

Chapter 11

Demographic Studies

Introduction

The allocation of land uses and amount of services to be provided are based on the anticipated population to be served. This chapter will review the population and housing characteristics of Waynesboro Borough and Washington Township, including past and present trends as well as projections for the future. This chapter includes discussion about expected housing increases and the anticipated demand for land zoned for residential use over the next ten and twenty years.

It is useful to begin by considering the pattern of residential development that has occurred so far. The growth pattern of the Region has been strongly affected by the surrounding metropolitan areas of Hagerstown, Frederick, the Baltimore/Washington D.C. suburbs, as well as York, Harrisburg, and to a lesser extent Gettysburg. Future population growth will be contingent on the provision of a variety of community and public services to the communities such as public water and sewer services, highway improvements, economic development initiatives, and the impact of the redevelopment of Fort Ritchie in nearby Cascade, Maryland.

There is land available for new residential development in Washington Township, though much of it is agricultural land. The Borough is comprised of a well maintained and sound existing housing stock, with opportunities for infill growth, due to an above average vacancy rate.

This chapter includes tables that show past and present conditions as well as projections of future growth. This information is intended to assist local officials in the decision-making process, as well as point out opportunities for intermunicipal cooperation.

Historic Population Growth and Trends

The rate of population growth over time can provide insight into how the population may increase in the years to come. The following graph shows how the population has changed over time in each municipality as well as for the Region.

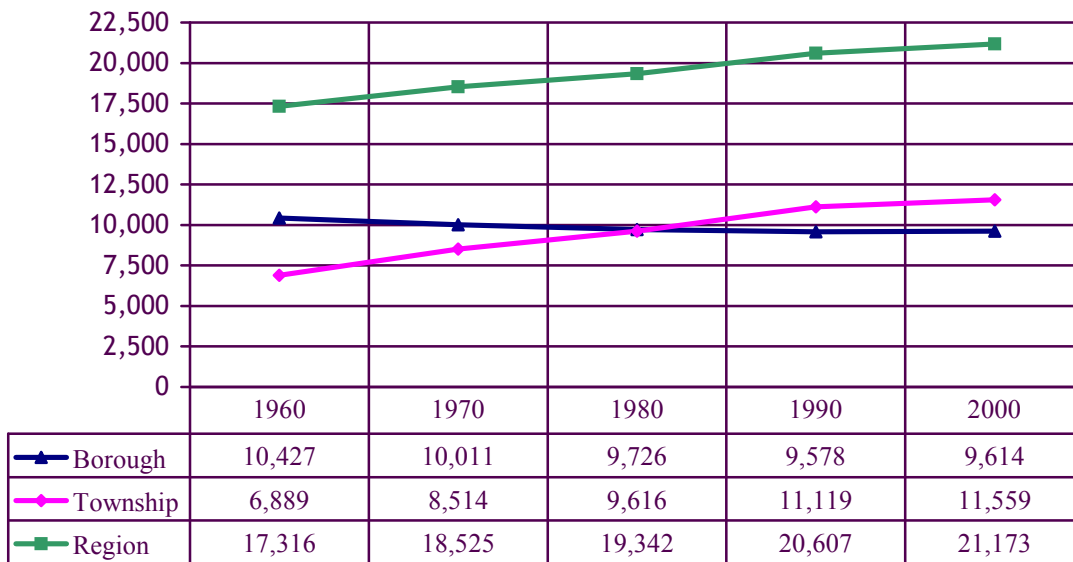


Figure 11.1: Total Population Growth

SOURCE: Washington Township Comprehensive Plan, 1999; Waynesboro Comprehensive Plan 1990; U.S Census Bureau

Most American suburbs showed significant spurts in population in the years immediately following World War II. The chart shows that this trend was not present in the Region, particularly as Waynesboro has lost population every census since 1960. This pattern results in a trend line that resembles a sigmoidal curve: that is, a curve that has ceased to show growth at an increasing rate, but indicates growth at a *decreasing* rate. This is a typical growth curve for communities that have experienced high growth rates to the point of becoming “built-out:” that is, having no open land available for development.

In Washington Township, the most significant growth was from 1960’s through the 1980’s, which would be characteristic of a community more distant from urban growth centers.

The 2005 census estimate shows a slight change to the trend in the Borough, however, future censuses will show if this was truly a change to the sigmoidal trend (i.e., the 2010 census will show an even higher rate of growth for the current decade) or if this slight increase is simply an adjustment to the trend line.

Figure 11.2: Basic Demographic Characteristics

This data included in this table will be the basis of the remainder of the chapter. All data is based upon the 2000 Census unless otherwise noted.

	WASHINGTON TOWNSHIP	WAYNESBORO BOROUGH	REGION TOTAL
Total Population 2000 (2005 estimate)	11,559 (11,884)	9,614 (9,700)	21,173 (21,584)
Total Households	4,577	4,228	8,805
Total Families	3,469	2,555	6,024
<i>Racial Composition</i>			
White	11,221 (97.1%)	9,153 (95.2%)	20,374 (96.2%)
African-American	117 (1.0%)	252 (2.6%)	369 (1.7%)
Hispanic (of any race)	93 (0.8%)	148 (1.5%)	241 (1.1%)
Asian and Pacific Islander	108 (0.9%)	49 (0.5%)	157 (0.7%)
Other, including mixed racial composition*	39 (0.3%)	65 (0.7%)	104 (0.5%)
<i>Household Characteristics</i>			
Average number of persons	2.52	2.26	#
Married-couple households	3,001	1,863	4,864
Total households with children under 18	1,398	1,251	2,649
Female-headed households	324	510	844
Non-family Households	1,108	1,673	2,781
Householder living alone	937	1,438	2,375
Householder 65 years +	420	649	1,069
<i>Age Characteristics</i>			
Median age	40	36.5	#
Percentage of persons under 19	2,956 (25.6%)	2,465 (25.6%)	5,241 (25.6%)
Percentage of persons aged 19-34	1,862 (16.1%)	2,128 (22.1%)	3,990 (18.8%)
Percentage of persons aged 35-44	1,907 (16.5%)	1,388 (14.4%)	3,295 (15.6%)
Percentage of persons aged 45-64	3,006 (26%)	1,944 (20.2%)	4,950 (23.4%)
Percentage of persons aged 65 and over	1,828 (15.8%)	1,689 (17.6%)	3,517 (16.6%)
<i>Income Characteristics</i>			
Median household income	\$45,165	\$31,574	#
Median family income	\$51,791	\$39,951	#
Per capita income	\$20,673	\$17,063	#
Persons below poverty line	450 (3.9%)	980 (10.3%)	1,430 (6.8%)
Families below poverty line	91 (2.6%)	181 (7.0%)	272 (4.5%)

Source: US Census Bureau, 2000, 2005

*When reporting Hispanic or mixed race, the total percentages may add to greater than 100% because individuals report more than one race.

This data cannot be determined for the Region from available information.

Figure 11.3: Regional Population Trends

Municipality	1990 Population	1980-1990 % change	2000 Population	1990-2000 % change
Waynesboro Borough	9,578	-1.52%	9,614	+0.003%
Washington Township	11,119	+ 15.6%	11,559	+3.95%
Quincy Township	5,704	-1.52%	5,846	+2.5%
Antrim Township	10,107	+8.37%	12,504	+23.7%
Greene Township	11,930	+4.01%	12,284	+2.9%
Guilford Township	11,893	+12.55%	13,100	+10.1%
Franklin County	121,082	+6.56%	129,313	+6.8%

SOURCES: U.S. Bureau of the Census, 2004

Socioeconomic Data

The decennial census gathers a wide variety of data in addition to the raw count of persons. The data on household size, age, and income, can give insight into how the composition of Region’s residents is changing. These are the parameters that are most useful for planning purposes as they allow us to make projections relative to housing and land use issues. The following topics refer to Figure 11.2, Basic Demographic Characteristics.

Household and Age Characteristics – The majority of housing in the Region, particularly the Township, is in the form of single-family detached homes: an observation that is supported by empirical data, as shown later in this chapter. This observation suggests that many residents live in family units with children. The data shows that the Borough has smaller households on average than the Township, including a higher proportion of people living alone. Finally, these data should be reviewed with the understanding that the Census Bureau defines “household” as “all the people who occupy a housing unit as their usual place of residence.” This includes individuals who live alone as well as any combination of people who may reside together. “Family” is a type of household, and is defined as “two or more people who reside together and who are related by birth, marriage, or adoption.” Typically, the average family size is larger than the average household size.

An analysis of the age characteristics of the community is useful for estimating demand for public services, as different age groups have differing service needs. Age composition data has long been recognized as a critical element for planning school and recreation facilities, with projections of age compositions being particularly helpful in determining long-range facility needs and land requirements for such facilities. Age data also help to define stages of the life cycle that each have characteristic activity patterns, household moving behavior, and demands for housing and various community facilities and services.

- The 19 and under age group is the school-aged population, which has planning implications regarding school and recreation facilities and programs.
- Young adults, aged between 19 and 34 years, are just entering the labor force and typically prefer rental housing. This group is likely to produce the most children, and tends to be highly mobile.
- Those aged between 34 and 44 comprise the young labor force and are likely to have families. This group tends to be less mobile than the 19 to 34 year olds.
- Individuals in the mature labor force, aged 45 to 64, tend to be more settled and at the height of their earning power.
- Those 65 years and older comprise the senior sector of the population. They generally do not work, or work part time, and exhibit higher rates of demand for health care, public transit services, and special recreation services. Traditionally, this sector has been characterized by limited purchasing power. While this is still more typical, a growing proportion of the senior population has significant disposable income.

Ethnicity – Ethnicity, or “race,” is defined by the Census Bureau as a type of self-identification that has been historically significant for socio-economic and cultural reasons. For the 2000 census, individuals could identify themselves as “White,” “Black or African American,” “Asian,” “Native Hawaiian and other Pacific Islander,” “Some Other Race,” and, starting with the 2000 census, “Two or More Races.” The census also provided for separate identification of Latino persons, who may be of any “race.”

- The racial composition of the Region is very homogenous, even by the standards of Franklin County, which is itself among the most racially homogeneous counties in Pennsylvania. As the shown on the chart above, the Region’s population is 96.2% “white,” while the same group comprises 85.4% of the entire state.
- The data on minority populations is difficult to gather due to the fact that the 2000 census was the first where respondents were allowed to indicate more than one racial group. For the purposes of our analysis here, we included

mixed-race individuals with the “other” category; in previous censuses, such persons may have identified themselves with another group.

Figure 11.4: Education Characteristics

PERSONS 25 YEARS AND OLDER	Waynesboro Borough		Washington Township		REGION	
	1990	2000	1990	2000	1990	2000
No High School Diploma	1,835 (28.2%)	1,200 (18.5%)	1,730 (23.6%)	1,222 (15.1%)	3,565 (25.7%)	2,422 (16.6%)
With High School diploma	2,878 (44.1%)	2,999 (46.1%)	3,096 (42.2%)	3,609 (44.6%)	5,974 (43.1%)	6,608 (45.3%)
Some college, no degree	642 (9.8%)	1,130 (17.4%)	1,031 (14%)	1,368 (16.9%)	1,673 (12.1%)	2,498 (17.1%)
With Associate’s (2-year) Degree	304 (4.7%)	355 (3.5%)	367 (5%)	620 (7.7%)	671 (4.8%)	975 (6.7%)
With Bachelor’s Degree	504 (7.7%)	571 (8.8%)	706 (9.6%)	683 (8.4%)	1,213 (8.7%)	1,254 (8.6%)
With Graduate Degree	359 (5.5%)	247 (3.8%)	411 (5.6%)	583 (7.2%)	606 (4.4%)	830 (5.7%)

SOURCE: U.S. Bureau of the Census, 2004.

Education and income are generally linked, as it has been repeatedly shown that higher levels of educational attainment have a positive correlation with income. This trend is not as evident in the Waynesboro / Washington Township Region.

Figures 11.2 and 11.4 reveal the following information:

- In 2000, Township residents had a higher level of income than the Borough. By 2000, the Borough still had a higher proportion of high-school graduates than the Township, but they were nearly equal in the proportion of college graduate.
- The income figures show the effect of larger households and families. The Township’s household and family income is significantly higher than the same figures for the Borough, however, the difference among per capita income is less pronounced.
- It appears that the Region has become relatively more educated during the 1990’s. In 1990, over 25% of persons 25 or older did not have a high school diploma. By 2000, that number had dropped to 16.6%. Persons attaining college-level degrees have also increased.

Housing Trends

Figure 11.5: Basic Housing & Occupancy Characteristics

All figures from 2000 Census

	WAYNESBORO BOROUGH		WASHINGTON TOWNSHIP		REGION TOTAL	
	1990	2000	1990	2000	1990	2000
Owner-occupied housing units	2,169	2,177	3,346	3,861	5,515	6,038
Renter-occupied housing units	1,976	2,051	810	716	2,786	2,767
Total Occupied Housing Units	4,145	4,228	4,156	4,577	8,301	8,805
Persons per owner-occupied unit	2.49	2.41	2.71	2.54	*	*
Persons per renter-occupied unit	2.07	2.09	2.51	2.42	*	*
Vacant housing units	199	405 (8.7%)	209	263 (5.4%)	408	668 (7.1%)
Total All Housing Units	4,344	4,633	4,365	4,840	8,709	9,473

SOURCE: U.S. Bureau of the Census, 2004. * This data cannot be determined for the Region from available information

Figure 11.5 above shows housing and occupancy rates from 1990 to 2000. Washington Township has experienced a 10% increase in total housing units, while Waynesboro Borough's units have increased only 2%. The Region as a whole has seen the number of vacant units increase dramatically, with an increase over 63% and the overall vacancy rate for the Region is 7.1%, higher than the 5% which is generally considered a healthy rate for a community¹. The Borough contains the majority (61%) of the vacant housing units in the Region.

¹ The Practice of Local Government Planning, Second Edition, 1989

Figure 11.6 illustrates the number of housing units by type for both municipalities.

Figure 11.6: Housing Statistics

	Waynesboro Borough		Washington Township		REGION	
	1990	2000	1990	2000	1990	2000
Single-family detached units	2,006	2,179	3,344	3,862	5,350	6,041
Single-family attached units	587	768	171	203	758	971
Units in multi-unit structures (2 or more units)	1,688	1,636	337	291	2,025	1,927
Mobile homes	29	69	466	465	495	534

SOURCE: U.S. Bureau of the Census, 2004.

Single-Family Detached Dwellings – Within both municipalities, single-family detached dwellings represent the single largest type of housing provided. In Washington Township, over 80% of the occupied housing units are single-family detached dwellings, while 46.8% of the Borough housing is of this type. As a region, nearly 64% of the occupied housing is in single-family detached dwelling.

Single-Family Attached Dwellings – Described as “one-unit attached dwellings,” this category includes row houses, duplexes, and single dwelling units that are attached to non-residential units by a vertical dividing wall. Dwellings in the Region included in this category in 2000 was just over 10.0%

Multi-Unit Structures – This category includes apartment buildings, townhouses, and apartment conversions. As a region, this type of dwelling makes up 20.3% of the occupied housing units.

Mobile Homes – The majority of mobile homes are found in Washington Township. Total percentage of mobile homes in the Township is nearly 10%, while the Region as a whole accounts for only 5.6%, making mobile homes the least prevalent form of housing in the Region.

Figure 11.7: Population Projections

Numbers shown in the “1990 census”, “2000 census”, and “2005 EST” columns are as provided by the U.S. Bureau of the Census. Numbers in the “2010 and 2020 PROJ.” columns are the projections from the 2006 projections completed by the PA Department of Environmental Resources (PADEP).

	1990 CENSUS	2000 CENSUS	2005 EST	2010 PROJ	2020 PROJ
Waynesboro Borough	9,578	9,614	9,700	9,792	10,167
Washington Township	11,119	11,559	11,884	12,885	14,342
REGION	20,697	21,173	21,584	22,677	24,509
Franklin County	121,082	129,313	137,409	140,540	152,733

SOURCES: US Census; PA DEP, 2006

From the point of view of land use planning, the most readily obvious usefulness of these population projections is that they give us the ability to estimate the number of new housing units that will be required to accommodate the new population. *Where* those units will be accommodated will be discussed in the Future Land Use and Housing Plan.

Figure 11.8: Housing Need Projections

The Region totals are the sum of the Borough and Township numbers. Figure 11.2 provides average household sizes for each municipality. Dividing the average household size by the projected population will result in an estimate of required housing units.

	2000 CENSUS	2010 EST	2020 EST
Borough population	9,614	9,792	10,167
Borough housing requirement @2.26 persons/household	4,228*	4332	4,498
Township population	11,559	12,885	14,342
Township housing requirement @2.52 persons/household	4,577*	5,113	5,691
REGION POPULATION	21,173	22,677	24,509
REGION HOUSING REQUIREMENT	8,805*	9,445	10,189

SOURCE: US Census; PA DEP 2006; SSM 2006
* Total existing occupied housing units as of 2000

Taking the projected housing need, the next step will be to calculate how much land must be provided for residential use, based upon some projected housing density for new construction. This will be also addressed in the Future Land Use and Housing Plan.

Planning Considerations

The data presented in this chapter validates the need to plan for future residential development. Although the Region's population increases from 1980-2000 have been modest, the recent influx of new development indicates that this trend is about to change. Factors for this high rate of growth include the ease of access to employment centers, the availability of sanitary sewerage and water supply, and a high quality of life.

PA Route 16, Interstate 81, and proximity to US Route 15 provide the Region with easy access to Frederick, Washington D.C., Harrisburg, Gettysburg, and other larger urban centers, as well as access to the Pennsylvania Turnpike. An increasing number of commuters, including many who have moved to the Region from Maryland, work in these larger urban areas and find the Region, with its small-town, rural atmosphere, an attractive and convenient place to live.

Using Figure 11.8 as an initial guide, the Region must accommodate an estimated 1,384 additional units by the year 2020. The Future Land Use and Housing plan will include a detailed discussion on the recommended development densities and acreage needed to accommodate this additional development.