

IV. Future Growth and Land Development

This chapter examines future growth and development within the Township including existing land use, future growth projections, and impacts on land and water resources. This information is helpful in determining how to designate, accommodate, and protect areas that are subject to additional growth within the Township.

A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:

1. All land use plans and zoning maps that identify residential, commercial, industrial, recreational and open spaces.

(a) SOUTH MIDDLETON TOWNSHIP COMPREHENSIVE PLAN

The South Middleton Township Comprehensive Plan was adopted on December June 28, 2007. This Plan is the basis for guiding and managing development through implementation of zoning and subdivision and land development requirements. The Future Land Use Map contained in the Comprehensive Plan (found in Appendix EE) delineates the areas of the Township slated for future growth. These future growth areas are the areas in which public infrastructure, including public sewerage facilities, is to be extended. Those areas outside the growth areas are to be kept in agriculture, conservation or open space for the foreseeable future. Public infrastructure, including public sewerage facilities, is not to be extended into these areas for the purpose of new land development. The plan was reviewed by the Cumberland County Planning Commission and found to be generally consistent with the Cumberland County Comprehensive Plan that was adopted in December of 2003.

(b) ZONING ORDINANCE OF SOUTH MIDDLETON TOWNSHIP

Adopted on May 10, 2007, the Township's Zoning Ordinance establishes zoning districts and land use requirements to provide a guideline for orderly and sustainable development. The zoning ordinance provides twelve separate base districts: woodland conservation, agricultural and conservation, three zones of residential classification, two zones of village classification, two zones of commercial classification, and three zones of industrial classification. The following summary gives a brief description of

each base zone and the South Middleton Township Zoning Map delineates these zones (see Appendix FF).

- (1) WOODLAND CONSERVATION DISTRICT – WC: The purpose of this district is to preserve and conserve open spaces, scenic areas, exceptional natural resources, water supply sources, steep slopes, marshland, wildlife areas, vegetative cover and flood plains. In this zoning district, the minimum lot size is ten (10) acres to discourage development and protect the natural woodland habitat.
- (2) AGRICULTURAL & CONSERVATION DISTRICT - AC: The purpose of this district is to preserve areas of prime agricultural capability and conserve open spaces, scenic areas, exceptional natural resources, stream riparian zones and flood plains. Every effort is being made to preserve this land for agricultural, open space, conservation and recreational purposes, while accommodating limited additional uses in a manner that does not promote the scattering of development within the district. The priority of the district is to stringently restrict growth in these areas to maintain the rural character of the municipality.
- (3) LOW DENSITY RESIDENTIAL - RL: This zone is reserved for low density residential developments allowing for single family detached housing with few exceptions. Low density is defined as less than 1.7 units per acre with public sewer and 1 unit per acre without public sewer.
- (4) MODERATE DENSITY RESIDENTIAL - RM: This zone is reserved for moderate density development such as single family detached dwellings and single family semi-detached dwellings. Special approvals are needed for attached dwellings, churches, schools, day care centers, nursing homes, and group and special interest homes. Moderate Density is defined as being between 1.7 and 3.5 units per acre.
- (5) HIGH DENSITY RESIDENTIAL – RH: This zone is reserved for high density development such as single family detached dwellings, single family semi-detached dwellings and two family detached dwellings. Special approvals are needed for attached dwellings, apartments, mobile home parks, churches, schools, day care centers, nursing homes, and group and special interest homes. High Density is defined as greater than 3.5 units per acre.

- (6) VILLAGE DISTRICT - V: The purpose of this district is to encourage the in-filling of land within the older, built-up areas by permitting a variety of land uses that will be compatible with the established character of the communities. Permitted uses include all those covered by the moderate density residential zone, some commercial uses and high density development structures.
- (7) VILLAGE COMMERCIAL - VC: The purpose of this District is to promote traditional village building and site development patterns with an interconnected and broadly rectilinear pattern of streets, alleys, and blocks, providing for a balanced mix of automobiles. This District is to provide for retail and service common to a traditional village center as well as to promote the location of shops and workplaces in close proximity to each other in a compact configuration and in a scale that accommodates and promotes pedestrian travel within the district and to surrounding neighborhoods.
- (8) COMMERCIAL – C: This district is broken into a Light Commercial zone and a General Commercial zone. The purpose of the Commercial District is to provide opportunities for varied commercial and professional office development on the community level, and in areas set apart from more intensive regional commercial and industrial uses.
- (9) INDUSTRIAL DISTRICT - I: This district is broken into a Light Industrial zone, a Manufacturing and a General Commercial zone. This zone was established to enable diversified businesses and industries.

(c) SOUTH MIDDLE TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

This ordinance was approved on January 25, 2001. It contains various subdivision, planning, land development design requirements and construction specifications to insure orderly and sustainable development in accordance with the Township's Comprehensive Plan.

(d) CUMBERLAND COUNTY COMPREHENSIVE PLAN

The Cumberland County Comprehensive Plan was adopted in December 2003. It is the long-term guide for maintaining the quality of life for its residents. It is intended to offer recommendations on growth and land use. These recommendations are designed to:

1. Provide guidance to the County, municipalities, and other agencies.
2. Coordinate land use with transportation and plan for transportation improvements.
3. Promote coordination between the County and municipalities, as well as among municipalities.

(e) REGIONAL GROWTH MANAGEMENT PLAN

The Tri-County Regional Planning Commission has developed a Regional Growth Management Plan which serves as a guide for coordinating comprehensive planning among the 103 municipalities, 3 counties and regional planning agency within the Tri-County area. The areas within the Sewer Service Areas have been identified as growth areas within the report, as seen in Map 10-2 "Planned Growth Areas" of that report.

2. Zoning or Subdivision regulations that establish lot sizes predicated on sewage disposal methods.

Lot size requirements are established by the South Middleton Township Zoning Ordinance. The Township's on-lot system management ordinance delineates the planning and design requirements for all on-lot systems in the Township. Each new lot proposing the use of an on-lot system is required to contain two permitable locations for these systems.

Under the Zoning Ordinance, on-lot systems are not permitted within the RM, RH, and V Districts, as the minimum lot sizes in these districts are considered to be inappropriate for these systems. The minimum lot size in the WC District is ten acres. In the AC, RL, C and I Districts, lot sizes generally are controlled by the type of sewage disposal system proposed for the/ property. The table below illustrates the lot size requirements for various zoning districts.

Zoning District	Lot Size
WC	Minimum Lot Size = 10 Acres Suitable area for two sewage disposal systems required.
AC	Maximum Lot Size = 3 Acres, unless additional area is required to site two systems. Suitable area for two sewage disposal systems required.
RL	Minimum Lot Size = 25,000 square feet with public sewer, and = 1 acre without public sewer. Suitable area for two sewage disposal systems required where public sewer is not available.
VC	Minimum Lot Size = 6,000 square feet for lots created after January 1, 2007. No minimum for existing lots of record.
C	Minimum Lot Size = 25,000 square feet with public sewer, and = 61,000 square feet without public sewer. Suitable area for two sewage disposal systems required where public sewer is not available.
I	Minimum Lot Size = 25,000 square feet. Suitable area for two sewage disposal systems required where public sewer is not available.
RM, RH, and V	Public sewer required.

3. All limitations and plans related to floodplain and stormwater management and special protection areas.

In addition to the zoning districts described above, the South Middleton Township Zoning Ordinance also includes seven overlay zones. In these overlay areas, separate land use restrictions apply, and specific land development design requirements must be met. These overlay zones are the airport hazard, flood hazard, historical, steep slope conservation, scenic rivers, special stormwater management and wellhead protection districts.

(1) OVERLAY DISTRICTS

- (i) AIRPORT HAZARD ZONE: This zone was designed to regulate the location and heights of structures in the vicinity of the Carlisle Airport in order to promote safety and minimize accidents.
- (ii) FLOOD HAZARD DISTRICT- This zone regulates the development of flood plains so as to avoid damage to the

environment, structures and life. South Middleton Township was part of a FLOOD INSURANCE STUDY performed in 1996 by the Federal Emergency Management Agency of the Federal Insurance Administration. This document identifies water resources and flood prone areas within the township, along with engineering techniques and suggestions to prevent potential problems.

It is designed to protect flood plain areas, natural resources, watershed areas and soils. The section includes slope flood plain controls to prevent shelter flooding and preservation of alluvial lands.

The purpose of these provisions is to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, the impairment of the tax base and the protection of landowners in and adjacent to flood hazard areas by:

- Regulating uses, activities and development that will cause unacceptable increase in flood heights, velocities and frequencies.
- Restricting or prohibiting certain uses, activities and development from locating within areas subject to flooding.
- Requiring all those uses, activities and developments that do occur in flood prone areas to be protected and/or flood- proofed against flooding and flood damage.
- Protecting individuals from buying lands and structures which are unsuitable for intended purposes because of flood hazards.
- Flood plain areas are also addressed within Article IX of the SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. This document is similar to the Zoning Ordinance, but also includes definitions and design.

The UPDATED COMPREHENSIVE PLAN listed the following rivers, creeks and tributaries as flood hazard; Yellow Breeches Creek, Letort Spring Run, Mountain Creek, Hunters Run, Old Town Run, Whiskey Run, and Little Dogwood Run.

Finally, flood plain research was covered for areas of South Middleton Township in the FLOOD INSURANCE STUDY. It identifies flood prone areas, engineering techniques and possible alternatives to prevent unnecessary flooding. Figure II-2 in Chapter II shows the flood zones.

- (iii) VILLAGE HISTORIC DISTRICT - VH; This district protects the historic structures of Boiling Springs against conversions not suitable to that purpose.
- (iv) STEEP SLOPE CONSERVATION DISTRICT - SS; This district was recently established to promote public health, safety and welfare, low lying areas from flooding and to limit soil erosion and damage to properties.
- (v) SCENIC RIVERS DISTRICT - SR: Protects and maintains the high quality streams of South Middleton Township. Within South Middleton Township, three (3) first priority scenic rivers exist. The SR Overlay applies to the Yellow Breeches Creek, Mountain Creek and the Letort Spring Run Watersheds.
- (vi) SPECIAL STORMWATER MANAGEMENT DISTRICT - SSM: This overlay provides special stormwater management requirements for developments within watersheds that have been studied under ACT 167 – The Pennsylvania Stormwater Management Act. Currently, this overlay applies to the Hogestown Run Watershed. In the very near future, a SSM overlay will apply to the Upper Yellow Breeches Creek Watershed. These studies have been incorporated into a Cumberland County-wide Act 167 Plan that was approved by DEP on September 29, 2010.
- (vii) WELLHEAD PROTECTION DISTRICT - WP: This overlay district provides separate land use restrictions specific land development design requirements for areas surrounding the Township's municipal water supply wells.

Storm water runoff is addressed within the South Middleton Township SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, Article X. It reviews the purpose, methods and standards to enable the proper handling of storm water. A Storm Water Management Plan is required for each subdivision or land development plan.

As illustrated above, planning measures are being taken in compliance with the South Middleton Township Zoning Ordinance and the

Subdivision and Land Development Ordinance. Other special protected areas such as vegetation and wildlife habitats, and historic sites, are displayed in Appendix GG. Results of review of the Pennsylvania National Diversity Inventory, and archaeological and historically significant areas are displayed in Appendix F. Efforts are being made to protect environmentally sensitive areas within the township through guidelines, enforcement, and penalties.

B. Delineate and describe the following through map, text, and analysis.

- 1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDU's remaining to be developed (include time schedule for EDU's remaining to be developed).**

Included in Appendix M is a spreadsheet listing all existing development and plotted subdivisions that have occurred since the 1992 plan update.

The future growth population projection will discuss the anticipated time frame for the remaining EDU's to be developed.

- 2. Land use designations established under the Pennsylvania Municipalities Planning Code including residential, commercial, and industrial areas. Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning.**

Existing and future land use plans are contained in the Township's Comprehensive Plan. As stated in that plan, residential uses are to be located surrounding the urban development areas of Carlisle, Mt. Holly Springs, and portions of Boiling Springs.

The commercial zoning districts are located near the exit ramps of I-81 and extend out along the corridors leading the interstate. There are some mixed use (Village District) around the urban development areas of Carlisle, Boiling Springs, and Mt. Holly Springs.

Industrial uses exist in several areas of the Township. As can be seen on the zoning map, the three major areas of concentration for industrial uses are along Lisburn Road (I-1), Park Drive (I-2), and Allen Road (I-3).

As stated previously, the major problem evaluated in this plan is that the sewer service areas from 1992 are not consistent with the Township's current Comprehensive Plan and Zoning Ordinance.

The sewer service areas from the 1992 Plan covered the areas that were typically served by public sewer (e.g. – higher density residential, commercial, and industrial users). However, there have been several revisions to the Comprehensive Plan and Zoning Ordinance since that time. As a result, there are several areas outside of the designated sewer service areas that are adjacent to areas with public sewer and zoned for uses typically served by public sewer. This plan will update the areas to be more consistent with the current Comprehensive Plan and Zoning Ordinance, as well as examine those areas in regards to available and future capacity available to service those needs. The analysis also will show that the plant should be utilized as a 1.5 million gallons per day facility and justify upgrades to the facility.

3. Future growth areas with population and EDU projections for these areas using historical, current, and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities.

To plan for the future and for those persons who will come to South Middleton Township, it is essential to determine how many new persons will move into the Township. Population projections are calculated for this purpose. A number of agencies have compiled projections for the Township and Cumberland County. Projections are made using a variety of mathematical methods. For the purposes of the South Middleton Township planning, the mathematical methods used to compile projections are: arithmetic, exponential, and shared ratio. The results of these calculations are compared to other sources of population projections such as State Data Center, Tri-County Planning Commission, State Agencies, school census and projections, and building permit information.

Arithmetic Projection

The arithmetic technique uses a constant numerical change based on the average change in population over the period 1960 to 2000. This average change is added to the population in the base year and for each 10 year period for which projections are desired. Projections for the Township are made for the year 2010 and 2020.

EXAMPLE:

Population 1960	5425
Population 2000	12,939
Difference	+ 7514 persons over 40 years
Average annual increase is	187.9 persons
Year 2005 projection	12,939 plus 940 = 13,879 persons
Year 2010 projection	12,939 plus 1879 = 14,818 persons
Year 2020 projection	13,127 plus 1879 = 16,697 persons

Exponential Projection:

This technique assumes an exponential growth to determine the increase in population. This will project a higher population than the linear growth and assumes an exponential growth. The technique is demonstrated below:

$$\text{Population}_{\text{PROJECTED}} = \text{Population}_{\text{NOW}} (1 + \text{RATE})^{(\# \text{ of years})}$$

$$\text{where: } (1 + \text{RATE}) = (\text{Population}_{\text{NOW}} / \text{Population}_{\text{BEGINNING}})^{(1/\# \text{ of years})}$$

So, based upon the population increase from 1960 to 2000 in South Middleton Township, the projected (1 + RATE) would be:

$$(1 + \text{RATE}) = (12,939/5,424)^{(1/40)} = 1.022$$

And the projected population for 2010 and 2020, projected from the Census data for the year 2000, would be:

$$\begin{aligned} \text{Population}_{2005} &= 12,939 (1.022)^{(5)} = 14,426 \\ \text{Population}_{2010} &= 12,939 (1.022)^{(10)} = 16,085 \\ \text{Population}_{2020} &= 12,939 (1.022)^{(20)} = 19,995 \end{aligned}$$

Shared Ratio Projection:

The shared ratio projection technique compares the population of the smaller unit to a larger unit. For this projection, South Middleton Township is compared to Cumberland County.

The following chart shows the U.S. Census population for the County and Township since 1960.

	1960	1970	1980	1990	2000
Cumberland County	124,816	158,675	179,625	195,251	213,674
South Middleton Twp.	5,424	7,521	8,941	10,340	12,939
Percent of county	4.34	4.74	4.77	5.29	6.06

The ratio of South Middleton Township's population to the County for the year 2000 is 6.06 percent. (12,939 divided by 213,674). The Township population shows an increasing proportion of the County population. The increase from 1960 to 2000 was 1.72%. Based upon an arithmetic increase in the percentage ($1.72\%/40\text{years} = .043\%$ increase/year), we can estimate that the percentage of Cumberland County's population in South Middleton will be 6.49% in 2010 and 6.92% in 2020.

The State Data Center has projected the county population to be 249,813 in 2010 and 269,375 in 2020. Thus, the shared ratio population projections for 2010 and 2020 are:

	<u>2010</u>	<u>2020</u>
Cumberland County	249,813	269,375
Percent of county	6.49	6.92
South Middleton Twp.	16,213	18,641

Other Sources:

Various other agencies are used as a source for population information. The U.S. Census taken each decade is used as the official count. Projections made from other sources show a wide range of population. This demonstrates that projections are only a guide or indication of what the pending population may be. Population Projections from other sources:

	<u>2000</u>	<u>2010</u>
Cumberland County (State Data Center)	209,992	221,325
South Middleton Township (TCRPC)	11,722	12,704
Township Comprehensive Plan 1988	13,000	14,500
Township Open Space Plan 1994	13,000	14,500
Township Sewerage Plan DER 1991	10,890	10,957
Township Act 537 Sewerage Plan 1992	13,870	15,173
State Water Plan	10,890	11,652

The age and methodology of these various projections influences the accuracy and appropriateness of the results. The DER projections are outdated and conservative. The Act 537 Plan relies on the sewage hookup of past years. These tend to be more accurate provided the rate of sewer extensions and hookup does not change. The planning documents of the Township utilize the same populations. The range of population from these sources is 10,890 to 13,870 for the year 2000, and 10,957 to 15,173 for the year 2010.

Final Projections

Population projections shown in the following chart are those established as the official populations for the Township to be used in its planning and development decisions.

SOUTH MIDDLETON TOWNSHIP POPULATION PROJECTIONS

Source	2004	2005	2010	2020
Tri-County Regional Planning Commission*	-	14,871	15,769	17,300
U.S. Census	13,721	-	-	-
SMT Arithmetic	-	13,879	14,818	16,697
SMT Exponential	-	14,426	16,085	19,995
SMT Shared Ratio	-	14,956	15,139	16,324

*TCRPC municipal populations projected based upon County projections produced by State Data Center

To facilitate decisions related to the development of the Township and the provision of adequate services and land to support the pending development, the projected populations are set forth in a range. For the year 2010 the range is 15,000-16,000, and for 2020 the range is 17,000-18,000.

As indicated in the Township's Comprehensive plan, population increases from the areas currently zoned for residential are in excess of those needed to accommodate the future population. The "planning implication" is that the future land use plan does not need to provide new areas for residential development beyond what exists under the current zoning ordinance. New areas for the suburban community will serve to infill, rectify land use incompatibilities, and include existing development.

The implication to sewage facilities planning for the future growth is slightly different. The sewage facilities are planned for the long term, beyond 10 years, and should include estimated sewage flows for all undeveloped areas within the Township that are anticipated to be developed.

Below are charts that indicate the potential growth in the three main service areas of the Township.

The residential projections are based upon Township staffs knowledge of previous proposals on some of the residential sites, and comparison

to similar properties in size and zoning. The commercial and industrial parcels have been projected to have a sewage flow of 5 EDU's/acre where there wasn't a reasonable degree of certainty as to how they would be used.

Boiling Springs and PPG Areas (Area No. 1 & 4) – Tributary to SMTMA Plant

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	Development Name or Parcel	Total EDU's	EDU's Remaining	EDU's Projected to be used in the next:		
				0-5 years	5-10 years	10+ years
Future Development	40-09-0533-014 (north of Lisburn – 48 Acres – Zoned I-1)	240	240	0	120	120
	40-09-0533-022 (Otto – 99 Acres – Zoned I-1)	495	495	0	248	247
	40-09-0533-020 (Otto – 89 Acres – Zoned I-1)	445	445	0	223	222
	40-09-0533-011 (Doug Baker – 5 acres - Zoned C)	25	25	25	0	0
	40-09-0531-010 (Jefferson Court II/Morgan's Crossing)	137	137	100	37	0
	40-09-0533-136 (Heritage Village – 53.5 Acres – Zoned C)	267	267	267	0	0
	40-09-0533-016/017/018/019 (Carlisle Forge – 149 Acres – Zoned RH)	505	505	50	200	255
	40-10-0363-028 (Carothers – 121 Acres – Zoned C/RH)	500	500	0	0	500
	40-10-0636-027 (Myers – 101 Acres – Zoned RM)	350	350	0	0	350
	40-10-0636-030 (Warner – 21 Acres – Zoned RM)	25	25	0	25	0
	40-10-0638-031 (Diehl – 112 Acres – Zoned RM)	125	125	0	0	125
	40-11-0284-017 (Georgetowne – 115 Acres – Zoned RM)	214	214	0	0	214
	South Middleton Medical Offices	2	2	1	1	0
	40-11-0288-033 (Shover – 45 Acres – Zoned I-2)	225	225	0	225	0
	40-11-0288-037 (Weaver – 20 Acres – Zoned I-2)	100	100	0	100	0
40-31-2187-063 (Weaver – 20 Acres – Zoned I-2)	100	100	0	100	0	
Existing Development	Jason Baker Subdivision	3	3	2	1	0
	Graystone Bank	1	1	1	0	0
	Parkview at Boiling Springs	107	107	40	40	27
	Hillmount Lot No. 10	1	1	1	0	0
	Olde Forge Station	52	45	20	20	5
	Wheatstone	180	180	0	20	160
	Indian Hills Section 3 & 4	80	22	22	0	0
	Netherby	113	92	30	40	22
	Misty Meadows	49	1	1	0	0
	Villas	93	53	53	0	0
Forgedale Crossing Sections 5-13	188	151	40	40	71	
TOTALS		4622	4411	653	1440	2318

Carlisle Area (Area No. 2)

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	Development Name or Parcel	Total EDU's	EDU's Remaining	EDU's Projected to be used in the next:		
				0-5 years	5-10 years	10+ years
Future Development	40-09-0527-015 (Wenger Tract – 8 Acres – Zoned C)	40	40	40	0	0
	08-09-0527-010 (Sparks Tract – warehouse plan)	13	13	0	13	0
	40-09-0527-004 (8 acres adjacent to Carlisle Hotel Partners)	40	40	0	40	0
	40-08-0581-004A (30 Acres zoned I-3 – Rocky Meadows)	150	150	0	0	150
	40-10-0632-001 (portion zoned RL west of Baker Drive)	20	20	0	0	20
	40-09-0529-192 (Summerfield Commercial Area)	150	150	0	150	0
	40-09-0527-016 (Walnut Bottom Grove – 126 Acres – Zoned C & RH – 420 Dwellings + 73 Acres zoned C)	785	785	0	0	785
	40-09-0531-001 (Jeff Smith – 85 Acres – Zoned V & I)	425	425	0	0	425
	40-09-0531-010 (Morgan's Crossing)	121	121	0	121	0
	Amazon.com	15	15	15	0	0
Existing Development	Raudabaugh Subdivision	2	2	2	0	0
	Orchards at Marsh Run	650	650	125	250	275
	St. Patrick's Church Activity Center	1	1	1	0	0
	Trammel Crow Sparks Tract	13	13	0	13	0
	Carlisle Evangelical Free Church	8	8	8	0	0
	Limestone Creek Subdivision	186	186	26	60	100
	Townes at Summerbridge Village	26	26	0	26	0
	McCoy Business Center Lot 16	1	1	1	0	0
	West Shore Properties	2	2	0	2	0
	Sable Chase	63	33	33	0	0
	Westmooreland	105	105	0	105	0
	Exel, Inc.	8	7	0	4	3
	Carlisle Regional Medical Offices	2	2	2	0	0
TOTALS		2826	2795	253	784	1758

Mt. Holly Springs Area (Area No. 3)

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	Development Name or Parcel	Total EDU's	EDU's Remaining	EDU's Projected to be used in the next:		
				0-5 years	5-10 years	10+ years
Future Development	40-12-0340-020 (Edris Property – 86 Acres – Zone RL)	60	60	0	0	60
	40-12-0340-019 (Dean Otto Property – approx. 40 Acres is South Middleton Township – Zoned RL)	50	50	0	0	50
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
Existing Development	Westgate Subdivision Phases 5, 6, & 7	71	67	67	0	0
	Westgate Phase 8 (12 in South Middleton Township)	12	12	12	0	0
	Holly Hills	16	16	16	0	0
		0	0	0	0	0
		0	0	0	0	0
		0	0	0	0	0
TOTALS		209	205	95	0	110

- 4. Zoning and/or subdivision regulations: local, county, or regional comprehensive plans; and existing plans of any other agency relating to the development, use and protection of land and water resources with special attention to:**
- public ground/surface water supplies**
 - recreational water use areas**
 - groundwater recharge areas**
 - industrial water use**
 - wetlands**

The following overlay and conservation areas are contained within the South Middleton Township's Zoning and Subdivision & Land Development Ordinances:

- (a) The Woodland-Conservation District (W-C) helps to preserve open space, water supply sources, and other natural resources through lot size and area regulations; and by land conservation requirements. In this district, the minimum lot size for new subdivisions after September 21, 1999 is 10 acres. Area Regulations are as follows:
- No more than ten percent (10%) of the area of the lot shall be covered by buildings including accessory buildings.
 - At least eighty percent (80%) of the area of the lot shall be maintained with a vegetative material.
 - Unless specified elsewhere in the Zoning Ordinance, all other uses as permitted in Section 503 shall at a minimum comply with the area and other dimensional regulations for single-family detached dwellings.

Land Conservation Requirements include:

- A plan showing the "limit of work" shall be submitted which will confine excavation, earth-moving procedures and other changes to the landscape.
- All trees six (6) inches or more in caliper at a point four (4) feet in height above the ground shall not be removed unless they are within the right-of-way lines of a street or drive, within proposed building lines, or within utility locations or mandatory access for equipment. Retention of noteworthy plant material shall be encouraged where retention is practical.

- No topsoil shall be removed from the site or used as spoil. Topsoil must be removed from the areas of construction and stored separately. Upon completion of construction and /or site improvements, the topsoil must be redistributed on the site uniformly. Seeding or planting shall stabilize all disturbed areas of the site.
 - A soil erosion and sedimentation plan must be prepared and submitted for the improvement of any lot within this district. In those areas involving residential development where there are no new improvements being proposed (i.e. no new streets, drainage ways, detention ponds, etc.) and/or other storm water management facilities, a typical individual lot Erosion and Sedimentation Control Plan shall be sufficient. In all other instances, the Erosion and Sedimentation Control Plan shall be submitted to the County Conservation District for their review and approval. In those cases involving major land disturbances, said approval must be obtained from the Department of Environmental Protection.
- (b) The Agricultural & Conservation District (AC) helps to preserve the rural character of the Township and encourage conservation of agricultural and other related uses. This can also be done through lot and area regulations, as well as through growth boundary development.

The maximum lot size for new single-family dwelling development after September 21, 1999 shall be 3 acres, unless the physical characteristics of the land itself require a lot size of greater than 3 acre in order to properly site an on-lot sewage disposal system, with specific regard to the location of the dwelling, a driveway, and a water supply well.

Growth Boundary Development

Growth Boundary Development is intended to accommodate limited higher density development in the AC District in a manner that results in an extension of residential development, where water and sewer is available, into the AC District. Only a portion of the land in the AC District may be developed, with the remaining placed in a conservation easement. Thus, open space and agricultural land will be preserved, and a growth boundary will be created. The developed land must be

adjacent to public facilities, and share a common boundary of 400 with an RM or RH zoned parcel, and only a maximum of 20% of the baseline acreage may be developed. A conservation plan is required for the remaining 80% of the land.

Transferable Development Rights

The primary purpose of Transferable Development Rights (TDR) is to permanently preserve open land, sensitive natural areas, and rural community character that would be lost if the land were developed. In addition, this Section is intended to protect property owners' rights, allowing landowners whose land is intended for preservation to transfer their right to develop to other areas of South Middleton Township. It is the particular intention of this Section that the transfer of development rights be utilized to preserve and mitigate the impact of development on prime farmland, mature woodlands, stream riparian areas, wetlands, floodplains, historic, scenic and cultural resources.

- (c) The Steep Slope Conservation District also provides conservation and protection of land and water resources by establishment of general provisions. These provisions are listed under Subsection 1403 (2.) of the Zoning Ordinance.
- (d) The Scenic River District was established to protect and manage the aesthetic, ecological, and cultural values of certain rivers, streams, and waterways. Regulations under this district are controlled by the design standards, grading, and earthmoving activities. Such design standards include:

Clearing of Lots

No living or viable trees, shrubs or vegetation within one hundred (100) feet of a waterway designated in Subsection 1404 (1.) of the Zoning Ordinance, shall be cut, removed, or cleared from the land adjacent to or along said waterway; provided that the pruning, trimming, or cutting of weeds, dead trees or shrubs, and undergrowth shall not be prohibited.

The maximum area permitted to be cleared on any lot adjacent to a designated waterway shall be as established by the impervious coverage requirements applicable to the Zoning District in which the lot is located.

No grading or earthmoving shall be permitted which alters or changes any natural ridgeline within the designated stream segments.

(e) The Wellhead Protection District is another Special Overlay District. This district provides regulations to protect the public health, safety, and welfare and vulnerable groundwater resource areas. There are several objectives that this district hopes to provide. They are listed in Subsection 1405 (2.) in the Zoning Ordinance and are as follows:

- To limit land uses and activities involving the generation, use transport, or storage of hazardous substances;
- To regulate other land uses and activities with the potential to pollute groundwater;
- To assure appropriate nutrient management practices;
- To establish siting standards to guide development onto the least environmentally-sensitive portions of property;
- To preserve vegetated buffer areas and establish setbacks for uses around streams, water bodies, springs, and sinkholes;

To provide for maximum lot coverage standards to

- minimize impervious surfaces and reduce stormwater runoff;
- To provide for stormwater management that maximizes groundwater recharge;
- To protect and enhance surface and groundwater quality from the impacts of development on stormwater quality with Best Management Practices;
- To establish disturbance standards for wetlands, woodland and steep slopes to minimize sedimentation of waters and to maximize water recharge;
- To require the regular maintenance of on-lot sewage disposal systems to minimize the potential for contamination of groundwater; and,

- To alert landowners, potential buyers, appraisers, assessors and lessees of the legal restrictions inherent in certain land uses and activities in this Overlay District.
- (f) The Special Stormwater Management District contains provisions regarding those areas of the Township governed by an Act 167 plan. One provision contained in this section relates to the development, use, and protection of land and water resources is that the land use restrictions and the land development regulations set forth herein have been carefully determined through engineering and scientific study to be the minimum restriction or regulation necessary to protect the health, safety, and welfare of the citizens, as well as the future quality and quantity of this Township's groundwater supply.
- (g) The Subdivision and Land Development Ordinance also contains regulations relating to the development, use and protection of land and water resources. Article VII contains Site Planning and Design Standards which includes requirements for Site Grading and Landscaping. The following are a few of the requirements of grading that are used in order to provide suitable sites for development, improve surface drainage, and control erosion.
- All lots, tracts, or parcels shall be graded to provide proper drainage away from buildings and prevent any surface runoff from ponding.
 - All land within a development shall be graded to drain and prevent any surface runoff from ponding, except where other arrangements are approved by the Board of Supervisors.
 - All drainage provisions shall be designed to adequately handle the surface runoff and carry it to the nearest suitable outlet such as a curbed street, storm drain, or natural watercourse.
 - Concentration of surface water runoff shall only be permitted in swales or watercourses that lead to a natural watercourse or drainage structure.
 - Grading will not be done in such a way so as to divert water onto the property of another landowner without the expressed consent of the Township and the affected landowner.

- Topsoil shall be preserved and redistributed as cover and shall be expeditiously planted with perennial grasses or ground cover.
- Grading equipment shall not be allowed to cross live streams. Provision shall be made for the installation of culverts or bridges. Emergency crossings may be permitted through permission of Pennsylvania Department of Environmental Protection.

Landscaping Requirements are used to promote practical and attractive development within the Township. The following are those such requirements:

- Minimizing erosion and sedimentation, and stimulating groundwater recharge.
- Minimizing glare and heat on proposed hard surfaces, and reducing noise pollution.
- Stimulating air purification and oxygen regeneration.
- Maintaining existing, healthy vegetation.
- Providing harmonious development or properties adjacent to incongruous zoning districts or uses by providing minimum landscaping requirements.

Article X of the Subdivision and Land Development Ordinance describes the planning and design requirements for the Special Stormwater Management Plan, which promotes health, safety, and welfare within certain watersheds by minimizing damages. Those requirements include the following:

- Manage accelerated runoff, erosion, and sedimentation problems at their source by regulating activities that cause these problems.
- Use and preserve the existing natural drainage systems.
- Encourage recharge of groundwater where appropriate and prevent degradation of groundwater quality.

- Maintain existing flows and quality of streams and watercourses in the Township and the Commonwealth.
- Preserve and restore the flood-carrying capacity of streams.
- Provide proper maintenance of all permanent storm water management facilities that are constructed in the Township.
- Provide performance standards and design criteria for storm water management and planning.

5. Sewage planning necessary to provide adequate wastewater treatment for five and ten year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities.

As can be seen from the population and EDU projections contained in Section IV.B.3 above, South Middleton Township is expected to grow in all three areas that are served by a wastewater treatment plant.

In Areas 1 & 4, areas tributary to the South Middleton Township Municipal Authority plant, there are projected to be 4,411 EDU's into the future. As the current rate of 226 gpd, those 4,411 EDU's translate into an additional 996,886 gpd into the plant. The current three month maximum daily flow from these areas is 503,539 gpd. Thus, it is projected in the future that the total flow from Areas 1 & 4 to the plant will be 1.5 MGD. The current allocation, in an upgraded plant, for these areas is 1.3 MGD. Given the conservation nature of estimating the growth in EDU's, and the fact that a majority of the growth is estimated to occur beyond ten years, the upgraded plant should be adequate to serve these areas into the future.

In Area 2, tributary to the Borough of Carlisle's WWTP, it is estimated that there will be additional 2,795 EDU's in the future. This translates into an estimated 631,670 gallons per day. The average daily flow from SMTMA's collection system to this plant was 321,000 gpd. The total allocation of SMTMA treatment capacity in the plant is 1.01 MGD. Thus, the projected load of 952,670 gpd based upon the EDU projection will not exceed the allocated capacity.

In Area 4 & 5, the total flow projected to increase to the Mount Holly Springs WWTP is 205 EDU's, or 46,330 gpd. The current inter-municipal agreement reserves 200,000 gpd for SMTMA in the plant. The three-month peak average flow to this plant in 2009 was 97,651

gpd. Adding the projected flow to this total makes the projected future flow to be 143,981 gpd. Thus, the allocation to SMTMA will adequately cover the projected growth.