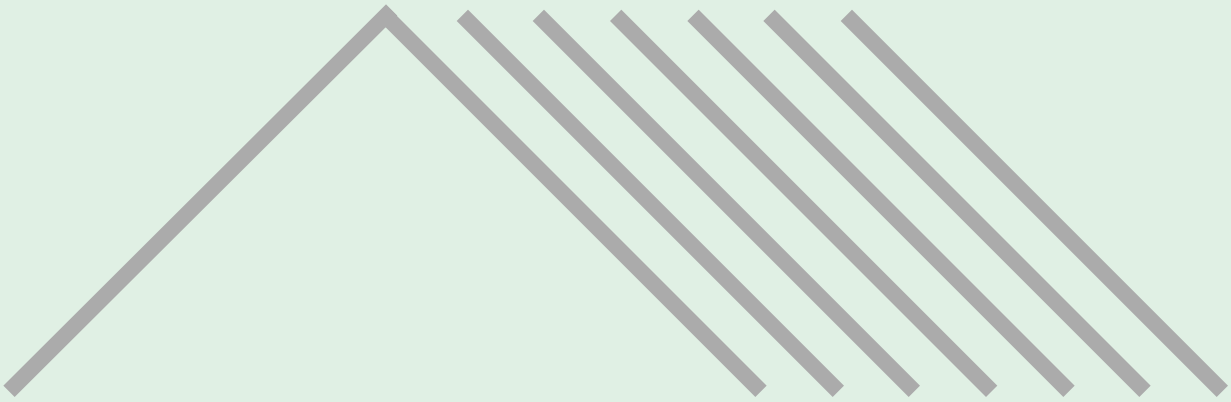


SHAPING FUTURE DEVELOPMENT:
THE ROLE OF CURRENT ZONING

A Build Out Study of Central and Western Montgomery County

Montgomery County Planning Commission
www.montcopa.org/plancom

November 1996

Executive Summary

This study measures and describes all future development permitted in the central and western municipalities of Montgomery County under current zoning ordinances. The 26 municipalities comprising the study area were chosen due to their high growth rates and amount of developable land.

The population of the study area grew by 63 percent between 1970 and 1990, while the rest of the county's population actually fell by 6 percent. Accompanying population growth in the study area was a 242 percent increase in the amount of developed land between 1965 and 1990. This includes all developed land, including land for housing, roads, businesses, and utilities. This translates into a 43 percent increase in the amount of developed land for each household -- the result of a widely dispersed pattern of development.

The total population of the study area is forecast to increase from 217,244 in 1990 to 303,460 in 2020. Under current zoning, the study area will eventually accommodate a total population of roughly 423,900. These new residents will live in low-density, suburban-style communities, continuing the development trend seen between 1970 and 1990. If current zoning remains unchanged indefinitely, single-family detached housing will likely comprise 80 percent of all new units and have an average lot size of approximately 43,200 square feet. Only 14 of the 26 municipalities will have any new single-family detached units on lots of 10,000 square feet or less.

Under current zoning, an additional 132,000,000 square feet of nonresidential floor space could be built in the study area, 19 percent of which is forecast to be built by 2020. Current employment and population forecasts indicate that job growth may be faster than population growth between 1990 and 2020. This could lead to a surplus of as many as 39,000 jobs in the study area by 2020. If every zoning district was completely built out according to current terms, there would be 216,000 more jobs than employed residents. This imbalance in areas zoned for housing and employment-generating uses may lead to more people commuting into the area for work.

This study clearly indicates that under current zoning, future development is likely to be characterized by low-rise, suburban-style shopping and office centers and large-lot, single-family detached housing. As communities become more fully developed, this pattern of land use may conflict with stated community development objectives such as 1) preserving community character and historic assets 2) providing efficient and cost effective public services 3) providing a variety of travel modes 4) avoiding congestion and 5) providing a reasonable range of housing types. Residents and policymakers of study area municipalities are encouraged to use this study to evaluate if current development regulations will guide growth in ways that are consistent with community goals and visions.

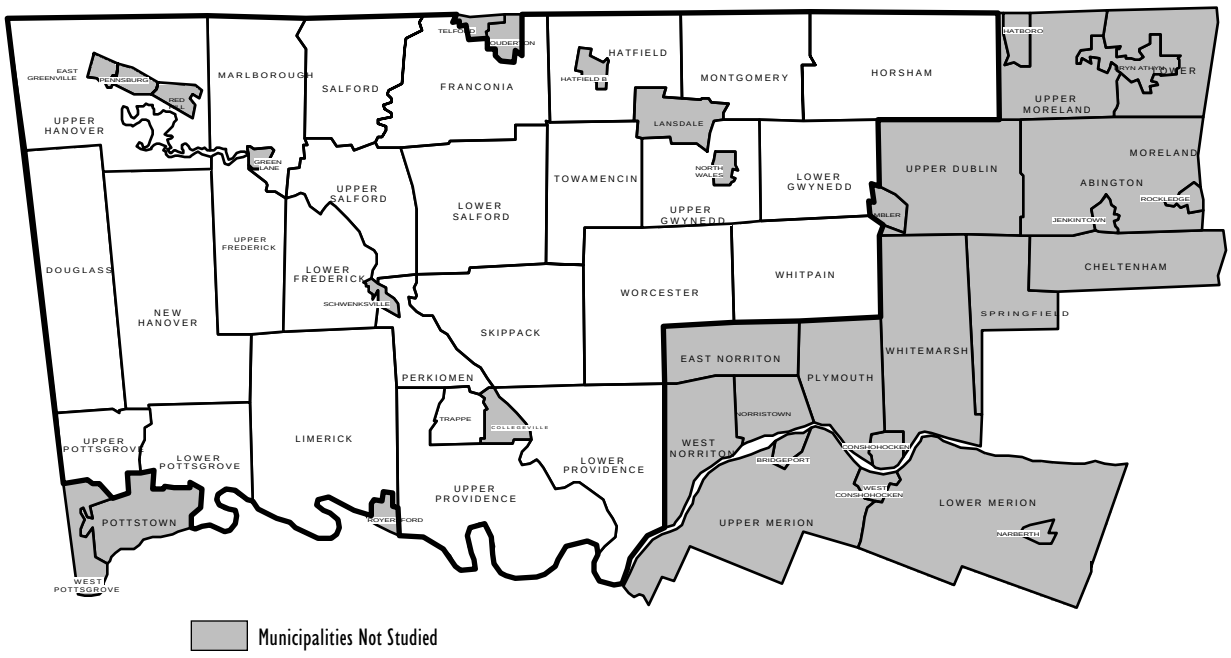
Introduction

What determines the shape of our communities? Is it developers? Consumer preferences? The economy? Technology? The answer is all of the above. Yet, one important influence on the way communities evolve and grow is not on this list -- local development regulations, including subdivision and zoning ordinances and comprehensive plans. A community's goals and visions are often expressed in a municipal comprehensive plan, as are general locations of future development. However, it is the zoning ordinance that legally prevails and ultimately determines future development possibilities. Zoning ordinances specify which land uses are permitted in each area and at what densities. This makes zoning the most important expression of municipal planning and land use policy.

Zoning is the most important expression of municipal planning and land use policy.

The purpose of this study is to measure and describe all future development allowed in the central and western municipalities of Montgomery County under current zoning ordinances. (See Figure 1.) The 26 municipalities comprising the study area were chosen due to their high growth rates and amount of developable land. Residents and policymakers can use this report to determine if current policies and regulations are consistent with their goals and visions. An attached appendix provides figures on the amount and type of development permitted under current zoning in each municipality in the midterm (2020) as well as the long-term.

Figure I: Study Area



Study Area Municipalities

Douglass Township
Franconia Township
Hatfield Township
Horsham Township
Limerick Township
Lower Frederick Township
Lower Gwynedd Township
Lower Pottsgrove Township
Lower Providence Township
Lower Salford Township
Marlborough Township
Montgomery Township
New Hanover Township
Perkiomen Township
Salford Township
Skippack Township
Towamencin Township
Trappe Borough
Upper Frederick Township
Upper Gwynedd Township
Upper Hanover Township
Upper Pottsgrove Township
Upper Providence Township
Upper Salford Township
Whitpain Township
Worcester Township

Background

This study is part of an ongoing effort by the Montgomery County Planning Commission (MCPC) to better understand emerging land development patterns in the study area and to provide growth management planning assistance to municipalities. Recent work by the planning commission has shown that the study area has been undergoing rapid change and development. One study ranked growth for all 26 municipalities by studying changes in ten different growth indicators between 1982 and 1989. These indicators included population, housing units built, and amount of land involved in development submittals. Another study created an index to measure future growth by looking at sewer capacity, availability of public water service, amount of developable land, and proximity of employment centers and major roads (see Figure 2). These studies determined that the high rates of growth experienced in the study area since the 1970s would continue well into the future. Population forecasts support these studies, with total population expected to climb from 217,244 in 1990 to 303,460 in 2020.

Growth is a necessary part of the county's economy and it has both positive and negative effects on quality of life. While growth brings jobs and prosperity to some, it often disturbs existing community patterns, creating noise, traffic, and other unwanted effects. Many residents of the study area are keenly aware of the fast pace of development, and serious controversies often arise over how to handle it. In focusing on the negative aspects of growth, communities sometimes try unsuccessfully to prevent or severely restrict it, risking costly court battles and the imposition of unwanted types of development. As a result, there is a growing recognition that communities need a new approach to help prepare for and manage the inevitable growth they are facing. One approach that does this is called growth management.

Figure 2: Future Growth Index - 1990

Municipality	CWI*
Upper Providence Twp.	149
Limerick Twp.	144
Montgomery Twp.	138
Douglass Twp.	128
Horsham Twp.	127
Franconia Twp.	122
Worcester Twp.	122
Hatfield Twp.	115
Lower Pottsgrove Twp.	113
Whitpain Twp.	112
Upper Frederick Twp.	107
Lower Providence Twp.	105
Towamencin Twp.	99
Lower Salford Twp.	97
New Hanover Twp.	96
Skippack Twp.	96
Lower Frederick Twp.	95
Lower Gwynedd Twp.	94
Upper Hanover Twp.	90
Perkiomen Twp.	88
Trappe Boro.	88
Upper Gwynedd Twp.	87
Upper Pottsgrove Twp.	82
Salford Twp.	78
Marlborough Twp.	72
Upper Salford Twp.	72

Higher numbers indicate greater probability and extent of growth.

*CWI - Composite Weighted Index composed of the following 17 indicators: (1) Developable land, (2) Percentage of total municipal land area that is developable land, (3) Public sewer capacity, (4) Accessibility of municipality to limited access highway interchanges, (5) Proximity of municipality to significant employment centers, (6) Total linear miles of principal arterials, (7) Acreage of approved plans, 1987-1989, (8) Percentage of total municipal land area that had approved plans, 1987-1989, (9) Number of approved housing units, 1987-1989, (10) Percentage increase in number of approved housing units, 1987-1989, (11) Square footage of approved non-residential development, 1987-1989, (12) Acres of land area involved in development submittals, 1987-1989, (13) Percentage of total municipal land area involved in development submittals, 1987-1989, (14) Number of proposed and pending housing units, 1975-1989, (15) Percentage increase in number of proposed and pending housing units, 1975-1989, (16) Square footage of pending major non-residential developments, 1975-1989, (17) Availability of public water service.

Growth Management

Growth management is a planning approach that addresses the problems of rapid development. It is as much a philosophy as it is a collection of tools and techniques. Growth management is an approach that recognizes growth is inevitable, whether a community desires it or not. While it uses many traditional planning tools, such as the comprehen-

sive plan, it uses them in new ways, to guide how and where the community's share of expected growth is to occur. This helps to ensure that growth takes place in a way that is acceptable and beneficial to the community while reducing its negative effects.

Growth management helps guide how and where the community's share of expected growth is to occur.

The Montgomery County Planning Commission has developed several growth management tools. The Transfer of Development Rights (TDR) Model Zoning Ordinance is the most recent example. TDR allows municipalities to encourage new growth where it is acceptable and appropriate, while discouraging growth in areas where the goal is to conserve the existing character. This is done through the voluntary sale and purchase of development rights. In other words, a landowner sells the development rights to his land (thus reducing density in that area) to another landowner who gains the right to develop her land at a higher density. This concentrates future development in locations agreed upon by landowners and the municipality. Thus, TDR achieves community objectives of saving open space or farmland, protecting the environment, or preserving historic and cultural buildings and landscapes, while fairly compensating property owners. (See Appendix B for a description of selected growth management tools.)

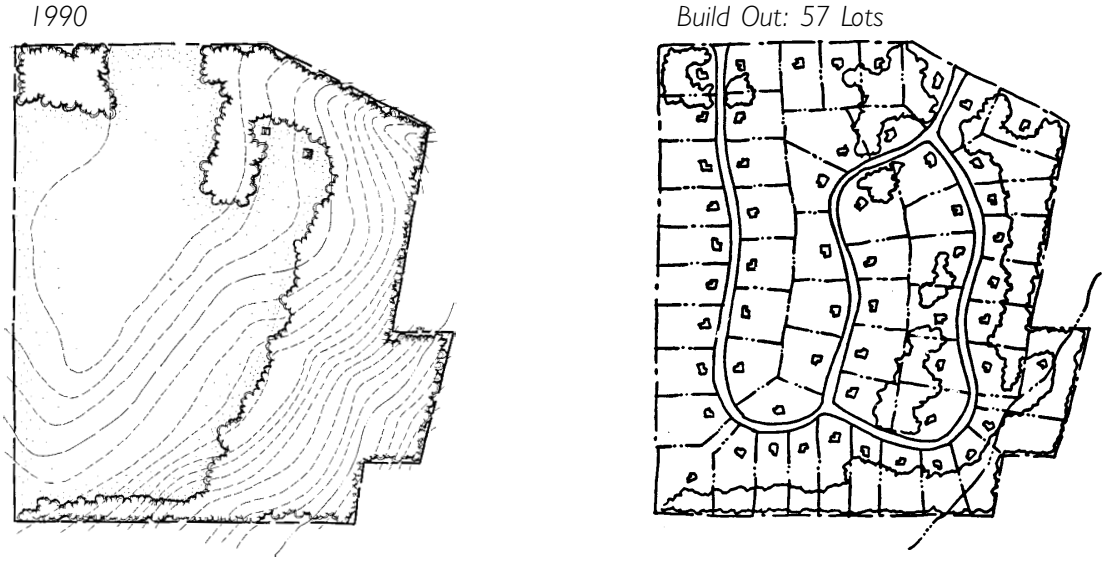
The Montgomery County Planning Commission has developed several growth management tools.

What is a Build Out Study?

This study is a "build out study." It measures and describes all future development allowed to occur in the study area under current development regulations. The study used 1990 municipal zoning ordinances, aerial photographs, and plans for utility expansions to determine the type, location, and amount of all permissible future development.

Zoning ordinances specify and restrict all permissible land uses within a municipality, including such details as minimum lot sizes in residential areas. As an example, consider an area of 143 acres zoned for single-family detached housing with a minimum lot size of two acres. Excluding a standard of 20 percent of the land for roads and environmentally sensitive land, 114 acres would be suitable for housing. This would allow a maximum of 57 new, single-family detached homes to be built in the area (see Figure 3). This type of analysis

Figure 3: 143 Acre Property with 2 Acre Zoning



was completed for all 322 zoning districts in the study area. Population and employment forecasts were used to gauge the timing of this development to provide figures for 2020. The study used 1990 as the base year because it offered the latest available aerial photographs. (See Appendix C for more discussion of the study's methodology.)

Historical Trends

Development trends in Montgomery County have been shaped by changes in technology, the economy, and government policy. One of the first important trends for the study area took place in the 1800s when rail lines were extended out to Norristown, Pottstown, East Greenville, and Lansdale. This allowed both industry and housing to move conveniently away from the city. The characteristic form of this development -- the row houses, small apartment buildings and shops near the center of town, and the detached homes a short distance away -- are still found in these communities.

Increasing automobile ownership began to disperse the population of the county as early as the 1920s. In the booming post-war economy, the availability of cars and trucks, together with certain government activities, such as highway building and home mortgage lending, spurred on a more substantial change in the development pattern of the county. Between 1940 and 1970, moderately dense suburban-style development became the norm. This type of development consumed most of the open land in the eastern portion of the county and contributed to the county's overall population growth rate of more than 20 percent each decade. (See Figures 4 & 5.)

Current Growth Trend

The population of the Philadelphia region has been growing quite slowly for the past two decades. However, within the region many people have moved from the older urban areas to the less-developed areas. This trend marked a clear shift in the location of development activities within the county. Between 1970 and

Figure 4: Development 1940-1990

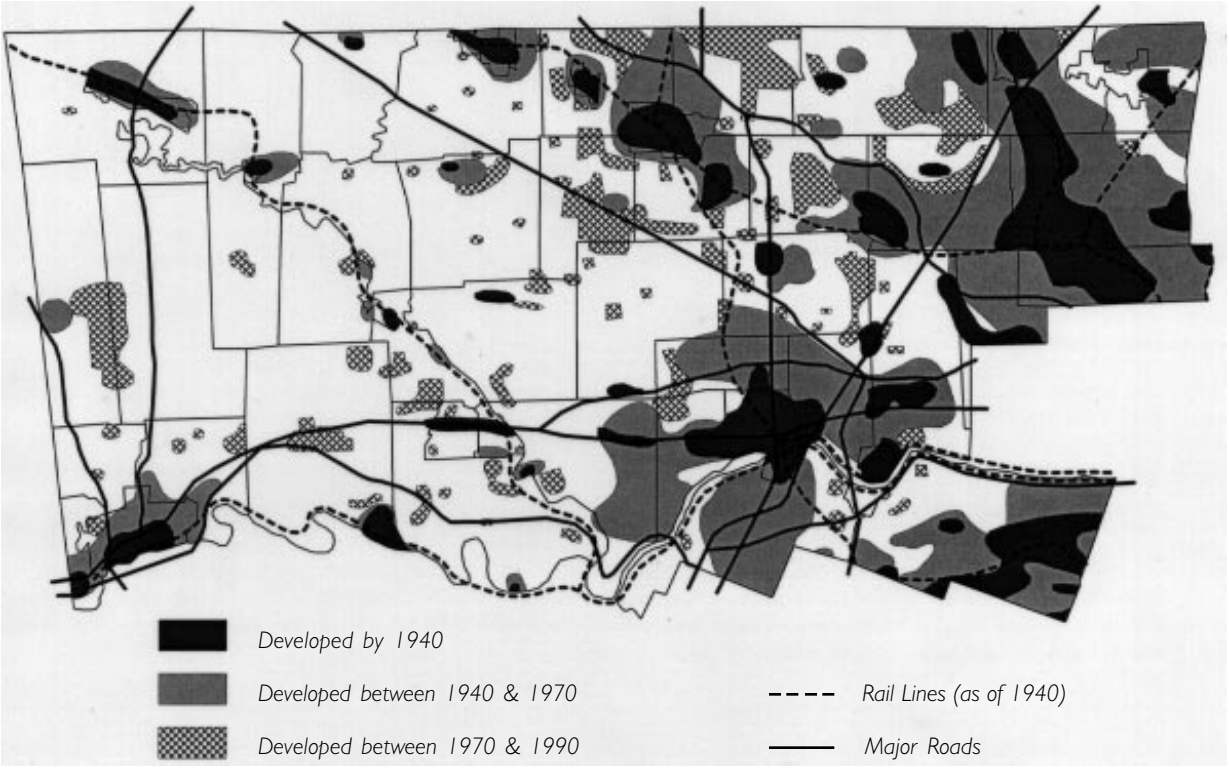
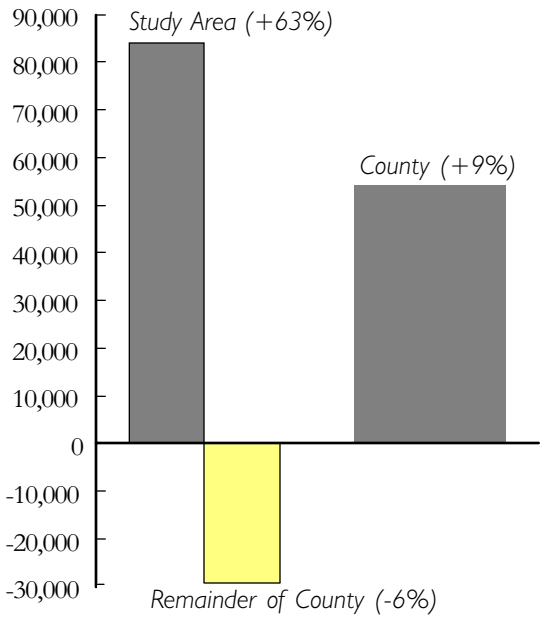


Figure 5: Population Change: 1970-1990



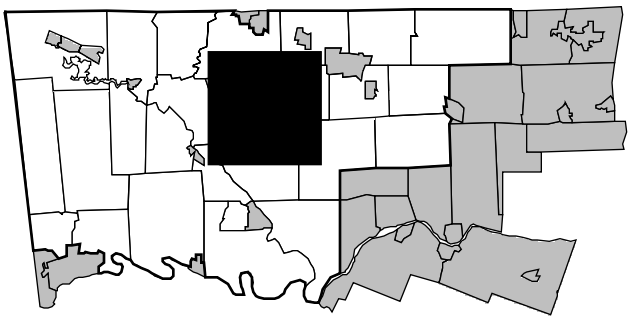
1990, the population of the study area grew by 63 percent, while the remaining part of the county actually saw a decline in population of 6 percent. This brought the population of the study area up to 217,244 in 1990, roughly one-third of the county total of 678,111, spread out over two-thirds of the county's land area.

One indicator of the extent of growth and development was the conversion of agricultural land to other uses. Between 1970 and 1990, 57 square miles of farmland in the study area, one-third of the total, was converted to other uses. This was equal to an area greater than the combined area of Skippack, Lower Salford, Towamencin, and Worcester Townships. The biggest changes occurred in the North Penn Area. Seven municipalities lost more than half of their agricultural lands during this period. What kind of development did the study area get in return?

Between 1970 and 1990, 57 square miles of farmland in the study area, one-third of the total, was converted to other uses.

The conversion of agricultural lands between 1970 and 1990 was largely to residential and business uses. (See Figure 6.) Residential development consumed 18.6 square miles of land during this period. This new housing activity made up 55 percent of all new housing units built in the county from 1970 to 1989. It marked a 100 percent increase in the housing stock in the study area in just 20 years, raising the total number of units to 78,942. Single-family detached housing remained dominant, comprising 63 percent of the housing stock in 1990. This compares to 52 percent for the rest of the county. Another important difference in housing characteristics was the average lot size for single-family detached units. In 1990 the study area's average lot size was 52,277 square feet, nearly three times that of the remainder of the county at 18,005 square feet.

Figure 6: Land Developed: 1970-1990



Area equal to land developed between 1970 and 1990

Source: DVRPC

During this same period, non-residential development consumed 21.8 square miles of land and created thousands of jobs in the area. This development was characterized by widely dispersed, low-rise, suburban-style shopping centers, offices, and other commercial buildings, segregated from each other and from residential areas into special zoning districts. Because driving was the most common way to get from place to place, parking ordinances and design standards that applied to each new building site typically catered to the automobile. In many cases this resulted in more land being dedicated to parking than to the building itself, and made walking or bicycling nearly impossible.

An important factor in shaping this dispersed character of development was the strict segre-

gation of uses called for in local zoning ordinances. When zoning laws were first devised earlier in this century, their main purpose was to separate noxious industries from residential areas. The practice eventually led to housing and businesses being segregated into a multitude of distinct districts. This is what happened in the study area during this latest period of growth. Offices are found near other offices, retail with other retail, and so on.

This environment makes everyday activities, like going to the store, stopping at the post office, visiting a friend, or going to a restaurant, nearly all dependent on driving a car. Indeed, this land use pattern has made the car the most comfortable and convenient transportation choice available. But congestion problems are now common in the eastern, more-developed parts of the study area, such as Montgomeryville and Kulpsville, and at places like Harleysville and Route 73 in Douglass Township. As development has spread out into the central and western parts of the county, the percentage of people driving alone to work has steadily increased, while carpooling, using public transit, walking, and biking to work have steadily fallen. In 1990, 84 percent of resident workers in the study area drove alone to work. In the county, the ten municipalities with the highest percentage of resident workers driving alone to work were all in the study area.

Everyday activities are nearly all dependent on driving a car.

The result of this trend toward large-lot, single-family detached housing and low-rise shopping malls and office centers has been a land-consumptive, sprawling of development over the countryside. Between 1965 and 1990 average household size declined 21 percent while the amount of developed land for each household increased 43 percent. (See Figure 7.) This figure includes land for housing as well as the offices, grocery stores, schools, and roads residents use.

What will future development be like according to these zoning ordinances?

Figure 7: Household Size and Per Household Land Consumption

	1965	1990
Average household size	3.48 persons	2.75 persons
Developed land per household	0.8 acres	1.14 acres

The pattern is self-perpetuating -- land use affects transportation and transportation affects land use. Market forces and consumer preferences have helped shape this development pattern, but one major factor in determining its character has been local zoning ordinances. For the most part, current ordinances are designed to continue the pattern. What will future development be like according to these zoning ordinances?

The Future *

In considering future development, it is important to recognize that zoning ordinances are affected by state law in two important ways. First, the law states that all land within a municipality must be zoned. Second, each municipality is required to provide for every use. For residential development, this means it must provide for a variety of lot sizes and housing types. For nonresidential development it means that all uses, from a mom and pop store to offices, factories, and landfills must be allowed. To protect the rights of property owners to develop their land, and to prevent the restriction of housing opportunities, the courts have found it unacceptable for municipalities to unreasonably limit densities in residential districts.

* Refer to Appendix D for a listing of figures for each municipality for 2020 and build out. Included are figures for housing units by type of unit, square footages of five categories of nonresidential development, residential trip generation, population, employment, and sewage flows.

Because it is difficult to plan or predict what will happen in the far future, the figures given for the final, built out state of the area should be taken with some caution. However, the figures for 2020 regarding the amount of development are based on employment and population forecasts and should be considered sound. The type and character of development is based on zoning ordinances.

Future Residential Development

The total population of the study area is projected to increase from 217,244 in 1990 to 303,460 in 2020. Under current development regulations, the final population at build out could reach 423,900. Six municipalities could reach this built out state within 50 years and eleven within 100 years. These new residents would require an additional 33,400 housing units by 2020 and a total of 80,100 additional units at build out. (See Figure 8.) Compared to 1990's housing stock of 78,942, the study area today has roughly one-half of the housing and population that current zoning ordinances permit.

The study area today has roughly one-half of the housing and population that current zoning ordinances permit.

In 1990 the housing stock was composed of 63 percent single-family detached homes, 15 percent attached homes (such as twins and townhouses), and 22 percent multifamily units (such as multi-level condominiums and apartments). (See Figure 9.) If all future housing units in the study area are built according to 1990 zoning ordinances, 80 percent will be single-family detached, 13 percent attached, and only 7 percent multifamily.

Figure 8: Population and Housing Units

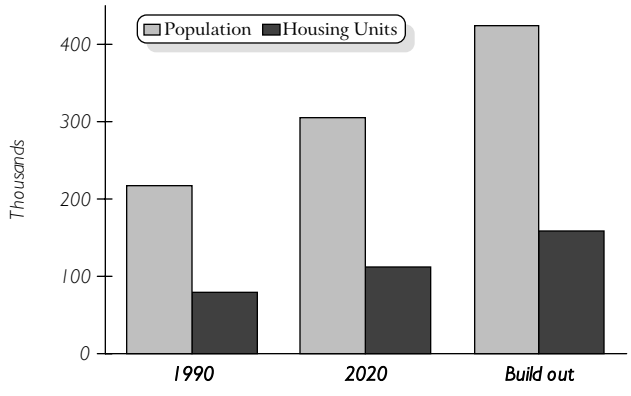
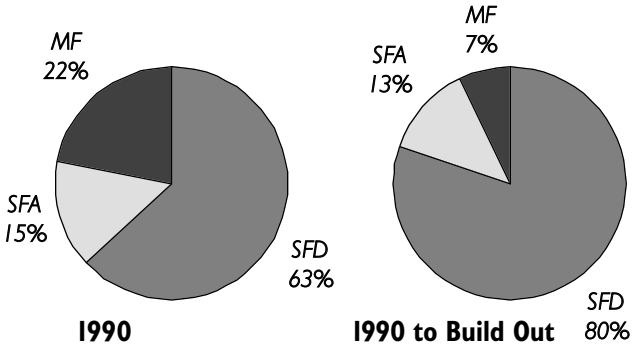


Figure 9: Housing Types



Not including homes with a lot size of 5 acres or more, the average lot size in 1990 for single-family detached homes in the study area was 52,277 square feet. In the remainder of the county, the average was only 18,005 square feet. Often, as areas become more fully developed, existing large lots become further subdivided, with the new lots being closer to the allowed minimum specified by the local zoning ordinance. This pushes the average lot size down for the entire area and partly explains the difference found in the two parts of the county. Examining what is allowed to be built by current zoning ordinances in the study area, however, reveals that the average lot size for future single-family detached homes is likely to be at least 43,200 square feet — just under 1 acre.

Only 14 of the 26 municipalities provide for any future single-family detached housing on lots of 10,000 square feet or less.

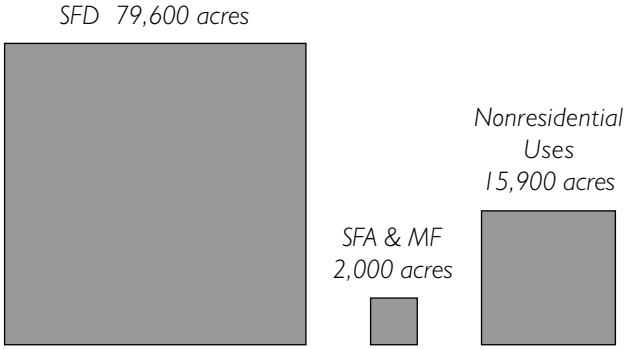
Only 14 of the 26 municipalities provide for any future single-family detached housing on lots of 10,000 square feet or less, for a total of 3,717 units. (See Figure 10.) Of all the land

Figure 10: Municipalities With Small-Lot Single-Family Detached Zoning

Township	Developable Acres Zoned for Small-Lot SFD	Units	Average Lot Size
Franconia	56.9	429	5,778
Horsham	3.4	15	9,874
Limerick	27.2	144	8,228
Lower Frederick	24.0	105	9,936
Lower Gwynedd	13.9	61	9,926
Lower Pottsgrove	525.0	2,287	10,000
Lower Salford	23.5	106	9,657
Montgomery	7.6	38	8,712
Perkiomen	11.9	74	7,005
Skippack	26.6	133	8,712
Towamencin	12.1	73	7,220
Upper Gwynedd	8.5	43	8,611
Upper Pottsgrove	43.4	189	10,000
Upper Providence	2.9	21	6,015
Total	**786.9**	**3,717**	**9,222**

reserved for single-family detached housing, these 3,717 small lots represent only 5.8 percent of future units on just 1.2 percent of the land. And more than half of these are in a single municipality. In total, future residential development will consume 128 square miles (84 percent) of the 152.4 square miles of developable land in the study area. (See Figure 11.) 53.8 square miles will be developed by 2020.

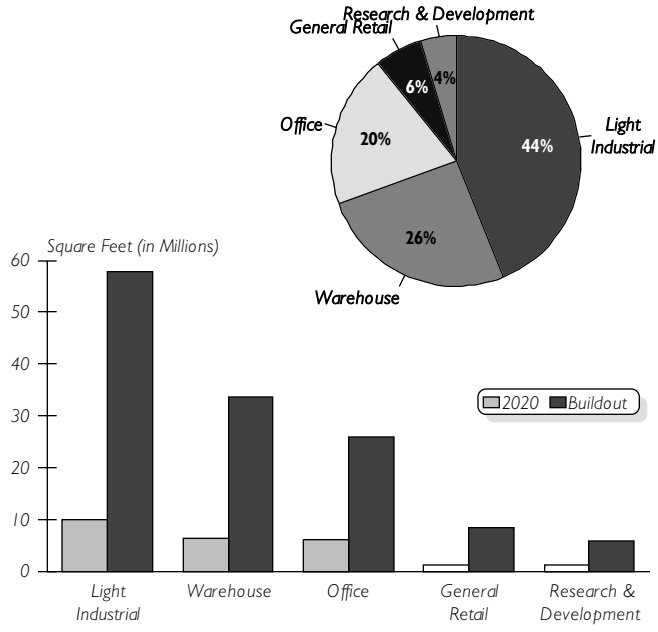
Figure 11: Developable Land by Permitted Land Use Type



Future Nonresidential Development

It should be noted that municipalities often overzone for nonresidential uses. That is, if a typical municipality in the study area were built out under present zoning, there would be far more employees of the new businesses than there would be housing available in the residential areas to accommodate them. Part of the reason for this is that nonresidential uses generally pay more in taxes than it costs to provide them with public services. This brings a fiscal benefit to the municipality and its current residents. Having large areas zoned for nonresidential uses helps municipalities attract them by offering a wider selection of potential sites. The amount of nonresidential development projected at build out may be inflated due to this practice. However, the amount of nonresidential development expected for 2020 is not affected by this possible overzoning because it is based on employment projections.

Figure 12: Future Nonresidential Development



Approximately 25,100,000 square feet of additional nonresidential floor space is projected by 2020. (See Figure 12.) This is only 19 percent of the total additional space allowed by current (1990) zoning. The figure jumps to

roughly 131,700,000 square feet at build out. Light industrial is the largest category, claiming 44 percent of all future floor space. Warehousing and office space are next with 26 percent and 20 percent, respectively. To give some sense of perspective, the square footage expected to be built between 1990 and 2020 is equivalent to 26 times the floor space of The Court at King of Prussia.

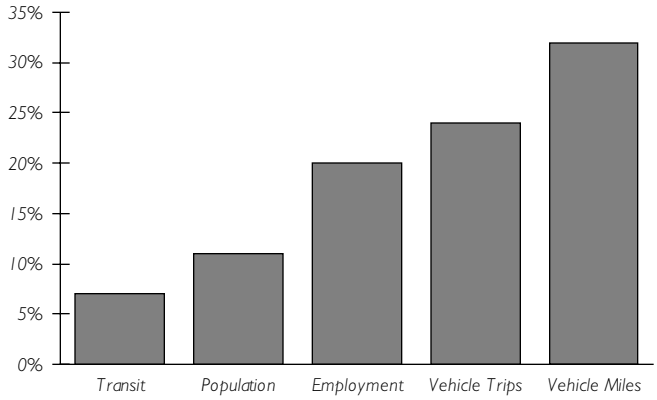
Impacts of Future Development

Transportation

The impacts of growth and development on the transportation system will be profound. Although it is beyond the scope of this study to predict all traffic impacts, it seems clear the problem of congestion will only become worse. Not only will more people be living in the study area, but research suggests the number and length of trips each person takes will also increase. (See Figure 13.) This will directly result from the character of future development. The more dispersed the development pattern, the more miles traveled per person by automobile. The low-density nature of residential development alone is calculated to result in 45 percent more residential vehicle trips by 2020 while population is forecast to increase 40 percent. And this figure is conservative, not accounting for other factors such as shrinking household size, increased vehicle ownership, or low availability of transit service. As an example, in Perkiomen Township, roughly 16,000 additional trips per day will be generated by new housing units by 2020. By comparison, there were 11,410 trips per day recorded in 1990 on Gravel Pike between 113 and Trappe Road.

The more dispersed the development pattern, the more miles traveled per person by automobile.

Figure 13: Projected Increases in Transit and Vehicle Use in the Philadelphia Region: 1990-2020



Source: DVRPC

Employment

Nonresidential development will create jobs, raising total employment in the study area from 145,970 in 1990 to a projected 203,100 in 2020. (See Figure 14.) If all currently permitted building took place, employment could rise to 440,300 at build out. This would be a tripling of total employment while population would nearly double. However, from now until 2020 employment will likely grow at a similar rate to population. It would take much longer for the final level of employment to be reached than the final level of population. In fact, it may not be possible that this final level of employment ever be reached. Only three municipalities would reach final employment figures within 50 years and nine within 100 years.

Figure 14: Population and Employment

In 1990 there were 30,340 more jobs than employed residents. While some of these residents held more than one job, most were filled by people commuting into the area. Given that the ratio of employed residents to population is forecast to remain roughly the same, the surplus of jobs will increase to 39,150 by 2020. As residential development reached its limits under current zoning, the mismatch between population and employment would become more severe, reaching a total surplus of 216,000 jobs at build out. This means if the study area developed according to current zoning, there would be nearly two jobs for every employed resident and a much greater number of workers would commute into the area for work, further congesting roads.

If the study area developed according to current zoning, a much greater number of workers would commute into the area for work, further congesting roads.

Sewer Service

The developable land in the study area includes areas currently served or expected to be served by central sewer service, as determined by existing Act 537 sewage facilities plans, and those needing on-lot or community disposal systems. (See Appendix B, number 2 for more information on Act 537.) According to current zoning, 48 percent of future residential development and 56 percent of future nonresidential development will occur within the central sewer service areas. It was assumed that where sewer service is available to accommodate it, 85 percent of future nonresidential and 75 percent of residential development will locate in the existing sewer service or sewer growth areas. The majority of municipalities have enough planned sewer area for this to be possible through 2020. This means by 2020 the study area's future developments will be generating sewage to be processed by central systems at the rate of nearly 10 million gallons per day (MGD). This is equal to approximately 30,000 equivalent dwelling units (EDUs). As of 1993, the central sewage treatment facilities serving the study area had excess capacity of roughly 11 MGD. At build out, future development occurring within these sewer service areas will generate approximately 15 MGD of sewage. A roughly equivalent amount of sewage will be generated by development occurring outside of the current sewer service area and will have to be treated by on-lot systems and private industrial and community systems or by new or expanded central systems.

The costs associated with serving future residents and businesses will depend greatly on the pattern of development. First, there is an economy of scale for sewage treatment plants that can process large quantities of wastewater. Second, package treatment plants and on-lot systems sometimes fail, causing water quality problems and requiring costly remedies. These costs are sometimes shared with existing customers of central sewage treatment plants when a connection to the system is required. Third, connection and service fees for residential customers are usually uniform and do not depend on distance from the treatment plant. As the system ages, maintenance costs per household will be higher for systems serving more dispersed neighborhoods. These are a few of the ways the pattern of development may significantly affect future sewer service costs.

Conclusion

This study clearly indicates that under current zoning, future development is likely to be characterized by low-rise, suburban style shopping and office centers and large-lot, single-family detached housing. In its mature form, this pattern of low-density suburban development often has negative consequences which affect everyone. These include congested roads, a heavy reliance on the automobile, a low level of informal social contacts and sense of community, and high costs of housing, transportation and services. At build out, the study area will have about the same amount of people as the remaining part of the county, but spread out over twice as much land area. That will likely translate into substantially higher costs for roads, trash pickup, utilities, school buses, and police and fire protection.

This conclusion may sound alarming, but land development does not take place all at once, it is a step-by-step process. Population growth in the study area consists mostly of people moving in from older suburban areas, nearby boroughs, and the City of Philadelphia. As growth occurs in the study area, every new house, gas station, school, and office building fills in an empty space that is part of a dispersed, segregated pattern of land use regulated by 26 separate zoning ordinances. In the short-term, development may not appear to be too problematic to residents of the least-developed areas. However, as suburban areas become more fully developed, the consequences become significant, and residents often become involved in opposing specific developments. What they find is that land development proposals, once submitted, usually cannot be stopped or significantly altered if they meet all the regulatory requirements. Under this development scenario, the predominant character of a township can change from rural to suburban in just 15 or 20 years.

In its mature form, this pattern of low-density suburban development often has negative consequences which affect everyone.

This kind of development scenario has evolved in countless communities across the country despite many of them having plans and policies that included goals and objectives of 1) preserving community character and historic assets, 2) providing efficient and cost effective public services, 3) providing a variety of travel modes, 4) avoiding congestion, and 5) providing a reasonable range of housing types. For suburban areas that experience problems related to sprawling land use patterns, it means the planning approaches and zoning techniques used to guide growth do not meet their objectives well. It appears this scenario may be unfolding in much of the study area. However, it is not too late to change course.

Growth cannot be stopped. It need not, however, result in sprawling development. Growth can be planned for and managed. New developments that are pleasant, walkable, and transit-supportive can be created with the right zoning and land use policies. (See Appendix B for a description of selected growth management tools.) This study provides insight into the amount and kind of development that will likely occur in the study area under current municipal regulations. Residents and policymakers should interpret the results and compare the information to their municipality's comprehensive plan goals and community development objectives found in the zoning ordinance. If this look at the future is desirable, then no adjustments are needed. If it is undesirable, making changes in goals and strategies to achieve existing goals, will take the leadership and efforts of municipal officials, technical staff or consultants, and concerned residents. If changes are desired, then other development regulations, such as subdivision and land development ordinances, should also be examined and changed accordingly. No matter what goals a community has, it should consider adopting innovative planning and growth management tools to achieve them. ❑

Growth cannot be stopped. It need not, however, result in sprawling development.

Municipal Data Sheet For: **SAMPLE TOWNSHIP**
Total Land Area: **10,463 Acres**
1990 Developable Land Area: **5,929 Acres**

Housing Development

	Single-Family Detached	% of Total	Single-Family Attached	% of Total	Multi-Family	% of Total	Total
Existing Units in 1990	1,384	75.5%	115	6.3%	333	18.2%	1,832
Permitted Units: 1990 to 2020	1,284	76.8%	306	18.3%	82	4.9%	1,672
Permitted Units: 2020 to Build Out	1,142	76.8%	273	18.3%	73	4.9%	1,488
Total Units at Build Out	3,810	76.3%	694	13.9%	487	9.8%	4,992

Average Lot Size of All Single-Family Detached Housing Built in 1990 or Before: 89,126 square feet
Average Lot Size of All Single-Family Detached Housing Permitted After 1990: 81,233 square feet

Nonresidential Development *(Square Footage)*

	Office	General Retail	Light Industrial	Warehouse	Research & Development	Total
1990 to 2020	120,383	46,421	320,397	160,198	0	647,398
2020 to Build Out	100,746	38,848	268,133	134,067	0	541,795
1990 to Build Out	221,129	85,269	588,530	294,265	0	1,189,193

OTHER IMPACTS

Estimated Residential Trips[1]

1990	15,700
2020	30,200
Build Out	43,100

Population

1990	4,700
2020	9,000
Build Out	12,850

Employment[2]

1990	2,650
2020	4,100
Build Out	5,300

Additional Sewage Flows *(Gallons/Day)*[3]

	Nonresidential	Residential
1990 to 2020	10,700	228,300
2020 to Build Out	0	0
Total	10,700	228,300

Traffic Volumes

Locations	Average Daily Traffic	Year
• Valley Forge Road between Fisher Road & Morris Road	17,647	1990
• Skippack Pike between Hollow Road & Valley Forge Road	15,945	1990

Notes: (All future figures provided in this sheet are based on population and employment projections and an anaylysis of 1990 zoning).
1. Residential Trips refers to daily vehicle trips generated by housing units only.
2. Employment refers to the number of jobs in an area and not employed residents.
3. Sewage flows were only calculated for central systems' current service areas and planned future growth areas.

Sources:
Montgomery County Planning Commission, Delaware Valley Regional Planning Commission, and the U.S. Census Bureau.