHOOL DISTRICT BUDGETS

The primary reason for this residential shortfall stems from residential demands on the local public school system. School district budgets far outstrip municipal budgets. Although residents provide only a portion of the full costs required to support local public school students (see Table 5, below), they receive all the benefits, for the simple reason that all students come from the residential land use.

In the Route 41 study area, Highland, West Sadsbury, West Fallowfield, and Londonderry Townships are part of the Octorara School District (OSD), which also includes the Boroughs of Atglen and Parkesburg, and Christiana Borough and Sadsbury Township in Lancaster County. Total expenses for the 2001-02 school year for the OSD were reported to be \$25,246,942. The School District reported a total of 2,657 students in the same year. Therefore, it cost approximately \$9,502 to educate each student that school year. The Avon Grove School District, of which London Grove and four other Chester County townships and two boroughs are members, reported income of \$39,416,383 for the 2001-02 school year, and expenditures of \$41,937,222 for the same year. With 4,773 students, the average cost to educate one student in that year was about \$8,786.

In 2001-02, about 584 of OSD students came from West Sadsbury Township. It cost a total of about \$5,554,424 to educate them that year. While the students are fully a product of residential areas, only \$1,783,823 (32percent, or \$3,054 per student) came to the school district directly from the residents of West Sadsbury in the form of taxes, a \$3,770,601 shortfall (or \$6,446 per student). The shortfall is made up or subsidized partly by taxes on the other land uses (commercial, industrial, and agricultural) and partly by state and federal government education subsidies. Following the same methodology in each of the five townships, Table 5. displays the “residential shortfall” per student for those townships.

TABLE 5: Average Shortfall per Student

Township	Average Cost per Student (2001-02)	Average Residential Tax per Student	Shortfall per Student
London Grove	\$8,786	\$5,062	- \$3,724
Londonderry	\$9,502	\$3,898	- \$5,604
Highland	\$9,502	\$3,756	- \$5,746
West Fallowfield	\$9,502	\$3,716	- \$5,785
West Sadsbury	\$9,502	\$3,054	- \$6,448

As each township currently sends hundreds of students to their public school, the shortfalls add up to large sums quickly. And as these townships grow in size, and the school districts receive more students every year, they must increase their local taxes to make ends meet.

This residential shortfall, or gap, may not become evident for many years. The school district, for example, may fill to capacity and then stretch to over-capacity without incurring any major new expenses. Yet, the student-teacher ratio will also climb, and the dollars spent per student (and possibly the quality of education) will fall. With the occupancy of each newly constructed house, the revenue gap will increase inexorably and permanently in terms of real dollars, until eventually permanently higher property taxes or a new earned income tax will be imposed. Thus, continued residential development will cause an upward spiraling of property tax rates.

And in fact, the Octorara School District has increased its property tax levy by an average of just over 5percent over the last ten years. Similarly, the Avon Grove School District has increased its property tax levy by an average of almost 8percent per year over the same period. With continued growth, municipal services (police, fire, roads, libraries, recreation, etc.) will also increase, requiring additional revenue that will likely come from increased municipal taxes. New residents tend to come from more highly developed areas where they typically received more municipal services than the less developed areas along Route 41. They will likely bring increased expectations with them.

V. IMPLICATIONS

Most residential households do include children and most of those attend the local public school, according to the 2000 Census and local school districts. In fact, 77percent of all households in the Route 41 corridor include school-aged children, and 87percent of those are enrolled in the local public school. Thus, on average, about 2/3 (67.3percent) of all households include children that go to the local public school (see Table 6).

Assuming that the percentage remains roughly constant for new households, the average number of new public school children produced by 100 new houses would be about 67 (the range per township is 60-72 children). Costs to the school districts can be calculated using the average cost per student –

Octorara SD	–	\$9,502 x 67 = \$636,634
London Grove (Avon Grove SD)	–	\$8,786 x 67 = \$588,662

For example, in West Fallowfield Township an average 100 home subdivision would result in the following budget shortfall –

Average residential tax contribution to the SD =	\$3,716 per student
Total contributed by the new subdivision =	\$3,716 x 67 = \$248,972
Shortfall from that subdivision =	\$387,662 (\$636,634 - \$248,972)

TABLE 6: Public School Children per Household

Township	Households	School-age Children (5 – 19)	School-age Children per Home	Public School Children	Percent Children in Public Schools	Percent Homes w/ Public School Children
London Grove	1,633	1,276	0.78	1,112	87.1%	68.1%
London-derry	539	393	0.73	366	93.2%	67.9%
W. Sadsbury	802	613	0.76	584	95.3%	72.8%
W. Fallowfield	829	655	0.79	497	75.9%	60.0%
Highland	433	225*	0.52	325*	???	???
Totals*	3,803	2,937	0.77	2,559	87.1%	67.3%

Source: Census 2000 data; School districts

* The figures for Highland Township, which come from the 2000 Census and the Octorara School District, respectively, do not agree. Therefore, Highland data was not used in the totals row nor in the text discussion.

Though the exact number of public school children will ebb and flow, that \$387,662 shortfall would essentially be a permanent, annual deficit. Although the school district may not yet be at capacity, the long-term trend clearly leads to permanent higher property taxes caused by increasing residential developments.¹

VI. SLOWING TAX INCREASES through OPEN SPACE PRESERVATION

From this analysis, it is clear that the preservation of farmland and other open space uses can help slow the rising municipal service and educational costs of rapid development by removing land that would otherwise be converted to new housing. The expense of protecting farmland and other open space (through purchase of development rights or fee simple purchase of land) may require a modest initial increase in taxes. Yet these expenses can be quickly recouped and surpassed. Not only are new school and municipal costs avoided, but in the case of farmland preservation, farm tax income is maintained. And, local funds to preserve these lands typically leverage much larger sums of money

¹ It should be noted that not all residential developments are the same from a cost- revenue standpoint. Residential developments that do not include children, such as senior housing or housing directed towards a younger, pre-family group (i.e. student housing or small garden apartments) will probably have a net positive impact on school district revenues. Also, expensive single family houses with high property values and where the resident earns high income, may result in a net positive impact to the school district. Some school districts levy an earned income tax as well as property and real estate transfer taxes, so “high-end” residences can have a net positive impact on local government and school jurisdictions.

from the County and the Commonwealth, both of which have very active and successful farmland preservation programs, and other private sources.

In dramatic contrast to the permanent increase in taxes caused by new residential development, lands that are preserved normally require a one-time financial commitment. Every dollar spent to purchase land or development rights avoids the greater and repeated costs of municipal and school district services. Any locally required management or maintenance costs (such as where public access is allowed or for parks) are on a much smaller scale than the preservation costs and can be supplemented by other funding sources, such as grant programs or private donations.

To take the same West Fallowfield example as above, suppose the property that could produce 100 new homes was a 150-acre farm. By purchasing the farm's 100 development rights at \$12,000 per acre, the municipality and its residents would enjoy substantial tax savings in the long term.

$$\begin{aligned} & \$12,000 \times 100 = \$1,200,000 \\ & \$1.2 \text{ million divided by } \$387,662/ \text{ year shortfall} = \\ & \quad 3.1 \text{ years break even period} \end{aligned}$$

In only 3.1 years from the date of the development right purchase, the municipality would have otherwise experienced a combined municipal and school district shortfall amount equal to the purchase cost of the development rights. Beyond 3.1 years, the annual shortfall would continue.

A municipality can frequently utilize the County/ State farmland preservation program funding rather than depend solely upon local taxes for financing open space preservation. And, by contributing some of its own funds, a township not only signals significant local support for a preservation project, it can also substantially raise its chances of success.

VII. CONCLUSION

This study and many like it that examine the impacts and costs of residential development all lead to the same conclusions that it makes financial sense to buy open space. Taxpayers are realizing that in addition to spiraling property taxes, excessive growth inevitably leads to crowded schools, clogged local roads, loss of the scenic and historic landscape, environmental degradation, and overall loss of a community's natural and cultural identity. Land preservation is not an extraneous expense; it is a long-term community investment that pays for itself several times over.

Since more development inevitably results in higher taxes, by paying a little more up front, current residents can prevent an even greater bill from reaching their mailbox in the future, and they can preserve their environment and a high quality of life in their community at the same time.

Preservation efforts cannot stop further development or the rising costs of education, but they can temper growth, including the growth of taxes, reduce the economic impacts of rapid development, and protect valued community assets. Having the ability to leverage open space monies, along with a set of

progressive ordinances regulating development², gives a municipality an extra measure of influence, certainty, and creativity in how their communities develop, where new developments go, and at what densities.

VIII. CONCERNING PREFERENTIAL FARMLAND ASSESSMENTS

Some school officials are concerned that their revenues are being unfairly cut by state-funded farm preservation practices. Many schools derive most of their local revenues by a tax on the assessed property values of the lands within their district. Two state laws allow farms to be assessed at a lower value. Act 319 lowers the assessed value of farmland below its “fair market value” to its “agricultural-use value” based on a continuing agricultural land use and the agricultural productivity of the soils. A similar state act, Act 515, also lowers a farm’s assessed value, based on its location, size, and use. In areas under significant development pressure, undeveloped land values – and the taxes levied on those lands – tend to climb substantially as their fair market values rise. Acts 319 and 515 are designed to alleviate some of the financial pressures farmers face to sell to developers, but both of these translate into lower real estate tax revenues for a given school district.

However, this concern does not recognize that if the farmers did sell their land, most of it would produce houses and children instead of crops. Those children can strain the schools’ financial resources more than the lowered farmland assessment, by forcing the school to buy new supplies and buses, hire new teachers, and eventually to build a new school. Moreover, a school can derive income from an earned income tax rather than solely from property taxes.

Finally, even though farmland assessed under Acts 319 or 515 do receive a property tax reduction, they still provide tax monies to the local school district and require little if any of its services.

² The importance of strong local ordinances bears emphasis. Those municipalities in the path of rapid growth would be wise to act quickly and strengthen any weaknesses in their land use, subdivision, and natural resource-related regulations and incentive programs. At the same time, it must be understood that “no municipality is an island.” Excessive residential growth in *any* of a school district’s member municipalities means increased school taxes for *all* those municipalities. Thus, multi-municipal planning and coordination – based on school districts – would be in the best interests of *all* those municipalities.