

# TOWN OF MIDDLETOWN



## Comprehensive Plan Effective March 28, 2010



Town of Middletown  
31 West Main Street  
Middletown, MD 21769

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**MIDDLETOWN COMPREHENSIVE PLAN**  
**ADOPTED BY ORDINANCE NO. 10-03-01**

**Effective**

**March 28, 2010**

2010

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## Chapter 1 INTRODUCTION

### Purpose of the Plan

The purpose of the Middletown Comprehensive Plan is to provide a framework to guide future decision-making concerning growth, development and the provision of public services. As such, the Plan for the Town should reflect the community values of its residents and elected officials. These values are expressed through the Plan's goals and objectives which envision a desired future condition for the community. The goals and objectives are the basis for recommendations which are to be found in the Plan and are the basis for future actions the Town will take in regard to development proposals, rezonings, annexations and public works projects.

The adoption of a Comprehensive Plan is also important in that it can provide the framework for consistent decisions. The Plan can give succeeding administrations a better idea of what values have been stated through the public planning process.

A Comprehensive Plan has value to the staff planner, the Town Planning Commission, the elected officials, and the citizens. The planner will use the plan to evaluate land use proposals and to inform property owners about appropriate areas for development. The elected officials will use the plan to make decisions which are consistent with an adopted course of action and to make progress on issues which are identified as needing action. The citizens can use the Plan to judge the decisions of the planning body and elected officials, and to gauge the progress made in important areas of concern.

Another purpose of the Comprehensive Plan is to coordinate planning activities with other levels of government and regional planning agencies. The State of Maryland through the Maryland Economic Growth, Resource Protection and Planning Act of 1992, and its subsequent amendments, requires plans to be updated at specified intervals and to include elements in the plan which will follow the 12 visions which were prepared in the wake of the 1987 Chesapeake Bay agreement with the addition of new visions from Senate Bill #273 to help achieve Smart and Sustainable Growth.

1. A high quality of life is achieved through universal stewardship of the land, water and air resulting in sustainable communities and protection of the environment;
2. Citizens are active partners in the planning and implementation of community initiatives and are sensitive to their responsibilities in achieving community goals;
3. Growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers;
4. Compact, mixed-use, walkable design consistent with existing community character and located near available or planned transit options is encouraged to ensure efficient use of land and transportation resources and preservation and enhancement of natural systems, open spaces, recreational areas, and historical, cultural, and archeological resources;
5. Growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner;
6. A well-maintained, multimodal transportation system facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers;

7. A range of housing densities, types, and sizes provides residential options for citizens of all ages and incomes;
8. Economic development and natural resource-based businesses that promote employment opportunities for all income levels within the capacity of the State's natural resources, public services, and public facilities are encouraged;
9. Land and water resources, including the Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air and water, natural systems, and living resources;
10. Waterways, forests, agricultural areas, open space, natural systems, and scenic areas are conserved;
11. Government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection; and
12. Strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, state, and interstate levels to achieve these visions.

On October 1, 2006, the Maryland General Assembly enacted legislation that affects the laws governing municipal annexation and the makeup of municipal and county comprehensive plans. HB 1141, Land Use-Local Government Planning, amends Articles 23A and 66B, Annotated Code of Maryland. It created new responsibilities for municipalities and counties related to annexations, and established new mandatory elements in all municipal and county comprehensive plans, the provisions of which take effect on October 1, 2009. A few of the legislation's key components are listed below.

1. Every municipal comprehensive plan must have a Municipal Growth Element and annexations must be consistent with these elements.
2. All municipal and county comprehensive plans must have a Water Resources Element.
3. Sensitive Areas Elements must address agricultural and forestlands intended for resource protection or conservation as well as wetlands.

Equally important is the coordination with County planning efforts since much of the public facility planning is controlled at the County level. Coordination with Town plans will enable the County to attempt to provide public facilities sufficient to meet the needs of the populace.

### Goals

All successful planning begins with an idea of a desirable end result. These desired end results are the goals toward which actions are directed. The goals provide the framework for policies and objectives to carry out the goals. The framework for the Plan can be stated in the four major goals:

#### A. Provide for Quality Living Environment

Preserve and promote quality residential developments with adequate provision of public facilities and services and explore opportunities for safe and affordable housing. In addition, new development should be directed to designated development areas and shall be encouraged only where it can be served at a satisfactory level by existing or planned

public improvements including roads, sewer, schools, water and park facilities. It is essential that in order to promote and ensure a quality living environment, improvements to the transportation system must be made. Specifically, extension of the Middletown Parkway should be kept as a top priority in Town and County plans.

B. Protection of Important Natural Resources and Historic Landmarks

The Town should require that the adverse impacts on the environment from development, including the impact on provision of public utilities, be minimized. It is important that the Town continue to ensure that flooding and erosion control steps are taken and that stormwater management and sediment control regulations are followed. The Town should also encourage the preservation of unique or historic landmarks, protection of the Town watershed and protection of Catoctin Creek and its tributaries. Promote concepts of a sustainable community to meet the needs of the present while ensuring that future generations have the same or better opportunities.

C. Encouragement of Sound Economic Base

The Town should provide for a variety of commercial and industrial areas which will be located so as to minimize the impact on adjoining land uses. It may also be helped by actions and recommendations of groups such as the Downtown Revitalization Committee, Main Street Maryland, and the Middletown Valley Business Association. The Town's natural and historic assets should also be fully utilized by encouraging tourism through promotions such as the Maryland Heritage Preservation and Tourism Program, and the Civil War Trails Area. The Town will provide for an efficient and streamlined development review process.

D. Manage and Sustain Middletown's Future Growth

The Town should ensure that its future growth is managed properly, per the towns residential and commercial growth policies, by requiring new development provide the necessary water and sewer resources, traffic impact studies and subsequent needed improvements to the Town's transportation infrastructure, and recreational resources for the town's residents, as determined by the Planning Commission and the Town Board. Additionally, developments will receive a set amount of permits per year.

The Town of Middletown is committed to fiscally, socially and environmentally responsible land use development. Sustainable development integrates the needs of the Town and its residents in the present generation without sacrificing the ability of future generations to meet their needs by balancing the economy, society and the environment in the process. In looking towards the future, the Town of Middletown will strive towards sustainable living and planning.

Sustainability in the Town will be guided by the following objectives:

- Preservation of Open Space and environmental stewardship areas in Town to ensure that the natural environment and the views it provides citizens are preserved into the future. This would include preservation and expansion of fragmented or isolated woodlands into

coherent greenways while providing water quality benefits for the Town's water resources.

- Continuation of the preservation of the greenbelt of open spaces and farmland established around the Town. This greenbelt physically separates Middletown from sprawl development in other areas of the County.
- Reduction of the total amount of impervious surface area within the existing Town limits of Middletown through the use of the latest stormwater management and pervious pavement designs.
- Continuation of its rain barrel partnership with the Interstate Commission on the Potomac River Basin (ICPRB) and the Chesapeake Bay Trust and investigation of other sustainable stormwater management practices.
- Reduction of energy consumption and carbon footprint through energy efficiency programs, clean energy programs, alternative transportation fleet options and recycled procurement programs as part of the Town of Middletown government policies.
- Promotion of Frederick County's single stream recycling program for residents and development and enhancement of government and business recycling programs in conjunction with the County program.
- Reduction of water consumption and wastewater production through enhanced water reuse programs and low-flow technologies.
- Continuation of the use of the brown biodegradable paper bags to all Town residents as part of its Yard Waste collection program that eliminates yard waste from the municipal solid waste disposal stream.
- Promotion of sustainable building practices using the U.S. Green Building Council's LEED program or a similar system for government and commercial construction projects.
- Cooperation with Main Street Middletown and Frederick County Public Schools to help educate the public, schools, professional associates, business and industry about creating a sustainable community and to establish sustainable policies for all commercial and County buildings and operations in the Town.

It will be the policy of Middletown that...

1. Wetlands, streams, floodplains, forested areas, and steep slopes are not disturbed by development.
2. Streams and floodplains have vegetated buffers that help to restore the natural function of these areas. These buffers are planted in species native to Middletown and the surrounding area.
3. The Town actively seeks ways to lessen its impact on the environment by minimizing energy use, carbon emissions, water consumption, stormwater runoff, and implementing green design standards.
4. To the fullest extent practical, new development uses non-structural techniques and pervious paving to manage storm water and otherwise comply with the highest standards of the Maryland Department of the Environment.
5. Developers seeking annexation will plan their projects to the highest standards for community and environmental design using sustainable building practices.
6. Natural areas and farming remain the dominant use in the greenbelt.
7. An interconnected system of parks, shared use paths, and open spaces is created in and around Middletown. Every resident is within a five-minute walk from a community park and shared use path.

8. All residents and businesses in the Town of Middletown will participate in Frederick County's single stream recycling program.
9. An education program is put into place that teaches the public, school children, and business owners about sustainable development and sustainable living.

### Planning in Middletown

This document is structured around 7 major components; population and housing, physical features, sensitive areas, water resources, municipal growth, land use, transportation and community facilities. Each of these components is a chapter in the Plan. Chapters 3 through 6 include background information, issues, objectives, policies, and implementation recommendations. The implementation recommendations include specific actions which are necessary to carry out the goals and objectives of the Plan.

Planning was initiated in Middletown on January 1, 1965, when a Planning & Zoning Committee was formed and given the task of preparing the appropriate ordinances to regulate development. The first meeting of the Planning & Zoning Commission occurred on January 19, 1965, at which time a State model zoning ordinance was adopted. This model zoning ordinance was amended from time to time and was in use until March 3, 1969, when the first Middletown Comprehensive Plan and Zoning Ordinance were adopted. Shortly thereafter, the Middletown Subdivision Regulations were adopted on March 17, 1969.

This Middletown Comprehensive Plan is the fourth comprehensive update since the original Master Plan was adopted in 1969. The target date for various housing and population projections used in the 1995 Plan was 2000.

Prior Middletown Comprehensive Plans sought to achieve a diversified community which avoided mixed land uses, provided easily accessible recreational facilities, and encouraged industrial and commercial development. The Plans also intended to provide for improved traffic patterns including a parkway around the downtown area. The Plans also intended for schools to serve as activity centers.

Some of the goals of the previous plans were achieved in the segregation of new residential development from other commercial and industrial uses. In addition, this residential development became a larger share of the Town's total land use acreage. However, other goals of the Plans were not achieved such as the provision of a complete parkway around Middletown or generally improved transportation patterns.

Over the past several years, Middletown has gained a new independence by the addition of a Town Staff Planner, Zoning Administrator, and Town Engineer and included documents such as approval of a Town Design Manual. In addition, the Town has instituted its own permitting authority, construction inspections, and is requiring annexation agreements for all new parcels coming into Town as stated in the town's residential and commercial growth policies.

### Description of the Town & Regional Context

Middletown, located on the Maryland Historic National Scenic Byway, can be described as a historic small town which, over the last 35 years, has become increasingly linked with the

Washington Metropolitan area as growth from this area has spread into Frederick County. It is included in the Heart of the Civil War Heritage Area, recently designated by the State, and boasts a large number of historic residences along the Old National Pike. An especially unique characteristic of Middletown is the view from Braddock Mountain. Due to the inter mountain terrain, many views of Middletown are available. Depending on traffic, both Baltimore and Washington are within an hour's drive from Town. Frederick County is now considered part of the Washington Metropolitan Statistical Area, and has a County population of 228,856 (2006) persons according to the Frederick County Planning Department. This is expected to increase to 331,700 by 2030. Middletown is located 40 miles northwest of Washington D.C. and 45 miles west of Baltimore and has a 2000 population of 2,668 persons. The projected population for 2030 is 5,092 people.

Middletown encompasses a land area of 1,142 acres and has the sixth largest population of 12 incorporated towns in Frederick County. It is largely a residential community within the agriculturally dominated Middletown Valley. Land uses in the vicinity of the Town include large scale residential development east of its border with agricultural and scattered residential north, west and south of the corporate limits. The downtown area includes small specialty commercial establishments and a small shopping center with a grocery store on the eastern edge of Town. Frederick City provides a wide range of goods and services and is located 8 miles to the east over Braddock Mountain. Another city, Hagerstown (39,000 population), is located 14 miles west over South Mountain. Other incorporated areas in the Middletown Valley include Brunswick City (5,230 population), 8 miles south and Myersville (1,508 population), 5 miles north.

### Historic Development

Development in the Middletown Valley began about 1740 with English settlers. These were soon followed by German immigrants who came to dominate the Valley. The Town of Middletown was originally laid out by Michael Jessorong, who deeded building lots described as being in the Town of Middletown<sup>1</sup>. The origin of the name is unclear, perhaps owing to the central location of the Town in the valley between the Catoctin and Blue Ridge (or South) Mountains.

Middletown has experienced many historical events that occurred during our nation's development. In 1755 Colonel George Washington accompanied General Braddock on the old Indian Trail that ran through the valley on his way to Fort Cumberland. Westward expansion occurred on Main Street including the construction of the Old National Pike in 1806 and in 1896 Car 11 of the Frederick Middletown Railway made its first run to Middletown. The Civil War brought both armies passing through Town on their way to the battles of South Mountain and Antietam. In the aftermath of those battles, Middletown opened its churches and homes to care for the wounded. Confederate General Jubal Early held the Town for ransom as recreated in the past during the Heritage Days celebration.

Middletown was incorporated in 1834 with Jacob Hoffman serving as the first Burgess. In the early days, Middletown had large and thriving businesses owing a great deal to its location on the Old National Highway. At one time, Middletown was the voting place for the entire valley from the Mason-Dixon Line to the Potomac River. There were various trades and other business

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<sup>1</sup> George C. Rhoderick, Jr., The Early History of Middletown, 1989

in addition to those serving the outlying agricultural area. Among the major businesses which were located in the Town were Hanover Shoe Company, the Valley Register Publishing Company, C.F. Main & Sons Ice Cream, Gladhill Furniture, Southern States Co-op, the Granger's Mutual Insurance Company, the South Mountain Creamery, L.Z. Derr General Store, Shafer's Plumbing & Heating, American Store, Arnett's Grocery, and the Middletown Cannery. For a variety of reasons, most of these companies have closed.

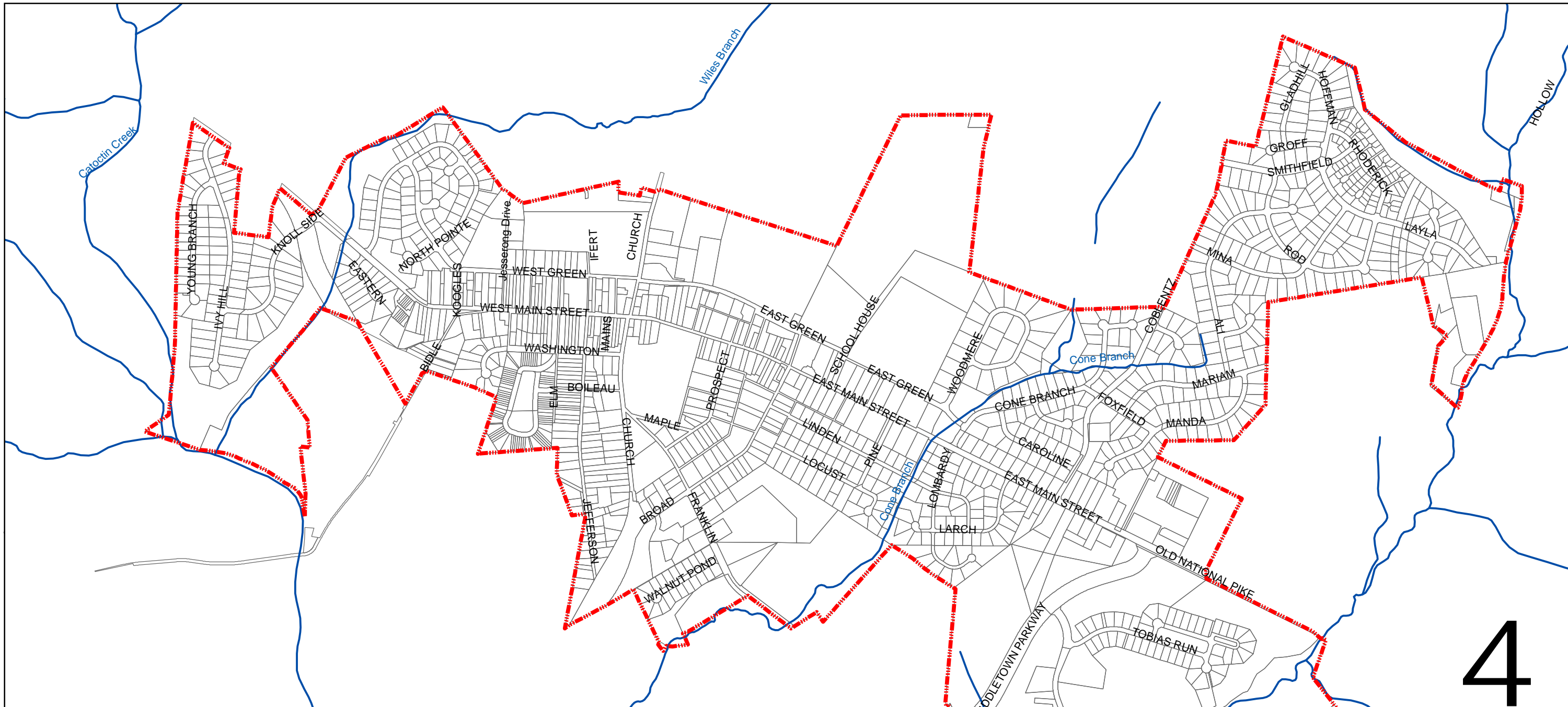
Recent development trends in the Middletown area show development east and west of Town and continued low density residential development in the agricultural areas. Since 1969, the corporate limits of Middletown have changed through both annexation and de-annexation of properties. As of August 2007, the land area of Middletown is 712 acres larger than the 1969 corporate limits.

### Heart of the Civil War Heritage Area

Middletown is part of the Heart of the Civil War Heritage Area, which stretches across much of western Maryland and provides recognition and funding for places whose history is intertwined with the Civil War. The Heritage Areas program encourages communities to identify, protect, and promote their unique heritage and to capitalize on that heritage through economic development tourism initiatives. State funds and assistance will be made available for interpretive and infrastructure improvements in State-approved heritage areas.

The Town endorses the Maryland Heritage Areas Authority's Management Plan for the Heart of the Civil War Heritage Area. As part of the Heritage Area, a Target Investment Zone (TIZ) has been designated in Middletown. The Management Plan designates the Middletown TIZ for future activation. To be activated – and to receive the funding associated with having an active TIZ – the Town must submit a detailed work program showing how Heritage Area funds would be used.

Middletown is also a part of the Journey Through Hallowed Ground National Heritage Area. Citizens wishing to become involved in the Town's historical heritage activities can contact the Middletown Valley Historical Society and the Central Maryland Heritage League both located in downtown Middletown.






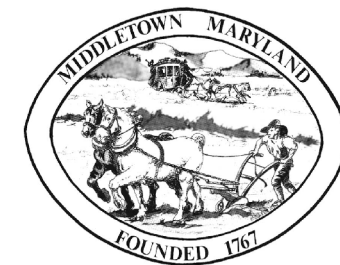
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# Town Limits Map Middletown, Maryland

3/10/2010

**Legend**

-  Streams
-  Parcels
-  Town Boundary



**Figure 1-3**



## Chapter 2 POPULATION & HOUSING

Past population trends and the forces which have influenced them should be examined to determine the nature and direction of growth in the future. Demographic information which explains the characteristics of the population is important to the planning process. The purpose of this chapter is to look at past and projected growth trends and characteristics of the population. The past trends indicate a history of the pace of development. The projected population increases will help determine the level of future public service needed to serve the population. The population characteristics will help determine the type of facilities and services. The household characteristics describe the living conditions of the population.

### Population Projections

Population projections have been developed for the Town of Middletown in order to plan for the impact of growth on new facilities and to help define the extent of land use needed for development in the future. Projections are based on assumptions about the economy, public facilities, household size, and public policy. The projections are also based on past growth trends and possible building permit activity. All of these factors are subject to change over time and may exert pressure on other factors which could affect the extent of development. Further discussion of population projections is found in the Municipal Growth chapter of this document.

### Population & Household Characteristics

Characteristics of the population are evaluated to determine trends which might indicate future service and facility needs to serve a certain population type. Changes in the structure of the Town may indicate a change in services such as aging population would require more senior citizen services. For this reason, comparison of previous Census information is presented where possible. Since 1960, the basic character of the Town in regard to age, race and sex has remained basically the same with a slight aging of the population. These figures are based on 2000 Census Reports, which are the latest available data.

TABLE 2-1  
POPULATION BY AGE

Age	1960		1970		1980		1990		2000	
	#	%	#	%	#	%	#	%	#	%
under 5	87	8.4	107	8.5	110	6.3	133	7.2	192	7.3
5-19*	231	22.3	317	25.1	404	23.1	390	21.3	714	26.8
20-44*	330	31.9	412	32.6	699	40	686	37.4	890	33.3
45-64	245	23.6	257	20.4	331	18.9	385	21	579	21.7
65+	143	13.8	169	13.4	204	11.7	240	13.1	293	10.9
	1036	100	1262	100	1748	100	1834	100	2668	100

Source: U.S. Census 2000

\*1990 figures are for 5-20 age group and 21-44 age group.

TABLE 2-2  
POPULATION BY SEX

1960		1970		1980		1990		2000	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
497	539	598	664	816	932	876	958	1277	1391
48%	52%	47%	53%	47%	53%	48%	52%	47.90%	52.10%

Source: U.S. Census 2000

TABLE 2-3  
POPULATION BY RACE

	1970		1980		1990		2000	
	#	%	#	%	#	%	#	%
White	1244	98.6	1717	98.2	1817	99	2585	96.9
Black	17	1.2	20	1.1	9	0.5	39	1.5
Other	11	1.1	6	8	0.4	0	44	1.6

Source: U.S. Census 2000

TABLE 2-4  
HOUSEHOLDS & HOUSEHOLD SIZE

Year	Persons in Households	Households	Persons per Household
1960	1036	343	3.02
1970	1262	421	2.99
1980	1748	648	2.70
1990	1834	713	2.57
2000	2668	981	2.72

Source: U.S. Census 2000

The 2000 Census reported the population of Middletown increased 834 persons to 2,668 persons. Of the 2000 Census count of 981 households, approximately 64% of these households were married couple households with 24% of the households in non-family status. The remaining 12% were accounted for by single parent families, three quarters of this number being headed by a female householder.

The number of households increased with the population between 1960 and 1990; however the average household size decreased. In 1960, there was an average of 3.0 persons per household which decreased to 2.57 persons per household in 1990. This was due partly to the rise of non-family households, single parent households, single person households and smaller family size. Between 1990 and 2000 this trend reversed, with the average persons per household rising to 2.72.

### Housing Characteristics

Of the total 1,540 dwelling units within the Town of Middletown, the predominate housing type is the single-family detached house with approximately 70% of the dwelling units in this category. Middletown does, however, have a significant mix of other dwelling types with apartments, townhouses and duplexes. The 2000 Census indicated there were two mobile homes; however, there is presently only one known occupancy of a mobile home within Town limits.

Nearly 18% of the housing in Middletown was built before 1940. Generally, structures over 50 years old can qualify as historic buildings provided other criteria are met. Since 1940, the largest increase in housing units have occurred between 1993 and the present when over 850 new housing units have been built.

## Chapter 3

### NATURAL FEATURES/SENSITIVE ENVIRONMENTAL AREAS

The purpose of the Natural Features/Sensitive Environmental Areas chapter is to identify those physical characteristics, natural resources and sensitive areas existing within the Middletown area and to formulate policies and proposals to protect them. The Economic Growth, Resource Protection and Planning Act of 1992, amended Article 66B of the Code of Maryland to require local jurisdictions to incorporate a sensitive areas element into their plans and to adopt corresponding implementing regulations.

#### Background Information

The use and intensity of development on land is often a function of the land itself. Physical characteristics of land such as steep slopes, floodplains and wetlands help determine the pattern of development. Middletown is fortunate to have physical characteristics that have minimal constraints on development. However, the variation of relief and physical features require careful development design in order to protect and enhance the property. Some physical features such as wetlands and woodlands serve an important ecological function and, therefore, should be protected from development. Other features such as floodplains should be protected from development due to the potential hazards from natural disasters. Some physical features can influence what land use types are appropriate for an area of Town. The purposes of this chapter will be to provide basic background information; identify constraints to development; identify issues and make proposals.

Topography/Steep Slopes: The Town of Middletown is centrally located in the Middletown Valley which is best described as an inter-mountain area of steeply, rolling land, narrow streams and rapid fall from north to south. The fall is about 14 ft. per mile (Catoctin Creek) or about five times that for the Frederick Valley. Surrounding the Middletown Valley on three sides are the Catoctin and South Mountains with elevations over 1,700 ft. above sea level.

The land within the corporate limits is rolling with elevations from 430 ft. along Catoctin Creek in the south west part of Town to 660 ft. above sea level, near Middletown High School in the northeast part of Town. There are several large areas on the east side of Town both north and south of Main Street which are relatively level.

The steepest slopes in Middletown occur in the stream valley areas. Because of the proximity to streams, protection of steep slopes as a sensitive area is extremely important. Slopes provide the environment for soil and pollutants to move into the stream system very quickly and at great speeds which can increase erosion and increase the dangers of flooding to human life and property values. Protection of steep slopes along the stream valley is the first step in protecting water quality. Steep slopes with undisturbed vegetative cover slows runoff, filters sediment and can provide cooler streams by the presence of shade. In addition, the steep slopes along the

floodplains provide a natural area for the Town to obtain the benefits of re-forestation. Reforestation along steep slopes also provides aesthetically pleasing areas and habitats for the local plant and animal populations.

The general slopes in Middletown are in the direction of two areas, Catoctin Creek on the west and Cone Branch which flows through the eastern-central portion of Town. The easternmost area of Town slopes to Hollow Creek which is a tributary of Cone Branch. There are two tributaries to Catoctin Creek - Wiles Branch and Tanners Branch, which parallels Main Street and Washington Street and runs from Main Alley to Walnut Street. Most of the undeveloped land in and around Middletown is open with very little tree cover due to the existing farming in the area. Most of the tree cover is found along the stream valleys.

### Floodplains & Wetlands

Identification of floodplain/wetlands is important since these are areas that perform important functions such as water recharge, diversified habitat for plants and wildlife, and storage and channeling of water during high stream flow. Floodplains are defined in several ways and two types of floodplains are used in the Middletown area; the one hundred year floodplain and the annual floodplains. One hundred year floodplains are defined as those floods that could occur once in 100 years on average. One hundred year floodplains are delineated by the Federal Emergency Management Agency (FEMA) for inclusion in their flood insurance program. Middletown adopted the State Model Floodplain Ordinance on April 13, 1992. The annual floodplain is the area which includes soils identified in the Soil Conservation Survey as soils of generally wet land which provides natural water retention.

The four major streams through Middletown all have floodplains. Catoctin Creek and Hollow Creek have been categorized as having a 100 year floodplain. One hundred year floodplain information also exists for Cone Branch and Wiles Branch up to the southern limits of Middletown. All three streams also have associated floodplain soils.

Wetlands are those areas which are inundated with water for a significant part of the year and/or the plant species and soils are typical of those found in wet areas. Frederick County's wetlands are non-tidal wetlands. Non-tidal wetlands perform an important function in controlling floods, supporting wildlife and filtering runoff before it enters the groundwater system. Non-tidal wetlands can also retain water like sponges through the dry times of year.

There are six major areas in Middletown which have been identified as wetlands. These include: two areas along Wiles Creek both north and south of West Main Street; an area along Cone Branch on the north side of Town, west of Coblenz Road; an area south of East Main Street, along Hollow Creek, areas throughout the Glenbrook Subdivision and Foxfield at Hollow Road and Layla Drive. See Figure 3-1 for wetland and floodplain locations.

It is important to note that additional wetlands may be identified through the development review process as specific properties develop and engineering is undertaken.

Soils: The soils in and around Middletown are classified as prime soils. These are the lands best suited to producing food, feed forage, and fiber. The predominate soil types in Middletown are from the Myersville and Fauquier soil series which makes up over 90% of the soil in Middletown. Both the Fauquier and the Myersville Fauquier soils are described as deep, well-drained and highly productive. These soils are commonly associated with the Catoctin soils. There are four areas in Middletown with soils which are classified as floodplain soils and these naturally are along the five streams running through Town: Catoctin Creek; Cone Branch; Wiles Branch; Hollow Creek; and Tanner's Branch. Soils in the Middletown area have been mapped and categorized in the Frederick County Soil Survey according to productivity, resistance to erosion and other factors. A breakdown of these soils indicate that nearly 70% of the land in Middletown is in Class I and II soils which are the two best agricultural soil types.

Streams & Buffers: Streams and buffers are valuable to people and vital to our natural resources. They provide drinking water, recreational fishing, water for irrigation, and habitat for local plant and animal species. The streams which flow through Middletown are part of the larger network of streams which flow to the Potomac River and to the Chesapeake Bay. Protection of stream quality on the local level is important in preserving not only the local resource but the regional resources such as crabs, clams and rockfish. Stream buffers are essential to preserving stream quality. As stated earlier, vegetative buffers provide soil stabilization, filtration of sediment and shading of the stream which maintains stream quality.

The primary waterbody in the Middletown Region is Catoctin Creek which is a winding stream with a 30 year average flow of 72.3 cubic feet per second. In comparison, the Monocacy River in the Frederick Region has a 50 year average flow of 931 cubic feet per second. Although Catoctin Creek is a significant perennial stream, historical records show a low flow of zero during the drought of 1966.

The Catoctin Creek watershed contains 121 square miles and drains 78% of the Middletown Valley. All of those areas around Middletown are within the Catoctin Creek watershed with only those areas in the very southern portion of the Middletown Valley not in this watershed. Catoctin Creek and Hollow Creek serve as the Town discharge for sewage effluent. Catoctin Creek also serves as a recreational resource. Tributaries of Catoctin Creek include Middle Creek, Bolivar Branch, Frostown Branch, Little Catoctin Creek, Hawbottom Branch, Wiles Branch, Tanner's Branch, Cone Branch, and Hollow Creek.

Little Catoctin Creek meets Catoctin Creek just west of Middletown. This area has been proposed in the past for a possible dam site. However, no further studies have been done on this proposal since 1981. The 1969 Frederick County Water & Sewerage Plan included a recommendation for a reservoir on Little Catoctin Creek. However, the 2008 Frederick County Water and Sewerage Plan does not contain a recommendation for a reservoir on Little Catoctin Creek.

Groundwater: The other important water source in the Middletown Valley is groundwater. The Middletown water supply comes from a series of 4 springs and 20 wells located on the western ridge of Catoctin Mountain near Coxey Brown Road. These springs and wells are carried by a pipe to the Town's water reservoir off Hollow Road. It should be noted that soils of the valley

are generally of low porosity and, therefore, unable to store quantities of water large enough to adequately feed the streams during long extended periods of drought. Well yields in the entire Region range from 1 to 225 gallons per minute. The two rock formations, the Catoctin Metabasalt and Mica Schist, have average well yields of 14 and 7 gallons per minute respectively. The Catoctin Metabasalt rock formation is in Hydrologic Unit II which is an average water bearing rock formation. The Mica Schist is in Hydrologic Unit III which is a poor water bearing rock formation.

Habitats of Threatened & Endangered Species: The Maryland Natural Heritage Program has identified a number of rare plant and animal species in Frederick County. Rare species which occur in Frederick County are often found in wetlands and rich forest lands. Some of the rare species are on the State's official threatened and endangered species list, and others are proposed to be added to it. According to the Maryland Department of Natural Resources, there are no known threatened or endangered plant or wildlife species in the Middletown area.

Geology & Mineral Resources: Geologic information is important in several ways. First, rock structure influences land form and drainage pattern. Secondly, rock structure also determines groundwater availability. Geology also determines the available resources for mining purposes.

The Middletown Valley is part of the Blue Ridge Province which is one of two major physiographic regions in Frederick County. There are two predominate geologic strata in and around the Town of Middletown. The Catoctin Metabasalt formation (MB) comprises 80% of the sub-strata north of Middletown and the Mica Schist comprises 80% of the sub-strata south of Middletown. In addition, there is a narrow band of Rhyolite tuff which cuts through the center of Middletown.

Many geologic resources in Frederick County are currently mined, although none are located in the Middletown Region. Limestone, shale, and stone aggregate are mined in the Frederick Valley, east of Catoctin Mountain. No mineral resources in the Middletown Region have been identified as having commercial value in the Frederick County Comprehensive Plan.

### Natural Features Issues

As development interest increases in Middletown and the value of natural resources becomes more widely known, the potential for conflict will arise. One of the purposes of this plan is to identify issues which may need to be addressed. Some of the natural resource issues in Middletown are as follows:

1. The primary tools for protecting natural resources are the Open Space Zoning District and specific restrictions applied during the subdivision review process. One of the purposes of the Open Space District is to preserve natural resources, and prevent erosion and limit development on excessive slopes and floodplains. The Open Space District up to this point has been used primarily for large institutional and park properties. The Open Space District could also be applied more to areas which meet specific criteria for floodplain and steep slopes.

2. The Town of Middletown relies on ground water resources in the Catoctin Mountains east of Middletown. As additional areas are considered for development, large areas should be reserved for future water needs. Identification of these areas would occur through the planning process and review of the water and sewer plan.
3. The Town has adopted a wellhead protection policy to protect our water resources. This policy needs to be further supported by the County strengthening its wellhead protection program as most of our resources exist outside of the municipal boundaries, in the County. The Town has acquired land around its wells and springs outside of the town limits to protect its groundwater resources, however this is a costly endeavor and a stronger county wellhead protection ordinance is needed.
4. New forest conservation laws have been enacted by the State which require implementation by the Town.
5. The Town enacted the State required floodplain regulations which cover FEMA 100 year floodplains. There are additional areas in Town which are floodplain soils such as along Cone Branch. Additional regulations should be enacted to protect this area.
6. To the extent possible, the natural resource areas such as stream valleys should be incorporated into recreational uses and as areas for reforestation to meet forestry regulations.
7. The water quality standards for sewage discharge to Catoctin Creek and Hollow Creek need to be identified to determine the constraints to development potential.
8. The Environmental Protection Agency approved on July 31, 2009, a Total Maximum Daily Load (TMDL) for sediment in the Catoctin Creek Watershed to reduce sediment runoff and discharges into Catoctin Creek and its tributaries. This TMDL could have future quantitative sediment loading limits or caps for all land uses in the Catoctin watershed.

#### Natural Features, Objectives & Policies

Two of the goals of the Middletown Comprehensive Plan are to: Provide for a Quality Living Environment, and Protection of Important Natural Resources and Landmarks. Certainly both of these goals are related to any policies regarding the natural environment. More specific objectives for these goals are as follows:

- A. Protect and Conserve Water Resources



1. The Town shall review development plans outside municipal limits which may impact Town water sources. The Town will keep the County informed of Town's interest in the Middletown Watershed and Catoctin Creek Watershed as an area of critical concern to the Town to protect water resources.
2. The Town shall require environmental waterway easements or designation of open space setbacks along all perennial streams for the purpose of natural resource protection and potential recreational use during the development review process.
3. The Town shall continue to encourage use of water conservation practices through various techniques and devices to promote on-site groundwater recharge to lessen the overall demand on the aquifer.
4. The Town shall regulate development in the floodplain according to the adopted Town floodplain regulations.

B. Encourage Compatibility with Man-Made Development & Natural Environment

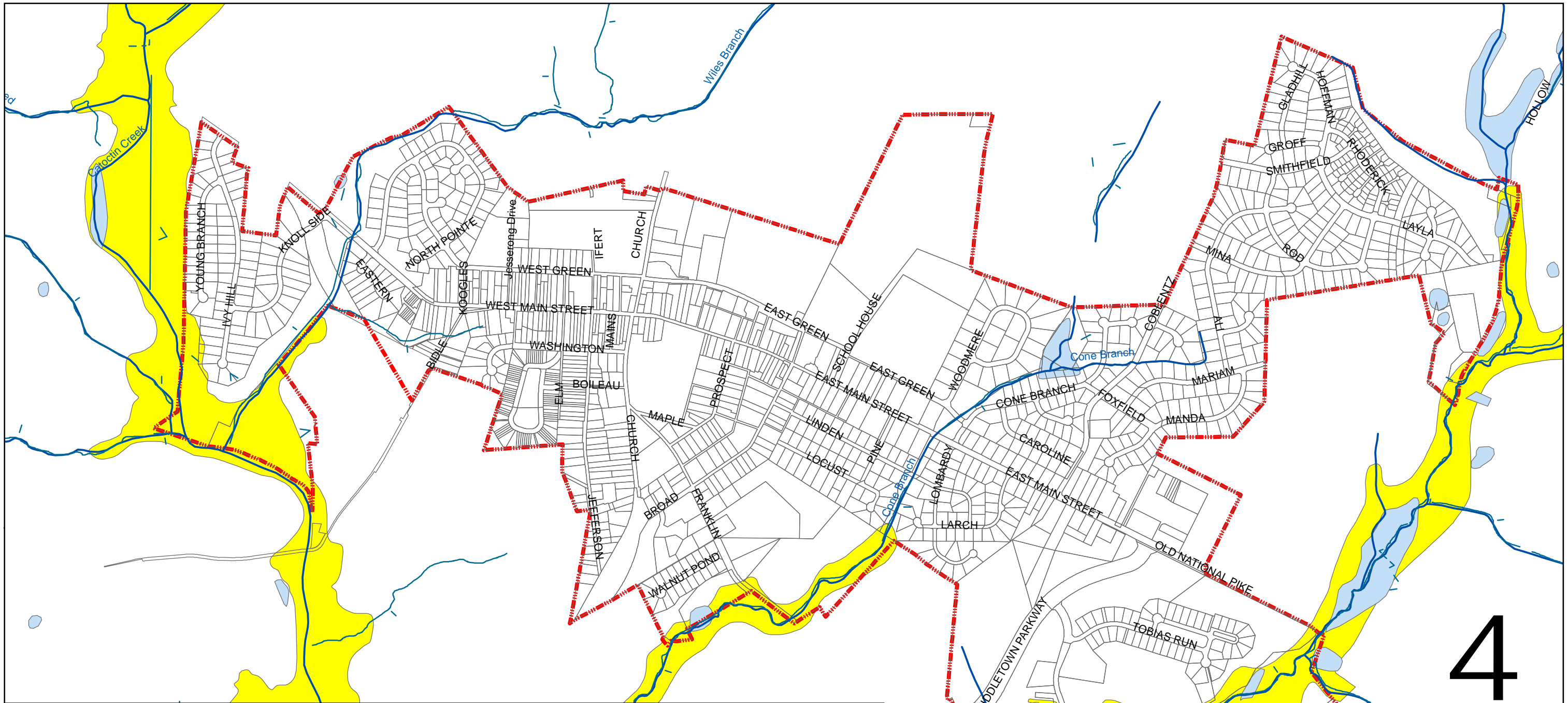
1. New development shall minimize the extent of grading and tree cutting as much as possible.
2. Development plans for new development shall indicate the extent of all natural features in order for the Planning Commission to consider the impact.
3. Annexation policies should encourage continued agricultural uses until development occurs.
4. Town shall encourage an agricultural or environmental buffer around the corporate limits.

Natural Features/Sensitive Areas Implementation Recommendations

In order to carry out the goals and policies of the Natural Features/ Sensitive Areas element, the following actions are proposed:

1. Town shall restrict development along all creeks and streams and require a minimum 100 ft. buffer from each bank. This shall be carried out through site plan review by the Planning Commission and adoption of an amendment to the Town Zoning and Subdivision Regulations. The buffer shall include the 100-year floodplain, adjacent non-tidal wetlands, annual floodplain soils, adjacent steep slopes, and in the absence of any of those sensitive areas, a setback measured from the centerline of the stream channel.
2. No development shall be allowed on floodplain soils, or on non-tidal wetlands.

3. Steep slopes along streams shall be priority areas for reforestation under the Middletown Forest Resource Ordinance. This shall be implemented by identification of reforestation areas.
4. The zoning ordinance and subdivision regulations shall be examined for other possible protections for steeply sloped areas.



4

# Floodplain and Wetlands Map Middletown, Maryland

3/10/2010

1 inch = 1,000 feet



**Legend**

- Streams
- Parcels
- Town Boundary
- Wetlands
- Floodplain

Source: MD Dept. of Natural Resources 1988-1995 and FEMA FIRM Maps Effective 9/19/2007; U.S. Fish & Wildlife Service, National Wetlands Inventory, 2002



**Figure 3-1**

## Chapter 4 LAND USE

Since one of the major purposes of the Comprehensive Plan is to guide future decision making on development, it is important to look at past and existing patterns of land use as background information for future land uses. Existing land uses will, to a large extent, determine future land use decisions.

Middletown has developed similarly to many small towns with a mixture of residential and commercial development along the main intersecting streets in Town (Main Street, Church Street, and Jefferson Street). Most of the commercial activity is concentrated along West Main Street from Church Street to Elm Street which is considered the central business district (CBD). Residential development predominated on the edges of the CBD and on the surrounding parallel streets to Main and Church Streets. More recent development has included residential on the east and west edge of Town, a County park to the north, and the purchase of Remsberg Park land to the south for future ballfields and other recreational activities.

While Middletown is the focus for development in the Middletown Valley, substantial development has occurred beyond the limits of the Town both east and west. To the east is the Fountaindale Subdivision and commercial development along US 40A. To the west are the Brookridge North Subdivision, West Middletown Estates and Picnic Woods Estates. The entire Middletown Valley has continued to be a desirable area for residential development, often conflicting with the existing agricultural activities.

### Existing Land Use

The existing land use in the Town of Middletown shows the predominate land use is residential with 51.1% in this category. This compares with 26% of the land in residential use in 1969. The majority of the residential use is single-family dwellings which are located throughout the entire Town. Multi-family residential and townhouse development is located in several specific locations. The Chesterbrook Apartments are located at the south end of Broad Street in Middletown with other multi-family development located closer to the center of Town. Townhouse developments are located in two areas on the west side of Town and include Jefferson Village and Creamery Row, and on the east side of Town in the Glenbrook Planned Unit Development (PUD).

Commercial development accounts for 3.9% of the land use in Middletown compared to 2.8% in 1969. Primary locations of commercial activity include the downtown area along Main and Church Streets and the Valley Shopping Center located on the eastern edge of Town. Commercial uses in the downtown area are interspersed with residential and institutional uses, however, and there are specific pockets of separate commercial areas. The commercial area near the intersection of Church and Main Streets extends along Main Street from Church Street to Summers Drive and along Church Street from Green to Washington Streets. On the western edge of Town commercial uses are located near Main Street and Walnut Street. Other spots of commercial activity are located at the intersection of Boileau Drive and Church Street and on East Main Street and Broad Street.

Public and semi-public land accounts for 14.2% of the land area in Middletown. This category includes churches, cemeteries, and other institutional or non-profit land holdings. The percentage of

public and semi-public land has decreased in Middletown since 1969. Open space/recreation and parkland is approximately 30.8% of the land in Middletown as compared to 1% in 1969. This category includes land specifically dedicated or reserved for open space, as well as undeveloped land which has the potential for development. Undeveloped land includes the Coblenz property on East Green Street, land owned by the Fire Department on Franklin Street, properties fronting Middletown Parkway, and the Dowd property east of the Town Center Plaza.

The Existing Land use Map, Figure 4-1, following this section shows the existing land use as of 2009.

### Zoning

The first official Middletown Zoning Ordinance was adopted in 1969. It outlined different zoning districts and provided development regulations for those districts. Since that time, the Zoning Ordinance and Zoning Map have gone through numerous amendments to further refine and reflect the objectives of the Town. For example, provisions for the Industrial zone were amended in 1985 changing the zoning to the Service Commercial/Light Manufacturing District which included both map changes and text changes. Another example was the addition of the R-20 Residential District in 1988 which provided a transition zone from the Town's denser development to the County's less dense residential development.

There are 8 zoning districts in use in Middletown which encompass all the land area in Town. There are four residential districts, three commercial districts, and an open space district. The largest zoning district in terms of land area is the OS Open Space District which includes the Hollow Creek Golf Course. The second largest zoning district in terms of land area is the R-1 Residential zone which includes approximately 289 acres (27% of the total land area in Town). An overlay district was added to the zoning code in 2008 and is known as the Neo-Traditional Residential Overlay District. This district can be overlain only on the R-3 zoning district and provides for smaller setbacks and the inclusion of alleys with greater design guidelines than the other residential districts. The Current Zoning Map, Figure 4-2, following this section shows the existing zoning as of 2009.

It is important to note the difference in land use and zoning. A particular zoning on a property can provide for different land uses and in some cases the existing land use is non-conforming and would not be permitted under present regulations. A non-conforming use is one which existed prior to the adoption of the specific regulation. An example of this would be Ingall's Lumber Supply which is zoned R-1 Residential. Other examples of the difference between land use and zoning would be the residential development along West Main Street in the areas zoned Town Commercial.

Table 4-1 shows the eight zoning districts in Town with the amount of developed and undeveloped acreage in each category. This table includes acreage of some parcels which are developed but not to the fullest extent allowed by the zoning regulations.

TABLE 4-1

MIDDLETOWN, MARYLAND  
DEVELOPED & UNDEVELOPED ACREAGE BY ZONING DISTRICT

Zoning District	Acres Developed	Acres Percentage	Undeveloped	Percentage	Total
Open Space	0	0%	436	100%	436
R-20 Residential	114	88%	15	12%	129
R-1 Residential	273	94%	16	6%	289
R-2 Residential	63	84%	12	16%	75
R-3 Residential + NTR	36	57%	27	43%	63
Town Commercial	27	100%	0	0%	27
General Commercial	18	56%	14	44%	32
Service Commercial/ Light Manufacturing	4	100%	0	0%	4
Total Acres	535	51%	520	49%	1055

Source: Frederick County Planning Department and Middletown Planning Staff 2009

Subdivision Activity

History

Major subdivision activity took place in the late 1970's with the development of the Woodmere Subdivision and the Jefferson Village Subdivision. However, by the 1980's, subdivision activity was minimal due in part to a sewer moratorium in the early 1980's. This restraint on development continued to have an impact on Town growth thru the 1980's although several properties proposed annexation. During the years 1982 to 1989, there were a total of 57 lots created averaging 7 new lots per year. By 1990, subdivision activity increased due to three large developments which had been in the planning stages since the late 1980's. From 1990-2000 subdivision activity averaged 29 new lots per year. In addition, approved but not recorded lots accounted for another 595 lots. In the 1990's, the average lot size generally increased from the 1980's except for 1992 which included several small parcels in the older downtown area. In the late 1990's, subdivision activity declined while the town constructed the new east end sewerage facility and upgraded its water distribution facilities. The 400,000 gallon water storage tank was erected to the rear of the school complex. The distribution lines were pressure zoned throughout town while new wells were added to the system and improvements were made in the watershed area. With these improvements in place, a huge increase in subdivision activity began in 2000, as can be seen in Table 4-2.

Table 4-2  
FINAL APPROVED SUBDIVISION PLATS: 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
# of Lots	45	106	237	120	0	0	60	0	2	0
Avg. Lot Size (acres)	0.5	0.3	0.3	0.2			0.2		0.3	

Source: Frederick County Planning Department 2000 and Middletown Planning Staff 2009

Due to a state imposed moratorium on development approvals in 2003 due to water allocation and use issues, the adoption of the Residential Growth Policy, and the will of the town board, there has been little subdivision activity in the past six years.

Site Plans

Whenever a new commercial or industrial use, or a change of use, is proposed, a site plan for development of the property must be approved by the Middletown Planning Commission, unless criteria are met in which it can then be approved by the Zoning Administrator. A site plan may include road access, parking, lighting, signage, stormwater management, landscaping and trash dumpsters. The purpose of the site plan is to coordinate permitted activities on the site and to minimize the impact the proposed use will have on neighboring properties. Since 1983, 41 site plans have been approved by the Middletown Planning Commission. Most of the 41 approvals involved existing buildings in the downtown area either on Main Street or Church Street. Twenty-two of the approvals were for properties on Main Street and 11 site plans were for properties on Church Street. Major site plan approvals include the 47,000 sq.ft. Town Center Plaza (Valley Shopping Center) which was approved in 1985; 3,200 sq.ft. office space in the Church Street Business Center; 4,500 sq.ft. for renovation and addition to Granger’s Mutual Insurance Company; 1,800 sq. ft LDS Convenience Store, and 3,908 sq.ft. for a Middletown Branch library.

Annexations

Another major aspect of development is the annexation of land into the Town. Annexations increase the size of the corporate limits typically through landowner petition. All annexations require a public hearing process and referral to the County and State for comment. The County must review the annexation in light of the current county zoning classification. If the proposed annexation is inconsistent with the current county zoning, then the County must decide whether to grant a waiver of zoning consistency. If the County does not grant the waiver then the five-year rule applies in which the municipality must wait five years before the new zoning classification is applied. When the zoning change is from one residential zone to another, the five-year rule will not kick in unless the density change of the proposed zoning is denser by 50 percent or greater. Since 1972, there has been over 691 acres of land annexed into Middletown and 33 acres de-annexed from Middletown. The annexed area has more than doubled the size of the corporate limits of Middletown.

The changes to the zoning district acreage as a result of annexation are as follows:

TABLE 4-3  
CHANGES IN ZONING AS A RESULT OF ANNEXATION

Open Space	+105 acres
R-20 Residential	+168 acres
R-1 Residential	+407 acres
R-2 Residential	-30 acres
R-3 Residential	+21 acres
GC General Commercial	+11 acres

Source: Frederick County Planning Dept. and Middletown Planning Staff 2009

TABLE 4-4  
ANNEXATIONS: 1972-2009

Approved Year	Name	Acreage	Location	Zoning
1972	Woodmere South	5	S Woodmere S. Subd.	R-1
1973	Airview/Valley Center	48	N & S side Main St.	R-1, GC
1973	Board of Education	50	Green St.	O-S
1979	De-Annexation Middletown South	-33	W MD 17, S Town	R-2
1988	Egon Elsner	.776	Val-E-Drive (Jesserong Dr.)	R-1
1989	Lancaster	3	Washington St.	R-2
1989	Valley Land Investors	72	S US 40-A, W Town	R-1
1990	Middletown Sewer Plant	16	S US 40-A, S Town	O-S
1991	Coblentz Ltd Ptnrshp	30	E Coblentz RD	R-20
1991	Glenbrook	289	S US 40-A, E Town	R-1, R-3, GC
1992	Routzahn	10	N E. Main St., W Coblentz Rd	R-1
1992	Coblentz Ltd Ptnrshp	14	W Coblentz Rd	R-20
1993	J.H. Remsberg	13	W Holter Rd	R-1
1994	Cone Branch pump stn	.5		OS
1997	Coblentz Ltd Ptnrshp	118	E. Coblentz Rd	R-20
2000	Johnson (Foxhole)	6	E. Coblentz Rd	R-20
2000	Well Fields (4 Parcels)	16	W. Hollow Rd	OS
2002	Fred. Co. Public Schools	17	Franklin St.	OS
2002	Middletown Vol. Fire Dept.	4	Franklin St.	OS

Source: Frederick County Planning Department and Middletown Planning Staff 2009

The location of annexed and de-annexed land is shown on Figure 4-3.

### Historic Sites

The historical past of Middletown is easily recognized even to the casual observer in both the Town and the surrounding Region. This evidence of the past is seen throughout Frederick County, but



especially in Middletown with its early development as a turnpike town. The 1990 Frederick County Comprehensive Plan recognized the importance of the historic past and in 1991, the County began a four year project to complete a county-wide historic sites inventory. This project began in the late 1970's, but lapsed in the early 1980's because of loss of funds. The survey was resumed in February 1991 with the aid of a matching grant from the Maryland Historical Trust, the state historic preservation agency.

The benefits of historic preservation are both tangible and intangible. The tangible benefits include: construction related jobs, increased tourism, and returning vacant structures to the tax rolls. The intangible benefits include a greater appreciation of historic heritage and stability of the neighborhood. Among the sites recognized in and around the Middletown corporate limits during the survey are as follows:

Airview Survey District (F-4-38): Airview, an early 20th century private real estate development at the east end of Middletown, has large residences in the vernacular, Queen Anne, Colonial Revival, and bungalow styles built about 1898-1930. Among the houses is an outstanding example of the Queen Anne style, the George Gaver House (1898-99), at 701 E. Main Street, and the first documented concrete block house in Frederick County, "Gray Haven" (1906), 709 East Main Street. The development was a direct result of the opening of the 1896 trolley line which linked Middletown and Frederick.

Middletown Survey District (F-4-39): Middletown's Survey District is centered on the intersection of Main Street and Church Street and includes the original 1767 planned town west of the intersection, the early 19th Century additions of Keller, Wise, and Grove, and the late 19th and early 20th Century extensions of East Main Street and the Prospect Street development. The later additions were partly influenced by the 1896 Frederick and Middletown Electric Railway and other factors such as the building of a school with necessary street access. The architecture of the different sections is clearly distinguishable, with the log, stone, and brick buildings of the pre-1850 period concentrated in the original section and along Jefferson Street through Keller's Addition. Late 19th Century commercial buildings are clustered along Main Street in the original section. The eclectic residential styles of the 1890's through the 1930's are apparent in the East Main Street and Prospect Street areas. Middletown is an excellent representative of turnpike town development, with the added influence of the electric trolley, which opened the Middletown Region to wider contact with other parts of the County and the larger interstate region. Middletown is also significant for its role as a hospital center after the 1862 Battles of South Mountain and Antietam and as the 18th and 19th Century religious center of the middle and upper Middletown Valley.

Spoolsville Survey District (F-4-44): Spoolsville was a rural industrial community established about 1800 around the Bowlus Flour Mill (demolished) on Little Catocin Creek, west of Middletown. It presently includes mostly residential buildings of log, stone, brick, and frame, built from about 1800-1870. Among the 24 contributing structures are two remnants of the commercial life of the community which developed from the mill industry and the location of the village on the busy National Road, a blacksmith shop and a wagon shop. The principal dwellings are the Bowlus Mill House, a circa 1800 stone house with fine interior craftsmanship in the German vernacular style evident in its trim and mantels, and the Adam Koogler House, a brick house of about 1830-40 on the old National Road, which is associated with the wagon shop. The district also includes several late 19th Century agricultural buildings and a circa 1920 steel truss bridge. This 1920 steel truss bridge

has been removed and replaced with a more modern bridge with larger capacity. The old bridge has been relocated to the Glenbrook subdivision for use as a bridge in the golf cart path, stream crossing.

J. Harmon Remsberg Farmstead (F-4-23)

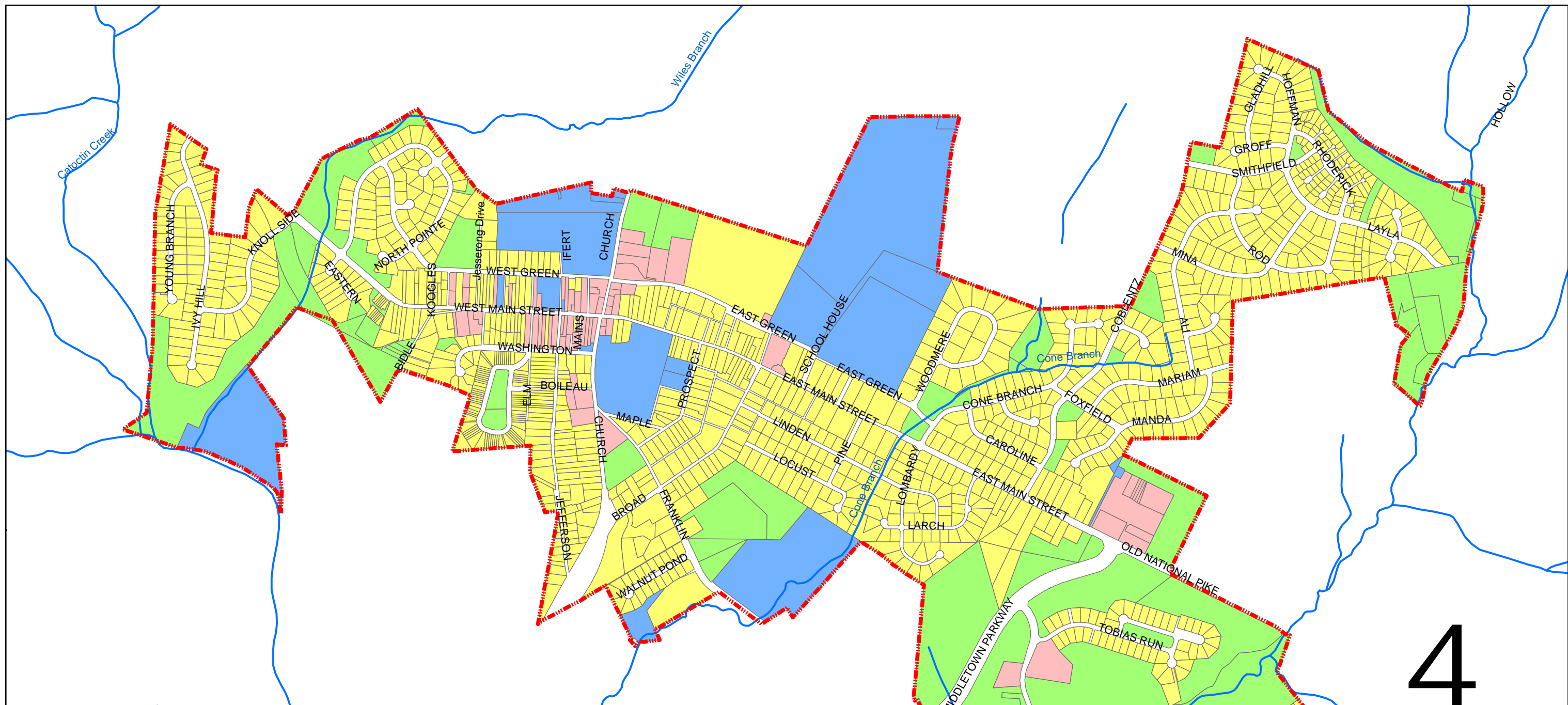
The Remsberg Farmstead is located on both sides of Holter Road, just outside the southeastern town limit of Middletown. The domestic group consists of a circa 1857 brick dwelling with a two-bay main section and a side wing with a two-story porch. The domestic outbuildings include a deteriorated brick smokehouse, a frame summer kitchen, two chicken houses, and other structures. On the north side of Holter Road is the agricultural group centered on a large frame bank barn of about the same date as the house. The bank barn was burned by arsonists in July 1992 after the survey documentation was completed. Other agricultural buildings include a circa 1923 concrete block dairy barn, a wagon shed/corn crib, a hog barn and two silos. The farmstead represents the agricultural development of Frederick County from principally grain-producing farms in the mid-19th Century to the dairy operations of the 20th Century.

In 2007, the Town Code was modified to now require a demolition site plan be reviewed and approved by the Middletown Planning Commission along with the demolition permit application. Although the new regulations represent an increase in public review, they do not prohibit the demolition of a building be it historic or otherwise. Increased development pressure can be expected to be a threat to historic structures and sites as economic considerations may encourage demolition rather than re-use. (See Section 17.32.160, Middletown Municipal Code)

Historic Sites and Survey District Map – Figure 4-4

Protection of Historic Structures







At a Public Hearing on January 19, 2000 scheduled to review proposals for the creation of historic district(s) in Middletown, negative response from citizens present caused the Town Board to drop the matter and look for alternative ways to protect historic areas and structures by Zoning Ordinances, Building Codes and the use of a conservation district.



4

# Existing Landuse Map Middletown, Maryland 3/10/2010

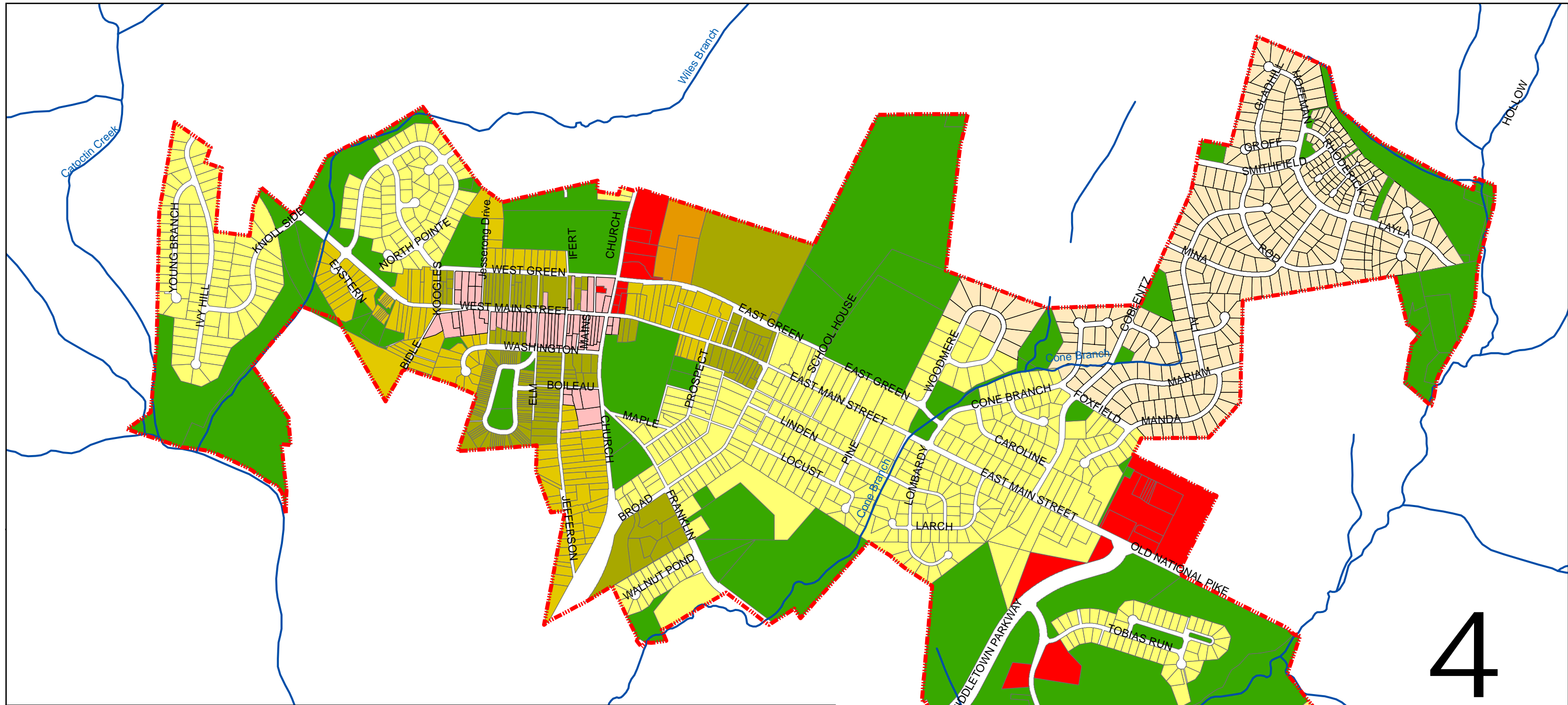
**Legend**

-  Streams
-  Town Boundary
- Landuse**
-  Residential
-  Institutional
-  Commerical
-  Open Space



**Figure 4-1**

x:\projects\comp plan\existing\_landuse.mxd



4

# 2009 Zoning Map Middletown, Maryland

3/10/2010

Zoning prior to 2010 Comprehensive Plan adoption effective 3/28/2010.

1 inch = 1,000 feet



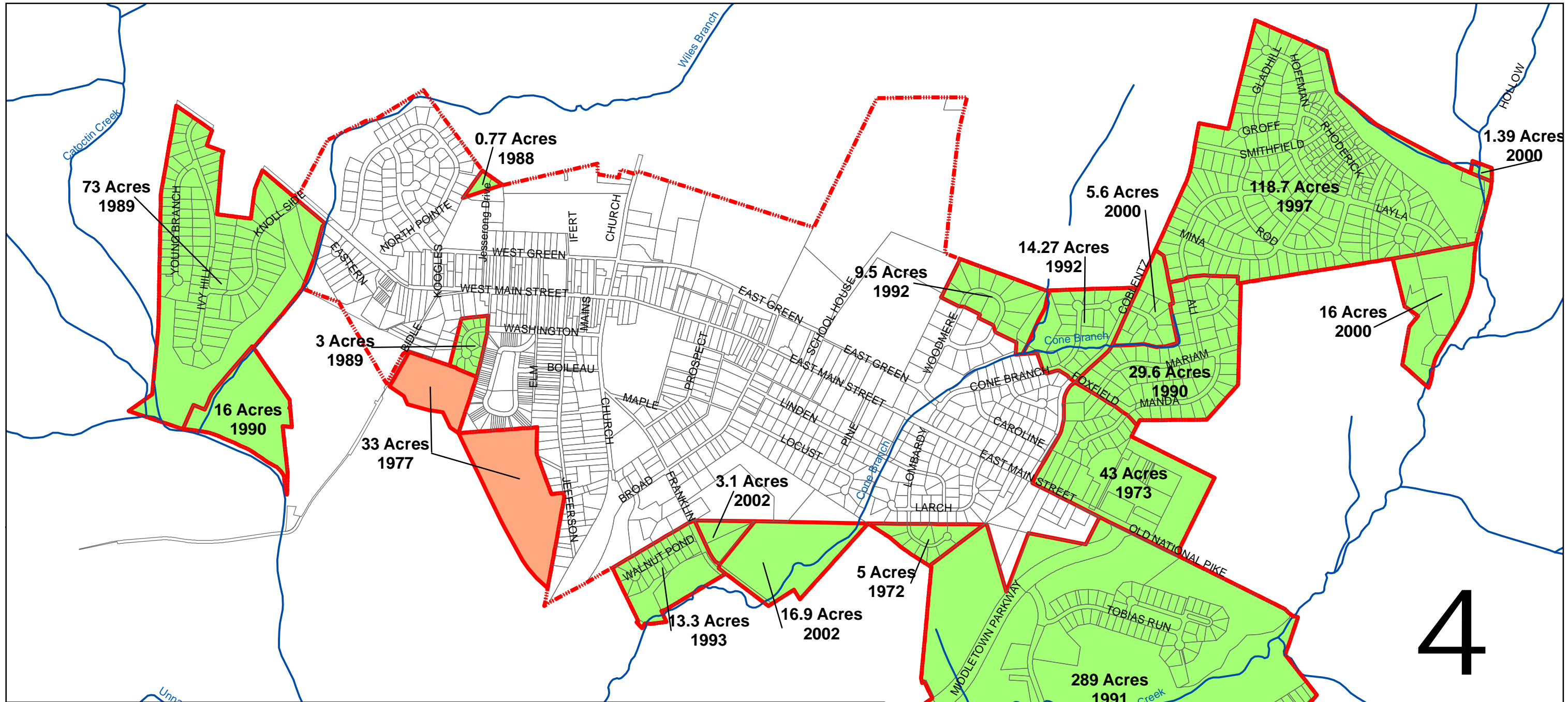
## Legend

- Streams
- Town Boundary
- General Commercial
- Neo-Traditional Res./R-3
- Open Space
- R-1 Residential
- R-2-Residential
- R-20-Residential
- R-3-Residential
- Service Comm./Lt. Manu.
- Town Commercial



Figure 4-2










4

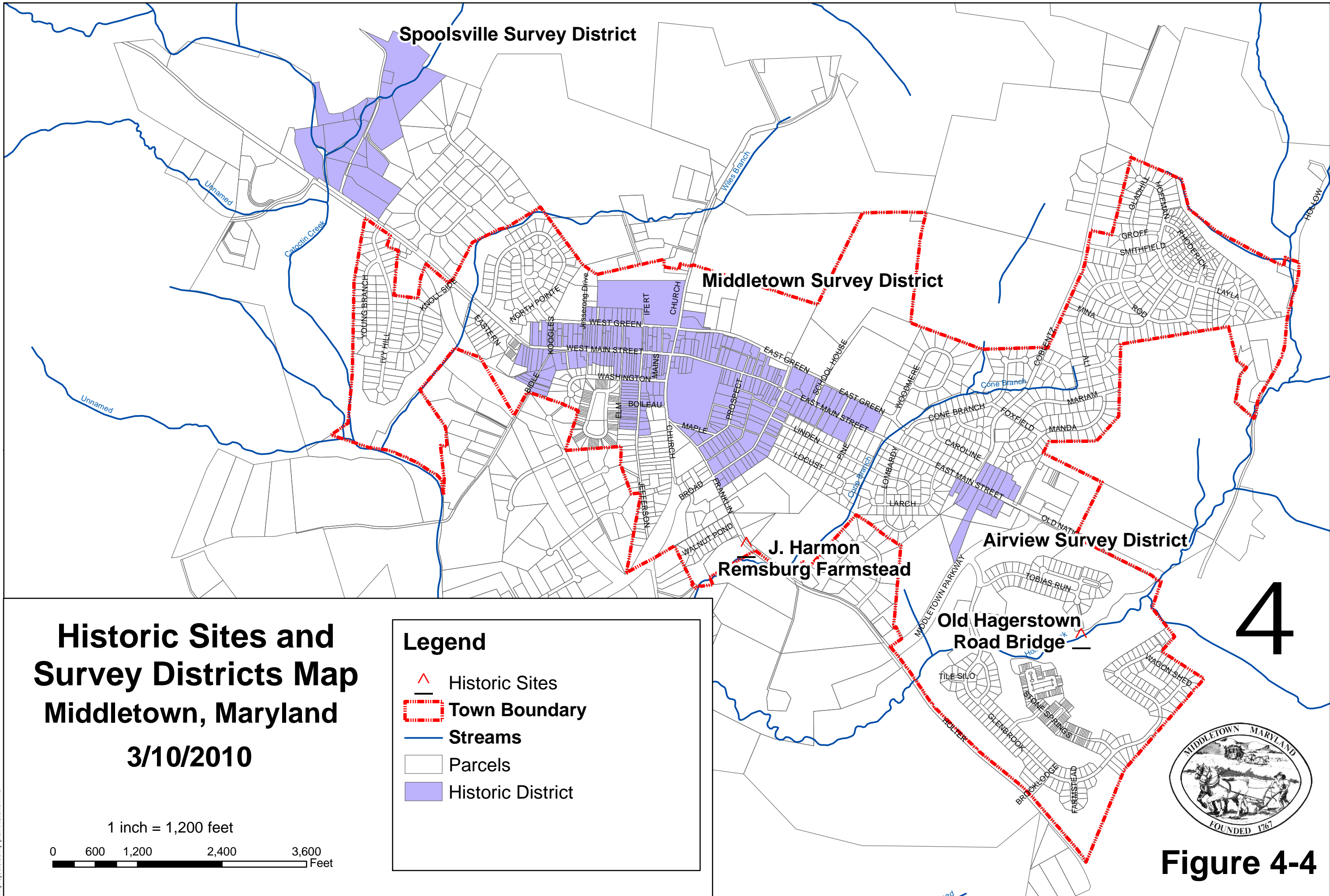
# Annexations Map Middletown, Maryland 3/10/2010

**Legend**

-  Town Boundary
-  Streams
-  Parcels
-  Annexation
-  Deannexation



**Figure 4-3**



x:\projects\comp plan\historic.mxd



## **Chapter 5 TRANSPORTATION**

The focus of the transportation plan is the movement of people and goods. The transportation system and the physical development of a community is inter-twined. In the case of Middletown, the name and very existence is due to its location between South Mountain and Braddock Mountain on the Old National Road. The need for additional roads and other forms of transportation increases as development occurs along the existing transportation routes.

The Old National Road, which became US 40-A, was one of the County's earliest toll roads. It created enough traffic to stimulate development of local trade centers and taverns or inns along its route. Farm to market routes developed as the population expanded. The expanding population also created the need for side roads and alleys in the Town itself. In addition to the importance of US 40-A, development in Middletown was also affected by the establishment of a trolley line. The trolley line resulted in the East Main Street extension and the Prospect's Addition Subdivision.

The purpose of this chapter is to inventory and analyze the existing transportation system. Towards this end, it will review the regional context of transportation, the existing local network, traffic counts, problem areas and issues related to transportation.

### Regional Context of the Transportation System

The transportation system in the Middletown Region contains both inter (outside the region) and intra-regional (within the region) transportation connections. Three inter-regional road connections are I-70, US 40 and US 40-Alternate; all are east-west connections from Frederick west to Hagerstown and beyond. The existence of these inter-regional routes is important due to the limited access outside the Middletown Region because of the mountains. This is a factor in evaluating transportation alternatives to improve traffic congestion. The oldest of the three, US 40-A, is Main Street in Middletown and is a two-lane road for its entire length where it splits from US 40. The newest of the three, I-70, was built in the late 1960's and now carries most of the through County east-west traffic. The predominate north-south route through the Middletown Region is MD Rt. 17 which is a two-lane State rural road which winds from Smithsburg in Washington County south to Brunswick. MD Rt. 17 is Church Street in Middletown and intersects with Main Street (US 40-A) in the center of Town. Other major north-south roads in the Region are Old Hagerstown Road, Old Middletown Road, Holter Road and Harmony Road. All the other roads in the Region are rural local roads or subdivision streets. See Figure 5-1 Roads by Jurisdiction.

### Local Road Network

The local road network in Middletown is predominately characterized by the relationship of the smaller streets to Main Street and to a lesser extent Church Street. The basic linear grid pattern with parallel streets is present in the Town street system but contains many interruptions which force traffic back to Main Street and Church Street. The street system has its origin in the

original layout of the Town with some of the original streets being Jefferson, Church, Elm, North (now Green) and South (now Washington) Streets.

About 350 ft. north of Main Street is Green Street which parallels Main Street. West Green Street is mostly open section (no curbs or gutters) and extends to the North Pointe subdivision, where it intersects with North Pointe Terrace, which intersects with West Main Street, opposite Eastern Circle. East Green Street has been upgraded with curb, gutter, sidewalk and turn lanes to the Middletown school complex and subsequently eastward, where it intersects with Cone Branch Drive.

The pavement width on West Green Street varies but has been improved in recent years to 20-40 feet from N. Church Street to North Pointe. The western end of Green Street also has some problems with vertical alignment which is being improved through development. One issue concerning Green Street is the lack of sidewalks, although some have been added through upgrades to the eastern section. This street serves the Middletown school complex and is heavily used by many school children.

South of Main Street are two main parallel roads which serve different parts of Town. On the west side of Town is Washington Street. This street extends from Church Street to its end in the Manor Ridge Subdivision. Both the pavement width and right-of-way varies along Washington Street. The other parallel road south of Main Street is Linden Boulevard. This street extends from Broad Street east to Larch Lane. Linden Boulevard primarily serves the Woodmere South Subdivision. Linden Boulevard is 38 ft. wide with a 50 ft. right-of-way.

The grid street pattern is much more pronounced on the older, west side of Town. The streets running from Green Street to West Main Street include Garage Drive, Jefferson Street, Elm Street, Willow Street and Bussard, Summers and Koogle's Drive. Jefferson and Elm Street cross Main Street and extend past Washington Street. Generally, all of these streets are narrow in both pavement width and right-of-way with structures very close to the pavement. Most of these streets are now one-way. Walnut Street is a major road connection southwest of Town where it is named Bidle Road in the County. On the east side of Town, there is only one direct connection from north of Main Street to south of Main Street and that is where Lombardy Drive intersects with Main Street and becomes Cone Branch Drive, north of Main Street. Cone Branch Drive has access to Coblenz Road (County road) via Caroline Drive or Foxfield Pass. There are two connections from Main Street to Franklin Street (which is named Holter Road in the County). These two road connections are Prospect Street and Broad Street. These two streets are connected between Main and Franklin Streets by Locust Street. Broad Street is paved through to South Church Street (MD Rt. 17) but has been blocked to through traffic. Pavement widths on Broad and Prospect Streets are 22-30 ft. Most of the other streets in Town serve mostly local use either in the older developed areas or in the newer subdivisions.

Many of the older streets in Town are approaching, or have past, their useable life and are in need of renovation. Streets in the subdivisions of Glenbrook, Foxfield, North Pointe and Cone Branch Estates, which were completed in recent years, provide connections that have helped to alleviate traffic congestion at the intersection of US 40-A and MD Rt. 17 in downtown Middletown.



### Current Transportation Activity

In 1998 and 1999 the Town upgraded Green Street from N. Church Street (MD Rt. 17 north) to Schoolhouse Drive. The developer of the Cone Branch Estates subdivision completed the extension of E. Green Street to Cone Branch Drive near its intersection with E. Main Street (US 40-A) with the Town completing the section from Schoolhouse Drive to the Estates. At the western end of Green Street beyond the Amvets Post Home the developer of North Pointe Subdivision extended the street through that subdivision to West Main Street (US 40-A) opposite of Eastern Circle. These road sections have provided an alternate through traffic pattern in Middletown, paralleling Main Street, and have provided a secondary route if Main Street becomes blocked.

The developer of the Glenbrook Subdivision was required to construct a section of the southern parkway between East Main Street and Holter Road to State standards (150' right-of-way with 2 lanes of 24' wide pavement) and dedicate to the Town the entire right-of-way until such time the State would take over the road. The developer also constructed a street (Glenbrook Drive) which runs from the parkway in an eastward direction and connects with Holter Road, affording the development two accesses to Holter Road.

The developer of Foxfield constructed a collector street between Coblenz Road and Hollow Road. This street is north of US 40-A and parallels that State Highway. A 150' right-of-way running in a north/south direction is also reserved through the subdivision for future extension of a parkway route as shown in the accompanying maps.

Middletown is also actively seeking County and State participation in further study for a Middletown road south of Town shown in both this Plan and the Frederick County Middletown Regional Comprehensive Plan for a road from US 40-A at Brookridge South to Rt. 40-A at the Town Plaza Shopping Center. The County no longer has listed this as a Secondary Road Priority.

Middletown participated in the Maryland National Road Partnership Program to nominate the Old National Pike which runs through Middletown (Main St.) from Baltimore to the Pennsylvania line as an "All American Road". A ribbon-cutting ceremony to recognize the National Road as an All-American Road was held on May 8, 2003 at the Frederick Visitor's Center on Interstate 70. The National Road has also been designated as a Maryland Scenic Byway.

### Traffic Volumes

Traffic volume data gives insight into the function of various roads throughout the Region and around the Town. Low traffic counts would indicate the function of the road is predominately local access while higher counts indicate the function of the road is more than just local access and includes through traffic movements. Traffic counts are available on State roads and on certain County roads in the Middletown area. The Traffic Count map, following this section of the Plan, shows the latest available traffic counts as well as some prior year's counts which can measure the increase in traffic volume over the years.

US 40-A east of Middletown has the highest non-interstate traffic volumes in the Middletown Region. Between 1971 and 1995 traffic increased 280% on US 40-A east of Middletown and 340% west of Middletown. MD Rt. 17 south of Middletown increased 430% and 350% north of Middletown, during that same period.

The Frederick County Division of Public Works is responsible for collecting traffic counts on the County road system, which assists in identifying trends and prioritizing improvements in the County. The counts are taken with machines which are typically in place for 2-3 days in the middle of the week. The numbers are referred to as the Average Annual Daily Traffic (AADT), which reflects the amount of traffic in both directions for a 24-hour period. The counts are done generally every three years, and seasonal and temporal variations in traffic levels can occur. The most recent counts done in the Middletown vicinity were made in 2007 and 2008. See Figure 5-2, Traffic Volume map.

High traffic volumes on US 40-A and MD 17 and the percentage increase in these volumes indicate changes and events outside the Town limits. The two major causes of the traffic increases on these routes are the continued development in the rural areas of Frederick County and the development outside of Frederick County, in West Virginia and Washington County, Maryland. State Highway Administration improvements of MD 17 from Burkittsville to Middletown and MD Rt. 34 from West Virginia to Boonsboro have increased use of these routes. While the Town's transportation system is affected by outside development, the Town has no control over development in these areas.

### US 40-A Congestion

The extent of through traffic in the center of Town on US 40-A has generated several studies of existing and projected traffic volumes as well as alternatives to relieve the traffic congestion. As a result of these studies, the Frederick County Middletown Region Plan (1997) designated a southern route around Middletown and extending to I-70 and a collector to connect MD Rte.17 to the extension to I-70. The purpose of an alternative route in the form of a parkway is to remove the heavy traffic volume through the center of Town. Over the past thirty years, the Town has expended all of its efforts with SHA and the County to get action on this. At this time, the Town will identify both bypasses in the hope that one will be developed over time as development occurs.

The Middletown Downtown Revitalization Study conducted by Hyder (ARRO Engineering) was completed in connection with the (most recent) southern bypass study. It evaluated traffic movements through Middletown during the A.M. and P.M. peak (rush) hours. The results from the Origin & Destination Study indicated that the majority of the traffic through downtown in the A.M. peak is from the west and the south, heading east, and the reverse in the P.M. peak. The existing average daily traffic (ADT) in 1996 on US 40-A through Town was 13,500, which was expected to increase to over 23,300 by the year 2010 without any highway improvements. Over Braddock Mountain, there is an approximate 70%-30% split in the peak hours, with the majority of the traffic heading east in the A.M., and west in the P.M. Existing ADT on US 40-A over Braddock Heights is 18,000.

While both southern and northern alternatives would relieve traffic congestion in downtown Middletown, the high traffic volumes through Braddock Heights would remain. The most recent study considered the possibility of an interchange on I-70 at Hollow Road, although it is not certain whether an interchange would be approved at this location. At the present time, the Town of Middletown has through the annexation process, commitments for dedication of rights-of-way through two subdivisions (Brookridge South and Glenbrook) for a southern parkway. In addition, right-of-way has been reserved through the Middletown South Subdivision and Holy Family Catholic Church. Sections of a northern collection road have been included in the Foxfield Subdivision.

In addition to problems created by high traffic volumes and the need for an alternative route, other traffic problem areas exist. As with many Towns which developed prior to the automobile, the older streets are narrower than what would be required under current standards. Development occurred in close proximity to the traveled roadways leaving little room for road improvements. Increased traffic has increased the problem created by narrow roadways. In particular, intersections of narrow streets become problem areas. Intersection problems in Town include the West Main Street/Walnut Street intersection and the Washington Street/Church Street intersection. The difficulty with the Walnut Street intersection is the angle and grade of the intersection and the problem with the Washington Street intersection is the steep grade from Church Street. All of the older downtown streets are narrow including particular problems with South Jefferson Street, Koogle Drive and Summers Drive. Due to existing historic structures at the intersection of Church Street and Main Street, widening options to make geometric improvements for increased pedestrian safety are not possible. Pedestrian safety improvements at intersections might be accomplished in the form of pavement markings, signing or signal improvements.

#### Alternative Transportation Options

Towns the size of Middletown generally cannot support public transportation services. At present, Frederick County's TransIT plus, which is a County operated transportation service, provides demand-response transportation service for medical assistance recipients (for medical appointments only, where public transit is not available), senior citizens and persons with disabilities. Local taxicab companies which operate 24-hour service, 7 days a week, also serve Frederick County. Virtually all other transportation is either vehicular or pedestrian. US 40 Alternate is designated by SHA as an on-road bicycle route, although no marked bicycle lanes are provided. As part of the statewide bikeway network, local officials should work with SHA to enhance opportunities to improve conditions for bicyclists including the provision of bicycle racks in the Main Street business district. No other on-road or off-road bicycle ways currently exist in the Town.

Commuter service to the Washington metropolitan areas is provided by Maryland Transit Administration (MTA) bus route 991 during weekdays at peak morning and evening hours. The service operates from the Park and Ride lot off MD Route 17 south of Myersville to the City of Frederick, Urbana and the Shady Grove Metro Station in Montgomery County. The 2007 Frederick County Transportation Development Plan has identified the Town of Middletown as a priority regional community for future expansion of shuttle route service from the Town to the

City of Frederick/MARC commuter rail stations. The MARC commuter rail line carries passengers from locations in Frederick to Washington D.C.

### Sidewalks

Sidewalks provide a link for people and their community. Distances which could easily be traveled on foot will not be done if there isn't a safe, accessible sidewalk or path. As such, the sidewalk system can provide an important function in encouraging more pedestrian movements for nearby trips. The Town supports Frederick County in working with the Safe Routes to Schools Program to improve bicycle/pedestrian safety, in particular at intersection crossings, and provide pedestrian education and greater ADA accessibility.

The existence of sidewalks in Middletown is predominately in the oldest and newest areas of Town. The Town did begin working with the State Highway Administration on a Main Street Project that would revitalize much of RT 40-A through Town, but the project was placed on hold by SHA. Church Street has sidewalks both north of Main and south of Main from Green Street south to Broad Street. Other streets which have sidewalks for a large portion of their length include Jefferson Street, Prospect Street and Broad Street. Major subdivisions which have been built since the 1970's which also have sidewalks include Jefferson Village, Brookridge South, North Pointe, Glenbrook, Cone Branch Estates and Foxfield. Notable areas where sidewalks are not present are in the Woodmere North and South Subdivisions, Jefferson Street extended, and along West Green Street. Improvements to West Green Street are in the planning process. To date, the Town has installed roughly 4 miles of sidewalks using the State Highway Retrofit program.

### Greenways/Paths

The undeveloped lands around Middletown provide an opportunity for a shared path or greenway system. A shared path or greenway is a trail designed to accommodate several different users, including walkers, joggers, and bicyclists, that would have an improved surface of concrete, asphalt, crushed stone, compacted dirt or grass. These greenways and paths would be located on a combination of stream valleys, public lands and existing public road rights-of-way. Greenways would surround the town and connect with proposed county paths following the Catoctin Creek and following trolley lines from Myersville. The Town will support coordination with Frederick County to encourage shared use path connections between Middletown and the City of Frederick, Myersville and along Catoctin Creek.

Beginning at Remsberg Park, a path has been constructed on the east side of the Middletown Parkway to Main Street. From there it would need to traverse through the AC Jets property and continue through the Foxfield development using land from the existing right-of-way of the Middletown Parkway. This path would connect with the existing Foxfield Path on the perimeter of Foxfield. This existing Foxfield Path would continue through any new land that may be annexed west of Coblentz Road, and then continue behind the Middletown Middle/High School complex. This path would also connect to the existing and planned paths in the Middletown County Park.

After crossing Route 17, the path would connect with North Pointe and then southward across Route 40A to the Wiles Branch Park paths. These paths would then continue south of Middletown connecting with Remsberg Park, forming a Greenway around Middletown. In addition, a path is planned to connect the walkway on Cone Branch to a path starting from Route 40A to the Middletown Primary School and then onward to Remsberg Park; this pathway would connect the Remsberg Park and the Middletown Primary School to the Middle/High School complex and the Middletown County Park. See Figure 5-3, Greenway Map.

### Transportation Issues

1. A major priority of the Middletown planning effort is the construction of a parkway to reduce through traffic in the center of Town. The Town can facilitate the construction of a parkway by reserving road right-of-ways during the development review process. Parkway roads can also be built to standards determined by the Town and funded by development. The most likely way to get developer built roads is through properties approved for development.
2. Road construction is governed by street design standards found in the Middletown Design Manual. New road construction needs to be better integrated into the character of the Town and to the relationship with Main Street. New roads should compliment the existing Town street pattern. The Town should consider the appropriate streets for bicycle lanes, or wider shoulders, and design these streets accordingly.
3. Roads in new developments that are not classified as public roads and are not by design intended for general public use and travel, such as alleys and private roads, will not be accepted for maintenance by the Town.
4. The recommendations for the roads around Middletown on the Frederick County Comprehensive Plan should be reviewed for acceptance into the Town.
5. The Town should study concepts for revitalization of downtown streets.
6. The Town should continue to make improvements to the sidewalk system for continuous connections throughout Middletown thus developing a uniform pedestrian experience.

### Transportation Objectives & Policies

1. Middletown will continue to pursue the identification and construction of a parkway, as well as alternative approaches to reducing through traffic along US Route 40-A. This includes participation by the Town in several ongoing studies being conducted by the Maryland Department of Transportation and the State Highway Administration.
2. The planned improvements to the transportation system shall correspond to and support the overall Municipal Growth Plan, including scaling of streets to foster community cohesiveness and the provision of inter-connected streets where possible.

3. Planned road improvements shown in the Comprehensive Plan will be required to be provided during development review with an emphasis on construction and dedication over reservation. In addition, the development review process will consider transit, bicycle and pedestrian improvement requirements.
4. Middletown will consider alternative transportation proposals which reduce traffic congestion. This can include improvements to sidewalk systems, and pedestrian shared use paths, consideration of road design to include bicycle path lanes or wider shoulders, and the role the Town government may play in ridesharing/carpooling programs. Furthermore in recognition of the fact that US 40A has been designated as an existing or future bikeway by SHA, the Town could work to ensure that bicycle parking and other amenities and enticements are available to the long distance bicyclists traveling between Central and Western Maryland and points west.
5. The Town will require dedication or reservation of land during subdivision review for potential greenway connections.

### Transportation Plans

The purpose of the transportation proposals is to identify new road links, the type of road to be built, and other transportation proposals needed to facilitate the movement of people. A functional classification system has been adopted which designates local, collector and arterial road standards. The location of collector and arterial streets has been identified and mapped so that reservation or dedication can be required during the development review process. Additional transportation proposals will also be discussed.

### Functional Classification System – See Figure 5-4, Transportation Map.

Minor Arterials - These are roads which support the County interstate system in providing longer distance connections from the rural areas outside of Town and linking Middletown with other communities in the County. They carry moderate to high volumes of traffic and typically provide access to the interstate system. They should have bicycle and pedestrian accommodations in the form of shoulders/sidewalks and/or parallel shared use paths. Arterial roads such as Holter Road and MD Rt. 17 will be within an 80 ft. right-of-way. The parkway alternative will require a 150 ft. right-of-way with limited access in accordance with State Highway Administration requirements. The Arterials listed on the Plan are as follows:

Northern parkway (new road connection)  
Southern parkway (new road connection)  
Middletown Parkway  
MD 17 south of town limits  
MD 17 north of town limits  
Holter Road south of Middletown Parkway  
Rt. 40-A/Main Street

Collectors - Collector roads support the arterial road system by carrying traffic from the local roads and subdivisions to the arterial road network. All Collector road improvements shall

require bicycle and pedestrian accommodations in the form of shoulders/sidewalks and/or parallel shared use paths. Collector links have been identified on the Plan's Transportation Map; however, additional Collector links may be needed. Collectors identified are as follows:

Church Street  
Franklin Street (north of southern parkway)  
Coblentz Road  
Layla Drive (between Hollow Road & Smithfield Drive)  
Smithfield Drive  
Glenbrook Drive to the second intersection with Stone Springs Lane  
North Pointe Terrace up to first intersection with West Green Street  
East Green Street  
West Green Street (planned upgrade)  
Cone Branch Drive up to Foxfield Pass

Local Roads – Local roads provide direct access to abutting properties and are designed to handle relatively low traffic volumes. New Local roads have not been identified on the plans and shall be provided as individual properties develop according to the specific needs of the development. All local road improvements shall require curb, gutter and sidewalks with a pavement width of 32-36 ft., within a 50-60 ft. right-of-way.

#### Other Transportation Related Implementation Recommendations

While traffic movement is primarily related to the automobile, the Town can play a role in non-automobile related transportation efforts. Primarily, these efforts will be related to movement of people within the Town limits for recreation, shopping and schools. These include designation of greenways along stream valley areas for hiking and designation of a bicycle route through Town, as well as planning for on and off-street routes connecting to other communities.

Finally, the Town should explore the role that could be played in ride-sharing and carpooling. As a Town service, the Town could provide matching of people with destinations. This could be accomplished by simply matching individuals for pickup at homes or by provision of a ride-share parking lot.

4








# Roads by Jurisdiction Middletown, Maryland

3/10/2010

1 inch = 1,200 feet



## Legend

-  Town Boundary
-  Private/Alley
-  Town
-  County
-  State
-  Streams
-  Parcels



### Figure 5-1



4

# Traffic Volume Map Middletown, Maryland 3/10/2010

Source: Frederick County Planning Department

1 inch = 1,200 feet

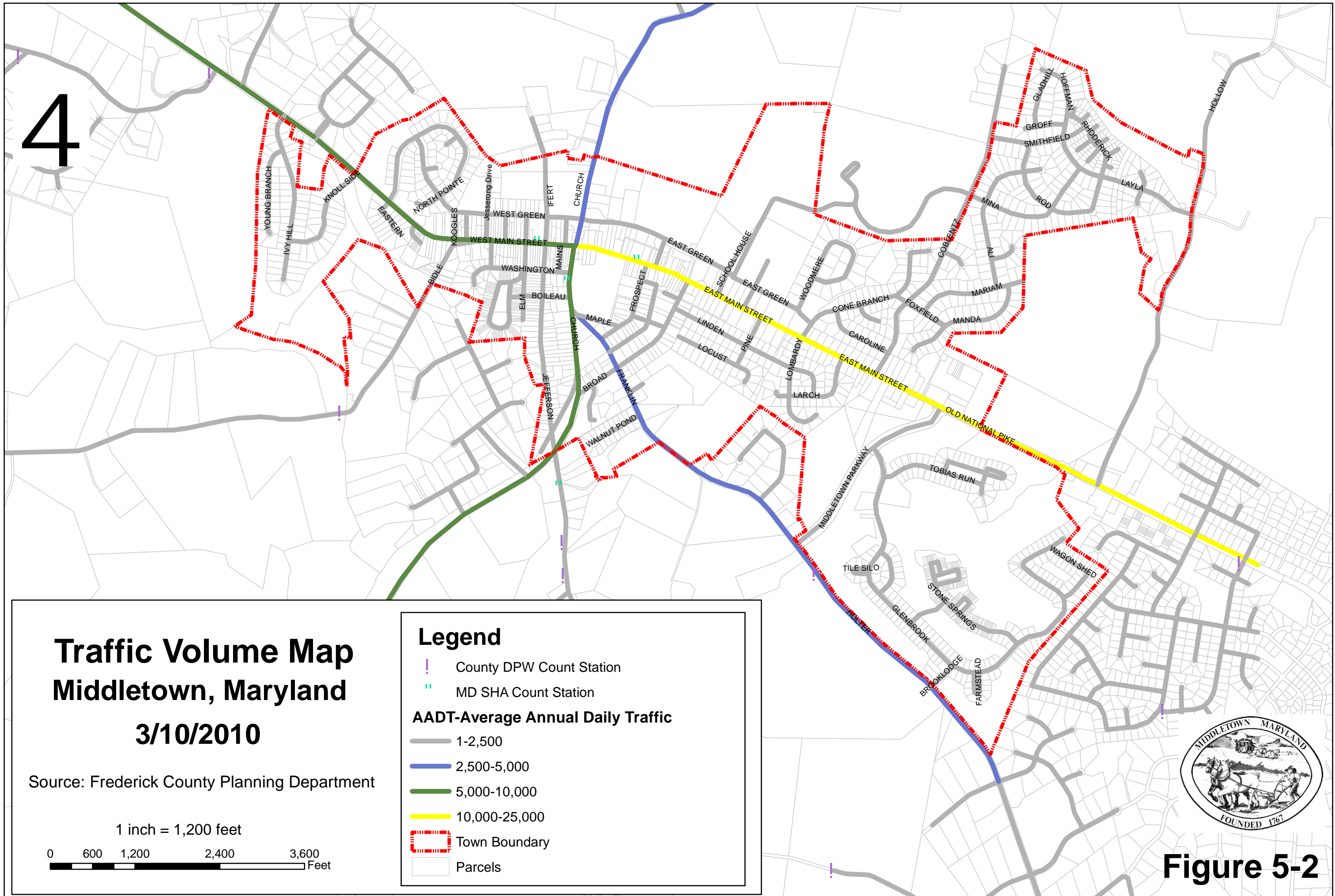


## Legend

- County DPW Count Station
- MD SHA Count Station
- AADT-Average Annual Daily Traffic**
  - 1-2,500
  - 2,500-5,000
  - 5,000-10,000
  - 10,000-25,000
- Town Boundary
- Parcels



Figure 5-2



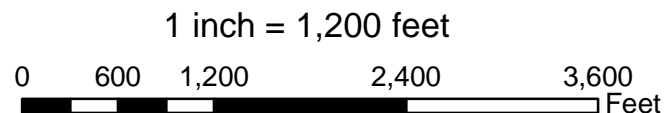


4

# Walkway and Trail Map Middletown, Maryland

3/10/2010

Source: Frederick County Planning Department  
and Middletown Planning Staff



**Legend**

- Local roads
- Streams
- ▭ Parcels
- ▭ Town Boundary

**Greenway**

- ▬ Built
- ▬ Easement/Town-Owned
- ▬ Future
- ▬ County Proposed Pathways



Figure 5-3



4

# Transportation Map Middletown, Maryland

3/10/2010

1 inch = 1,600 feet

0 600 1,200 2,400 3,600 4,800 Feet

## Legend

- Future Roads
- Minor Arterial
- Collector
- Local roads
- ▭ Parcels
- ▭ Town Boundary



Figure 5-4

## Chapter 6 COMMUNITY FACILITIES

The planning for future community facilities is a major part of the Comprehensive Plan. Future land use proposals will create a need for expanded public facilities. The growth projected in the Plan must be accompanied by a provision of adequate public facilities. In the case where public facilities are already inadequate, then the Community Facilities Chapter must identify potential solutions to the problems.

In this chapter, there will be background information on the existing facilities and services and policy recommendations for the provision of public facilities. Where appropriate, there will be a recommendation for future actions to provide adequate public facilities. See Figure 6-1, Public Facilities Map.

### Schools

**Existing Conditions:** The Town of Middletown and the nearby area is served by four schools; Middletown Primary, Middletown Elementary, Middletown Middle and Middletown High. All pupils within the corporate limits currently are within the Middletown School District. The Middletown Elementary, Middle and High schools are located in one large campus location north of Green Street on the north side of Town. The new Middletown Primary School, which serves pre-kindergarten through 2<sup>nd</sup> grade, is located on the south side of Town on Franklin Street. Some of the students from developments near Middletown attend the Myersville Elementary School in Myersville, which is a feeder school for Middletown Middle School. While the Town does not provide school services, Town growth will impact school capacities and the need for additional schools.

In 2009, the Middletown High School is the only area school that exceeds capacity. In addition, portable classrooms are presently being utilized at Middletown Middle (2 portables), Middletown High (5 portables) and Myersville Elementary (1 portable). Portable classrooms allow class sizes to be maintained at 25 students per class.

**Planned BOE Improvements:** There is one BOE future project in the Middletown area which will increase school capacity when completed. The addition to Middletown High School (August 2014) will add 300 seats. A previously planned Myersville Middle School to have been constructed in 2008 is no longer being planned. The school enrollment projections shown in the following table are based on percent capacities and do not consider planned additions or new construction.

TABLE 6-1  
PUBLIC SCHOOL ENROLLMENT PROJECTIONS\*

	Capacity	2007*	2008*	2009	2010	2011	2012	2013	2014	2015	2016	2017
Middletown Primary	482	401	452	444	444	445	452	462	472	483	494	505
Middletown Elem.	629	430	407	455	489	543	548	550	549	559	570	583
Middletown Middle	914	869	871	836	825	877	893	953	975	1023	1008	1018
Middletown High	1169	1346	1311	1282	1228	1195	1189	1146	1175	1210	1252	1339

\*2007 figures are August 2007 actual enrollment percentage; 2008 figures are from December 2008 quarterly enrollment report

Source: BOE Educational Facilities Master Plan Annual Update, September 2008

Parkland

Developed parkland resources available to Middletown residents in or near Middletown consists of Municipal parkland, County parkland, and Board of Education land. In addition, several parcels within developments have been reserved as open space for recreational uses. The Town has submitted engineering plans to the State for extension of the linear park in Brookridge South & North Pointe and these plans are under review. The developed parkland in Middletown is as follows:

TABLE 6-2  
PARKLAND INVENTORY WITHIN TOWN LIMITS

Site Name	Site Location	Acreage	Facilities Use
Foxfield Greenway	Westside of Hollow Rd.	13.100	trails, gazebo
Elm Street Pocket Park	100 Block W. Main St.	0.003	bench, landscaping
Memorial Park	Eastside S. Church Street	5.460	softball, basketball, pavilion, tot lot, multi-purpose court
Wiles Branch Park	Southside of West Main Street	25.386	basketball, tot lot, trails, pavilions, multi-purpose field
North Pointe Tot-Lot	Northside of North Pointe Terr	0.002	tot lot
Glenbrook Soccer Field	Southside of Glenbrook Dr.	2.260	soccer field, trails
Cone Branch Pocket Park	Westside of Cone Branch Dr.	1.350	gazebo, benches, lighted paths
North Pointe Park	Northside West Main St.	9.200	undeveloped, pond
Jefferson Village - Green Area	Center of Boileau Dr.	2.350	trail, benches, tot lot, grill, landscaping

**Total Parkland within  
Town Limits                    59.11**

TABLE 6-3  
PARKLAND INVENTORY OUTSIDE OF TOWN LIMITS

Site Name	Site Location	Acreage	Facilities Use
Hollow Creek Park	7700 Hollow Road	12.441	undeveloped
Hawbottom Park - Parcel #1	9000 Block Hawbottom Road	3.900	undeveloped
Hawbottom Park - Parcel #2	9000 Block Hawbottom Road	31.250	undeveloped
Remsberg Park	Southside of Holter Road	87.900	undeveloped

<b>Total Parkland outside of Town Limits</b>	<b>135.49</b>
<b>Total Parkland</b>	<b>194.60</b>

Source: Middletown Staff 2008

Private park facilities exist at the Middletown Amvets. This 6 acre site includes picnic facilities with a pavilion and horseshoe courts. Also within the Town of Middletown are the Middletown County Park and recreation facilities and fields on properties owned by the Board of Education. The 79 acre County-owned park is located on Coblenz Road and is located adjacent to the Middletown High School. This park offers such amenities as lighted basketball courts, picnic facilities, play equipment, trails, sports fields, fishing, horseshoe pits, a bandstand, and a disc golf field.

Library Facilities

The Middletown Library was constructed in 1990 on a .87 acre lot adjoining the old elementary school on Prospect Street. The building consists of 2500 sq.ft. In fiscal year 2007-08 (July 1, 2007 to June 30, 2008), the library had a circulation of 76,922 items. The library also offers many programs including children’s story times, teen programming and adult book clubs, as well as tours of the library facilities.

Fire & Ambulance Service

The Middletown Fire and Ambulance Company is presently located on South Church Street, one block south of Main Street but plans to construct new facilities at their carnival grounds. The firemen have a service area of approximately 35 square miles for the fire company with a larger service area for the ambulance company. There are roughly 70 active volunteers and four paid employees with additional people involved in other fire company activities. Three paid employees are on duty from 6:00 A.M. until 6:00 P.M. and are cross-trained for both fire and ambulance calls.

The Fire Company building was constructed in 1950 with several later additions, and houses a tanker truck, two Class A pumper trucks, one older pumper truck, a brush truck and two ambulances as well as a chief’s vehicle.

The Middletown Fire Company also owns 17 acres located on Franklin Street, which presently is used for carnivals and other activities to benefit the Fire Company. The Fire Company proposes to relocate the fire station there in the near future.

### Police Service

Law enforcement within the Middletown corporate limits is provided through the Frederick County Sheriff Community Deputy Program in which deputies are assigned to the Town and maintain office facilities within the Town Municipal Building. Middletown reimburses the County in an annual contract for this service. Law enforcement outside the corporate limits is provided by the Frederick County Sheriff's Department and the Maryland State Police.

The contract Middletown has with the Frederick County Sheriff's Department has an annual cost of approximately \$120,000 per deputy per year. The Middletown Deputies duties include criminal investigations, traffic citations, and meetings and presentations with various community groups such as the Community Watch Program. The community deputy regularly schedules assignments for traffic enforcement on local streets.

### Solid Waste

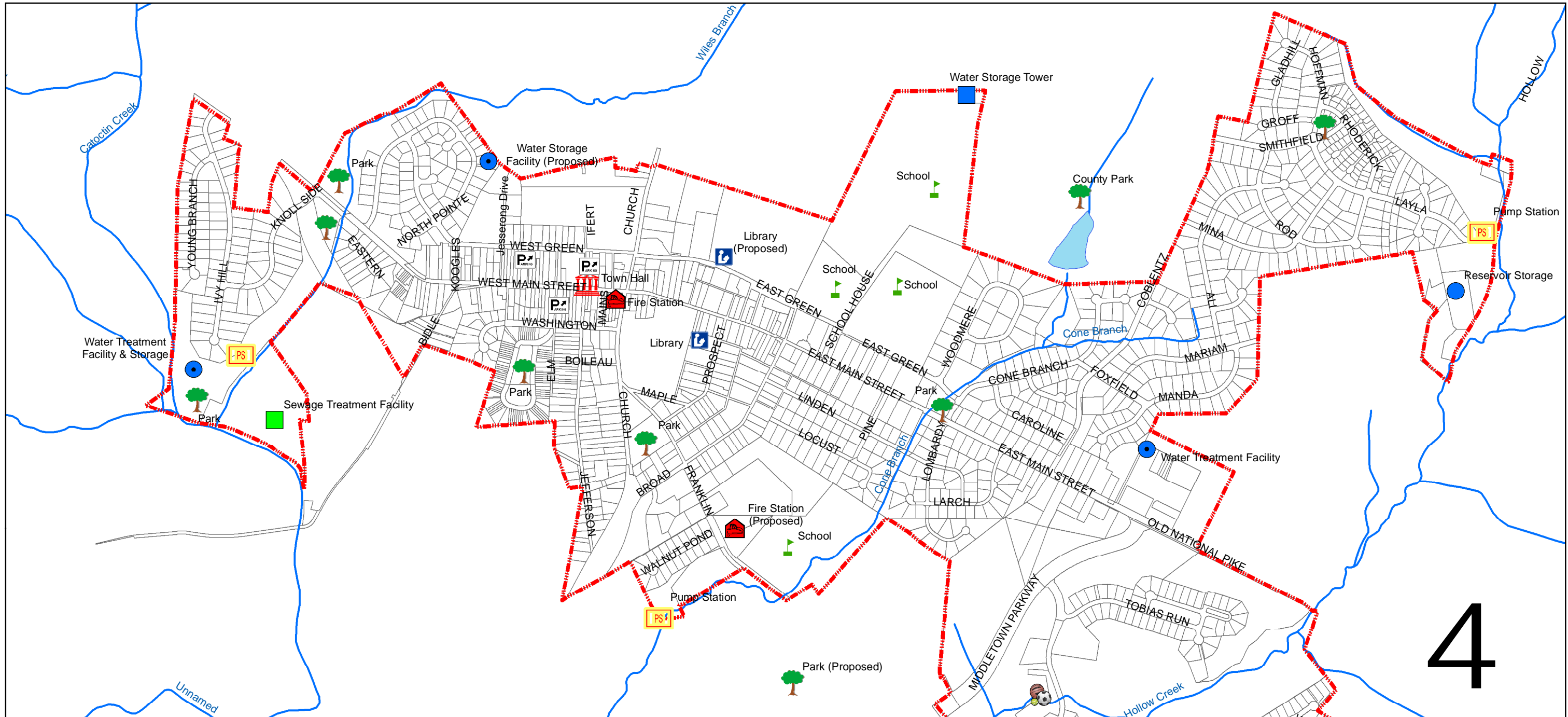
The Town presently contracts with a private hauler for municipal collection once a week of residential waste. Large commercial and industrial users must contract for their own waste disposal.

Middletown participates in the County recycling program and has its own yard waste program. The curb-side recycling program is now a single-stream program with 65-gallon containers that are picked up bi-weekly and contracted by Frederick County. Recycling material includes glass, paper, cans, cardboard, newspapers, magazines, books, aluminum foil, juice cartons and most plastic. The curb-side yard waste program involves one day a week, seasonal pick-up of grass clippings, and leaves.

### Adequate Public Facilities Ordinance

On October 15, 1991, Frederick County adopted an Adequate Public Facilities Ordinance, which has been amended several times, including the most recent changes adopted on October 14, 2008. In simplest terms, the APFO does not permit development to proceed, except for minor subdivisions and remainders, if certain public facilities are not adequate or planned to be adequate within the near future. The County's APFO measures four facilities required to be adequate; roads, public water facilities, public sewer facilities, and schools. The County is currently considering adding a fifth measure of adequacy which would be emergency response times. The Town of Middletown is currently considering enacting an APFO of its own, although the Town currently has a residential growth policy to ensure adequate facilities.

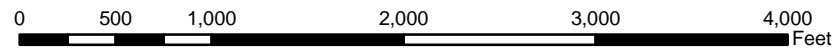




# Public Facilities Map Middletown, Maryland

3/10/2010

1 inch = 1,000 feet



**Legend**

	Sports Facility		Pump Station
	Parking		Reservoir Storage
	School		Sewage Treatment Facility
	Fire Station		Water Treatment Facility
	Library		Town Hall
	Park		Water Storage
			Pond
			Town Boundary
			Streams
			Parcels



**Figure 6-1**

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## **Chapter 7 WATER RESOURCES ELEMENT**

### Purpose

The purpose of this plan element is to coordinate the Town of Middletown's land use and water resources planning efforts. The plan is organized around the following three components: drinking water; wastewater; and stormwater. Included within those components are discussions of the watershed resources of the Town; the quality and quantity of drinking water supplies with respect to planned growth; the treatment capacity of wastewater treatment facilities and disposal of treated effluent; a review of Frederick County's stormwater management and non-point source pollution programs; and recommendations for environmentally sound land and water management practices that contribute towards the health and sustainability of our major watershed system and our residents.

*This water resources element was prepared to serve as the Town's Water Resources Element mandated through House Bill 1141 by the Maryland State Legislature in 2006. This plan is required to be submitted to the Maryland Department's of Planning and Environment for review in 2009.*

### Water Resources Goals

Achieving the Town's water resources goals will take a coordinated effort by its citizens, the town's government, and its businesses. Each has a role to play in protecting the Town's water resources for future generations. The overarching goals for the Town of Middletown's water resources are:

1. Maintain a safe, secure and adequate drinking water supply to accommodate the needs of the current population as well as future generations.
2. Protect and enhance the quality of the Town of Middletown's surface waters, ground water resources, and wetlands, with the goal of exceeding all environmental regulatory requirements.
3. Invest in water and sewer infrastructure that will provide ample treatment capacity for projected demand and reduce total maximum daily loading [TMDL] of pollutants to rivers and streams.
4. Promote coordinated planning with other federal, state and local agencies responsible for drinking water, wastewater, and stormwater management.
5. Engage Middletown's citizens in watershed conservation and promote a stewardship ethic.

## Coordination with Frederick County

This Water Resources Element (WRE) is linked to [add date of plans] Frederick County-produced plans such as their Water Resources Plan and the Water and Sewerage Master Plan. The County’s Water Resources Plan provides for the County’s goals for drinking water supplies, wastewater treatment and stormwater management for all of the County’s municipalities.

The Water and Sewer Master Plan provides a detailed description of the County’s water and sewer service areas including justification for the various levels of service. The Plan includes background on the physical geography of the County and provides detail on vulnerabilities and limitations to water and sewer service based on environmental factors.

## Land Use Planning Analysis

Frederick County projects a population of 331,700 by 2030, which is an increase of approximately 99,000 people. This population increase would result in a need for approximately 37,400 new dwelling units. These new residential dwelling units are targeted to occur in the County’s Community Growth Areas which includes the Town of Middletown.

Projected 2030 Population	5092 <sup>1</sup>	Projected 2030 Household Size	2.68 <sup>2</sup>
Current 2008 Population	4198 <sup>3</sup>	Current 2008 Household Size	2.78
Projected Additional Population 2008-2030	894	Current 2008 Annual Average Daily Water Use (gpd)	311,000
Projected Additional Dwellings Needed	334	Projected Annual Average Additional Residential Water Needed (gpd) <sup>4</sup>	100,200
Projected Additional Non-Residential Needs – acres	44 <sup>5</sup>	Projected Annual Average Additional Non-Residential Water Needed (gpd)	2,226

The future water resource needs of Middletown can be estimated using the above-referenced population projection; it is assumed that by 2030 an additional 100,200 gallons per day of drinking water supply will be needed to service Middletown residents. It is also assumed that by 2030 an additional 2,226 gallons per day of water supply will be needed to service non-residential users in Middletown.

<sup>1</sup> According to the Maryland Department of Planning

<sup>2</sup> According to the Maryland Department of Planning

<sup>3</sup> According to Frederick County population statistics

<sup>4</sup> Based on **Middletown requirement that developers must provide 300 gallons of allocable water per unit (gphd).**

<sup>5</sup> Based on **General Commercial acreage within town’s growth boundary.**

## **Importance of Water Resources Planning**

With an additional 99,000 people expected to reside in Frederick County over the next 20 years, population growth and its associated water resources challenges are anticipated in the Town of Middletown. In addition to addressing the competing needs of residential, agricultural, and commercial/industrial development, municipalities like Middletown needs to review its water resource and land use plans to ensure delivery of water and sewer service to a larger customer base.

Middletown's geographic location in the Chesapeake Bay watershed offers another major challenge. The major surface water resource in the Middletown Valley is Catoctin Creek, which meanders south through Frederick County directly into the Potomac River which flows into the Chesapeake Bay. The Potomac River, along with its smaller tributaries, carries stormwater runoff from the land [nonpoint] and wastewater discharge from point sources such as wastewater treatment plants to the Bay. Sediment and topsoil, fertilizers and pesticides, oil, pet waste and emerging contaminants (pharmaceuticals, etc.) are examples of pollutants that enter local water bodies. Once in the Bay, these pollutants disrupt the natural balance of the estuary, depleting fish, crab and oyster populations and posing serious health risks for continued human use and aquatic stability.

The environmental challenges associated with growth are not new or unique to Middletown and Frederick County. This water resources element takes into account the diversity of water resources, limitations and vulnerabilities that the Town of Middletown is facing and offers recommendations for potential solutions. This is the first attempt to develop a water resources element for the Town of Middletown.

## **Middletown Watersheds**

Catoctin Creek flows through the Middletown Valley, an intermountain area characterized by heavily rolling land and narrow streams. The valley is surrounded on three sides by the Catoctin and South Mountain ridgelines. These mountain ranges form the boundary of the Catoctin Creek watershed, which accounts for approximately 25% of Frederick County's total land area. The creek's confluence with the Potomac River is located just east of Brunswick, Maryland. See Figure 7-1, Middletown Watersheds & Drainage Basins.

Section 303(d) of the federal Clean Water Act requires Maryland to: (1) identify waters, known as water quality limited segments (WQLSs), where technology-based effluent limitations and other required controls cannot achieve water quality standards; (2) for each listed water, establish Total Maximum Daily Loads (TMDLs) for pollutants preventing the attainment of water quality standards; and (3) offer an opportunity for public review and comment on the proposed TMDLs.

The Maryland Department of the Environment (MDE) has identified the waters of the Catoctin Creek watershed (basin number 02140305) on the State's 303(d) List as impaired by sediments (1996), nutrients (1996), bacteria (2004), and impacts to

biological communities (2002 and 2006). A data solicitation for sediments was conducted by MDE, and all readily available data from the past five years have been considered. The listings for nutrients, bacteria, and impacts to biological communities will be addressed separately at a future date.

The TMDL sets the maximum load limit for the impairing substance. The TMDL also reflects potential load allocations to point sources, nonpoint sources, and a margin of safety that accounts for uncertainty in the procedures used to estimate the TMDL. Once established by the State, the TMDL will be subject to approval by the EPA. The established TMDL will support measures needed to attain water quality standards in the Catoctin Creek watershed. The Environmental Protection Agency approved on July 31, 2009, a Total Maximum Daily Load (TMDL) for sediment in the Catoctin Creek Watershed to reduce sediment runoff and discharges into Catoctin Creek and its tributaries. This TMDL could have future quantitative sediment loading limits or caps for all land uses in the Catoctin watershed.

Improvements to the health of the Catoctin Creek watershed is needed to meet regulatory requirements and support a diverse ecological environment. Watersheds provide natural functions to communities such as flood control, reduction of carbon dioxide, sources of food and water, and recreational opportunities. Some of the watershed management issues that citizens, farmers, schools, government agencies, and businesses are tackling in the area include:

- Reducing urban stormwater runoff;
- Restoring stream corridors;
- Controlling sediment and erosion during the land conversion process;
- Reducing impervious surfaces in new developments;
- Protecting habitat for birds, mammals, and aquatic life by planting trees, shrubs and herbaceous plants that are native to the area;
- Conserving water and
- Directing development away from sensitive environmental areas.

## **DRINKING WATER ASSESSMENT**

Healthy watersheds provide a safe and sustainable drinking water supply. With more than 1,400 miles of rivers and streams in Frederick County, water appears abundant. Many of us take for granted a safe and abundant supply of drinking water. Middletown uses ground water sources to obtain their water supplies. The perception of abundance highlights the importance of water resources planning. While water may be plentiful certain days or seasons of the year, levels or supplies may be dramatically lower in others. The drought conditions that occurred in 1999 and 2002 and associated restrictions on nonessential water uses brought home the lesson that our water supplies are not limitless and require good stewardship. Summertime demand, in particular, puts pressure on our water resources when supplies are lowest and demand is high.

This drinking water assessment investigates drinking water supply and availability; drinking water demand and water conservation. Other major issues related to drinking water policies and projects will be reviewed. See Figure 7-2 Water Service Map.

### **Drinking Water Supply and Availability**

In Middletown, the drinking water system is supplied by twenty groundwater wells and four major groups of groundwater springs located on the west side of the Catoctin Mountain, north of town. Water from these springs flow by gravity to two in-ground reservoirs with a combined capacity of two million gallons. These drinking water supplies are obtained from ground water sources, as opposed to surface water. There are no private wells in the Town of Middletown.

Ground water is stored in aquifers and crevices beneath the ground that are recharged by precipitation. In an unconfined aquifer, the most common in the Middletown valley, ground water moves horizontally before it is discharged into a stream or other surface water body, such as a seep, spring, or wetland. Stream flow directly correlates with the rise and fall of the water table; both are impacted by climatic and drought conditions.

Disruptions to the natural hydrologic cycle by land use affects availability of both ground water and surface water supplies. The steady increase in the area's population that is expected over the next twenty years poses a significant impact to the availability of this limited natural resource. Increased development reduces water recharge areas and has the potential for introducing new pollutants and contaminants to watersheds. This section assesses the availability of groundwater and presents its limitations.

#### *Groundwater*

The available supply of groundwater in Middletown is dependent upon the underlying geologic conditions. In most areas, the water bearing characteristics of the geology offer low storage capacity and low transmissibility. An extensive stream network and the nature of fine particle soils contribute to these characteristics. The United States Geologic Survey (USGS) and Maryland Geological Survey have generalized the water yielding character of Frederick County's aquifers and organized them by hydrogeomorphic region. Middletown is located in the Piedmont Crystalline region.

The poorest aquifers, in terms of yield and capacity, include fractured rock aquifers which are typical in the Piedmont Crystalline regions. In addition to geology, climatic conditions impact groundwater. Seasonal variation in groundwater table level is a primary limitation to its use as a reliable water supply. In a recent evaluation of the Catoctin Creek watershed, it was concluded that groundwater may be an adequate source during average precipitation years, but under drought conditions, groundwater supplies are not adequate to meet existing demand and support the biological and natural

resources of the watershed<sup>6</sup>. Groundwater supply limitations are typically accentuated during the summer months. Mid-June through mid-September is historically the driest time of the year and groundwater supply declines significantly during the summer months.

### *Water Balance Methodology*

Groundwater availability is difficult to predict; aquifers are not confined to topographic, political or watershed boundaries. Availability is based on the amount of recharge (in the form of precipitation, groundwater and septic system discharge) to the aquifer less the amount of water that is supplied as base flow to surface water streams. This estimation method provides a watershed availability scale estimate, and is not used to estimate availability at a particular well.

This water balance method for groundwater availability has been utilized in the Catoctin Creek watershed by Korsak and Smith (2006). It revealed the potential for major variations in groundwater availability under summertime and drought conditions. Assuming combined summertime and 20-year drought meteorological conditions groundwater supplies would be over-allocated in fifty percent (50%) of the sub-watersheds of Catoctin Creek by 2030<sup>7</sup>.

This water balance method is also used by MDE for distribution of groundwater appropriation permits for community water systems. To apply for a permit, a municipality must control or have jurisdiction over, either by ownership or via providing public water to the properties, own sufficient undeveloped land resources to allow for groundwater recharge of the aquifer they intend to withdraw from. This MDE policy particularly affects municipalities who are constrained by a municipal boundary with respect to where their groundwater supply wells are located. There is also a Maryland Department of Planning (MDP) policy that states that municipalities must be developed under the state's Smart Growth policy which prescribes higher densities for growth areas, while also identifying land resources to keep in permanent open space for their groundwater appropriations.

The most limiting factor in the near future will be the difficulty in locating sufficiently high yielding wells necessary for public water supplies, without impacting nearby private wells. As the population increases in Middletown, which relies entirely on groundwater, the town will be forced to identify water supply alternatives that will serve to diversify our current water supply.

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<sup>6</sup> 2006. MDE. *An Evaluation of Water Resources in the Catoctin Creek Watershed, Frederick County, Maryland.*

<sup>7</sup> *Water Resources Plan for Frederick County, Maryland – A Functional Element of the Frederick County Comprehensive Plan 2009*

Table 7-2 shows the latest watershed information for Middletown as of December 2008. The Town is limited to what the recharge rate of the aquifer is in the region. Since MDE will not allocate a withdrawal greater than the water rights (based on recharge rates), the Town is interested in acquiring water recharge easements on agricultural preservation parcels outside of the Town to increase the Town’s overall water rights in the area thereby giving the Town the rights to pump more water out of the aquifer.

<b>Table 7-2 Middletown Watersheds</b>	<b>WATERSHEDS</b>			
	<b>Catoctin Creek</b>	<b>Cone Branch</b>	<b>Hollow Creek</b>	<b>Buzzard Creek</b>
<b>Gross Acreage By Digital Planimetry</b>	<b>369</b>	<b>527</b>	<b>646</b>	<b>10</b>
<b>Net Acreage Available for Allocation (Assumes 10% impervious surface)</b>	<b>332</b>	<b>474</b>	<b>581</b>	<b>9</b>
<b>Drought (1-in-10) Ground Water Availability (432 gpd/ac)</b>	<b>143,467</b>	<b>204,898</b>	<b>251,165</b>	<b>3,888</b>
<b>Set-Aside for Maintenance of a 7Q10 Base Flow (15 gpd/ac)</b>	<b>4,982</b>	<b>7,115</b>	<b>8,721</b>	<b>135</b>
<b>Groundwater Potentially Allocable in the Watershed (gpd)</b>	<b>138,486</b>	<b>197,783</b>	<b>242,444</b>	<b>3,753</b>
<b>Groundwater Potentially Allocable in the Watershed (gpm)</b>	<b>96.71</b>	<b>137.35</b>	<b>168.36</b>	<b>2.61</b>

*Source Water Protection*

The quality of drinking water varies by source. Different issues exist for ground and surface water sources. Groundwater quality in the Middletown area can be negatively impacted by naturally occurring radon or iron, but can also be contaminated by fecal coliform, particularly when septic systems are nearby. Common water quality contamination concerns include:

- Sedimentation
- Human pathogens
- Fecal contamination
- Potential spills
- Fecal coliform
- Nitrates
- Natural organic matter
- Algae
- Taste and odor compounds
- Gasoline-related compounds

State and federal water quality standards are in place for community systems using ground and surface water sources. Regular testing of drinking water is a requirement. The federal Safe Drinking Water Act amendments of 1996 require that public systems conduct a Source Water Assessment to better understand the vulnerabilities of their source. MDE has prepared Source Water Assessments for all public systems in the State. These plans list in detail the vulnerabilities of the supply and offer recommendations for continued protection. It is likely that additional in-depth watershed management plans will be conducted to protect the diverse sources of drinking water in Frederick County in the future with TMDLs pending at the federal level for most streams in the County.

Middletown is interested in increased source water protection through wellhead protection ordinances at the County level. With groundwater wells and springs feeding Middletown's water system located outside the town limits, County regulations and ordinances are needed for adequate source water protection of municipal water systems. Middletown adopted a Wellhead Protection Overlay Zoning District ordinance in 1996 to ensure protection of the public health, safety and welfare through the preservation of the groundwater resources of community public water supplies. The designation of the wellhead protection districts, along with careful regulation of development activities within the districts, is intended to reduce the potential for ground and surface water contamination.

### **Drinking Water Demand**

Middletown's water system relies on twenty (20) groundwater wells and four (4) major groups of groundwater springs as stated previously. As of 5/12/2009, Middletown is permitted to withdraw 0.427 million gallons a day (mgd) for the average daily demand and 0.522 mgd for the maximum daily demand. Middletown's system serves a population of approximately 4,150 people with a current (2008) demand of about 0.311 mgd (maximum use of 0.343 mgd). Commercial businesses in Middletown are also supplied drinking water from the town's water system. The Town estimates a 2030 population of 5,092 and an associated drinking water demand of 0.411 mgd. To accommodate this projected population, the town will need to identify additional water sources. The 2001 Water System Facility Update, prepared by ARRO Consulting, identifies specific recommendations for increasing the raw water supply for the Town.

Middletown's wells have yields ranging from 30-60 gallons per minute (gpm), and the springs have an estimated total potential yield of 100-150 gpm. In 1999, the Town completed a Surface Water Treatment Rule testing program, with the cooperation of MDE, and received ground water certification of all of the spring currently in use by the Town. This testing is expected to be required in the future to maintain ground water certification of the Town springs. Middletown has two reservoirs with liners and covers located along Hollow Road between I-70 and US 40-A. The reservoirs are supplied by the wells and springs and have capacities of 1.5 million gallons and 0.5 million gallons. In 1997, the Town completed construction of a 400,000 gallon elevated water storage tank and distribution line improvements. See Figures 8-4 and 8-5 in the Municipal Growth Element of this Plan for additional information from the 2009 Middletown Water Supply Capacity Management Plan.

Middletown's water supply system has been divided in three (3) pressure zones, utilizing four (4) master pressure-reducing valve vaults, located on East Green Street, Summers Drive, the booster station at E. Main Street, and North Pointe Terrace, to reduce pressure in the distribution system prior to entering lower elevations in Town. The water treatment plant was relocated to the reservoir under the 1997 construction project.

The Town's water treatment program consists of adding caustic soda for pH adjustment; chlorine as a disinfectant to protect against microbial contaminants; and fluoride to



reduce tooth decay. From the water treatment plant, the water is pumped to the elevated storage tank. In 1982, approximately 40% of the mains in Town were upgraded with high density polyethylene (HDPE) plastic pipe. In 1993, the Middletown Burgess and Commissioners required real estate developers of new residential developments to satisfy Frederick County Department of Public Works design criteria which required ductile iron pipe. Frederick County requires the ductile iron pipe since it is a more impervious material.

Due to new MDE allocation policies, Middletown was placed in a new construction/building moratorium in 2004 until the town could identify groundwater sources outside of the over-allocated Hollow Creek aquifer to meet the demand of additional water service connections. Finding new groundwater sources outside of the Hollow Creek aquifer is challenging. With the addition of the new Brookridge South wells being added to the system in 2010, the expectation is that the moratorium will be removed by MDE. Water requirements in Middletown's Residential Growth Policy will prevent this from occurring in the future.

Middletown's water supply is vulnerable due to its sole dependence upon groundwater. The town has concerns regarding source water protection, drought and seasonal variations, overuse of water resources during summer months, depletion of ground water levels. The town is actively addressing these concerns by purchasing land around the spring and wellheads, conservation methods, conservatively allocating water, and establishing a conservation ring around the town.

Middletown, in particular among Frederick County municipalities, is affected by conflicting state policies regarding smart growth and groundwater allocation. The MDE groundwater balance methodology which is used to determine the limits of groundwater withdrawals requires sufficient open, undeveloped land within a water service area to allow for recharge of the groundwater aquifer. This policy encourages an overall lower population density condition for public water supply service areas utilizing groundwater resources. In contrast, state Smart Growth policy encourages higher population densities in designated growth areas. This policy requires an average density of 3.5 dwelling units per acre to maintain Priority Funding Area (PFA) status.

According to Frederick County's *Water Resources Plan (2009)*, there are at least three alternatives that Middletown may consider to address their drinking water supply limitations. The first is the water recharge easement, where properties in land preservation would sell water rights in addition to development rights. A program has begun in Carroll County where the County purchases water rights from landowners adjacent to growth areas then sells them back to the municipality. This enables a growth area to maintain its PFA status while also having sufficient land protected for recharge. This alternative addresses the conflicting state policies noted above and is currently under review by the Maryland Agricultural and Land Preservation Foundation (MALPF) for implementation statewide.

The second alternative mentioned in the 2009 County *Water Resources Plan* resulted from MDE's evaluation of Catoctin Creek which was done in May of 2006 (*An Evaluation of the Water Resources in the Catoctin Creek Watershed*), which advised that Middletown consider a surface water impoundment to diversify their water supply or interconnection to another reliable water supply system. A final alternative is to review the long-term development potential of the town and consider whether residential growth areas need to be redirected elsewhere.

The Town is very interested in the first alternative and plans to look at the ability to secure water recharge easements on properties outside of the municipal limits, which are under agricultural preservation easements. As can be seen on the Growth Boundary map, Figure 8-1, the Town has designated a Conservation boundary outside of the town's growth boundary. The Town will look at the agricultural preservation properties in the designated conservation area or greenbelt for possible water recharge easements. According to *An Evaluation of the Water Resources in the Catoctin Creek Watershed* study done by MDE in 2006, a recommendation of the study is for planners, local governments, and water suppliers to work with the agricultural community to identify properties where conservation easements could be combined with water resource easements to protect valuable water resources and augment water supplies in terms of water balance.

A surface water impoundment in the Middletown Valley would take countless years of planning, siting, engineering, money, public hearings, and permitting not to mention the political will to approve such a resource in the County. Regarding the final alternative, the Town Board will have to consider this if other avenues turn out not to be feasible. In summary, Middletown's plan in terms of addressing drinking water supply limitations is to first look at recharge easements on agricultural land within the town's conservation boundary, and secondly to look at revising planned growth in the Town. The Town also will consider an interconnection with a county water supply for emergency purposes only.

## **Water Conservation**

While water consumption by individual households in the Town of Middletown is below the national average, opportunities exist for further reductions in daily water use. Households, businesses, and institutions can reduce consumption by installing water efficient landscaping, rain barrels, low flow bathroom fixtures, gray water systems, and plumbing retrofits to older homes. Widespread education and outreach efforts on the benefits of water conservation have proven to reduce water use in a community. Conservation is especially important during the summer months when demand is high and supplies are low.

This is certainly something that has been shown to be effective in Middletown by reviewing historical water usage in the town over the past 10 years. Middletown's Municipal Code includes an ordinance on water use restrictions for water conservation purposes. Under the regulations, watering of lawns or grassy areas of property is

prohibited at any time between the hours of 9:00am and 6:00pm during the least restrictive periods of water use under the water conservation public alert system. The public alert system consists of three levels – red, yellow and blue – for which there are varying water conservation measures. The Town also posts tips to prevent water waste on its website, and sends out water conservation information with the water and sewer bills. Middletown uses a tiered rate billing system for residential water and sewer customers, which was put in place in 2001 as an incentive for customers to reduce their water consumption.

Water conservation measures lower consumer rates and utility bills while placing less pressure on precious resources. Middletown has realized major benefits from conservation measures when its citizens participate. Although conservation provides an alternative to providing additional sources of drinking water supply to the community, the Town still needs to investigate additional alternative sources of reliable water.

### **Implementation – Drinking Water Assessment**

To achieve water resources goals related to the **drinking water assessment**, five policies and eight action items have been identified. Completion of the action items and adherence to the policy statements will be monitored regularly by the Town through review and update of the Water Resources Element, a component of the Middletown Comprehensive Plan.

### **Drinking Water Policies**

1. Diversify sources of public drinking water and explore alternatives in order to meet future demand.
2. Employ demand management strategies and conservation measures (water pricing, recycling and reuse) to maximize use of existing resources.
3. Stage new real estate development projects according to the availability and adequacy of drinking water supply.
4. Include individual well construction on adjacent town limit properties within the growth boundary for future water service connection.
5. Encourage and support research and monitoring of local groundwater conditions, aquifer recharge, watersheds and streams.

### **Drinking Water Action Items**

1. Replace aging water main lines and other aging water-related infrastructure.
2. Establish a water recharge easement program to increase the land area within the town limits for recharge purposes.
3. Coordinate with Frederick County on the feasibility of interconnections with the County distribution system for emergency situations.
4. Enhance its water conservation education program for citizens and businesses in Middletown stressing summertime (peak) demand management and an overall household reduction in water use (in gpd).

5. Develop a water-resources-based GIS database for review of development plans and proposals.
6. Identify and advocate appropriate County protection measures in the Town's wellhead, springhead, and headwater areas that lie outside the town boundaries.
7. Require complete data regarding the availability and reliability of groundwater resources to assist in making land use decisions.
8. Continue coordination with the County to collect and share consistent drinking water data.

## **WASTEWATER TREATMENT ASSESSMENT**

This section of the Water Resources Element addresses wastewater treatment and disposal. It presents the quality of treated effluent and its impact to water resources; the regulatory framework related to water quality; and current and projected demand on the community wastewater systems. The section concludes with a list of major issues and potential solutions related to wastewater treatment and disposal as well as recommendations for future policy direction.

### **Quality of effluent/impact to water resources**

Wastewater treatment plants (WWTPs) are point sources of pollution in the Town of Middletown. They discharge treated effluent directly into streams. The contribution of nutrients (nitrogen and phosphorus) from WWTPs is a major water quality problem facing Frederick County streams and impacts the larger Chesapeake Bay watershed.

Pollutant capacity loadings have already been reached in the Catoctin Creek watershed and permitted pollutant loads from existing WWTPs are unlikely to be raised. Expansion of WWTPs in the County would require a corresponding reduction in pollutant concentration. Existing WWTPs in the Catoctin Creek watershed are located in and near Myersville, Jefferson, and also includes the two WWTPs in Middletown and the County WWTP that serves the Fountaindale subdivision. In the future, the majority of new or expanded wastewater treatment plants in the County will need to employ additional filtration and nitrification/denitrification to meet stricter MDE discharge permits. This requirement protects downstream water users and serves to protect the Chesapeake Bay.

### **Water Quality Regulatory Framework**

As an active participant in implementation of the 2000 Chesapeake Bay Agreement, the State of Maryland has agreed to reduce its nitrogen and phosphorus (nutrient) contributions to the Bay by a specific number of pounds to improve water quality conditions in the Bay. To date, Maryland has made significant progress through upgrades of major wastewater treatment plants. In addition to plant upgrades, Maryland has set nutrient caps on wastewater treatment plants through a point source tributary strategy. New or expanded discharges must meet these permitted limitations.

Point sources are required to obtain a National Pollutant Discharge Elimination System (NPDES) discharge permit from MDE in accordance with federal and state law. The permit specifies the allowable ranges for chemical, physical and biological parameters of discharge. Permits are issued on a five-year planning horizon and set discharge limits for WWTPs.

To meet the rigorous water quality goals of the Chesapeake Bay Agreement, Maryland has set up the Bay Restoration Fund, a dedicated fund financed by individual households and businesses served by community sewerage systems and individuals utilizing septic systems. Funds generated by this fee are used to upgrade wastewater treatment plants in Maryland as well as for cover crop plantings on Maryland farms to absorb excess nutrients.

### **Wastewater Treatment Capacity and Demand**

There are two Town owned and operated waste water treatment plants serving sewer discharges within the Town of Middletown corporate boundaries. There are no grandfathered septic systems located with the town. Irrigation is implemented on the Hollow Creek Golf Course with treated water from the East Wastewater Treatment Plant. See Figure 7-3, Sewer Service Map.

Middletown’s East and West treatment plants have a combined treatment capacity of 600,000 gpd. The average flow demand to the systems in 2008 was 0.381 mgd which includes demand caused by Inflow & Infiltration (I&I), and is projected to increase to 0.833<sup>8</sup> mgd by 2030 with ultimate demand at plan build-out at 0.850 mgd. Both treatment plants dispose of treated effluent to the Catoctin Creek watershed; the East WWTP discharges to Hollow Creek south of Town and the West WWTP discharges directly to Catoctin Creek west of Town. The sewerage system also includes three (3) sewage pumping stations and a network of 8 inch to 12 inch. sewer lines. A maximum of 21.1 mgd/year of effluent from the East WWTP can be diverted to the Hollow Creek Golf Course for irrigation via MDE permit #04-DP-3480, with a maximum daily amount not to exceed 200,000 gallons per day.

<b>Table 7-3: Permitted Discharges and Avg/Max Flows</b>					
<b>Facility</b>	<b>Receiving Stream</b>	<b>Design Capacity (gpd)</b>	<b>Permit Capacity (gpd)</b>	<b>2008 Avg Flow (gpd)</b>	<b>Net Available Capacity from Avg Flow (gpd)</b>
Town of Middletown (East)	Hollow Creek	350,000	250,000	175,760	74,240
Town of Middletown (West)	Catoctin Creek	250,000	250,000	204,790	45,210

Source: Maryland Department of the Environment and Middletown staff, 2009.

<sup>8</sup> According to the Water Resources Plan for Frederick County, MD 2009.

Approximately one third of the Town's wastewater flows by gravity directly to the West WWTP. From Broad Street east, however, the wastewater flows to the Cone Branch pumping station located on Cone Branch between Old Middletown and Holter Roads which it lifts the wastewater to a manhole on Holter Road and conveys it to either WWTP. Another pump station in Brookridge South conveys all wastewater from the Brookridge South subdivision to the West WWTP. Wastewater from the Foxfield Active Adult community along with Ashky and Ari Court and the lower portion of Layla Drive flow by gravity to the Foxfield pump station and are conveyed back into the Cone Branch drainage basin. All pumping stations have more than enough capacity to serve existing and future development through 2030.

The West WWTP was constructed in 1976 and has a design capacity of 250,000 gpd. Average daily flow in 2008 was 180,000 gpd. The East WWTP was constructed in 2000 and has a design capacity of 350,000 gpd. However it is only permitted to discharge 250,000 gpd. Average daily flow to the plant in 2008 was 160,000 gpd. The additional capacity of 100,000 gpd could accommodate up to 400 edus. The plant was designed so that it can be expanded up to 700,000 gpd, subject to permit requirements. Construction of new aeration tanks and clarifiers would be required. See Figures 8-2 and 8-3 in the Municipal Growth Element of this Plan for additional information from the 2009 Middletown Wastewater Capacity Management Plan.

The estimated 2008 population of Middletown is 4,198 and there are 1,515 sewer service customers. While Middletown is capable of providing wastewater service to its current population, expansion and upgrades will be required to meet its 2030 demand.

## **Major Wastewater Issues**

### *Inflow and Infiltration*

Inflow and infiltration (I & I) to community wastewater systems pose major challenges to local jurisdictions. Inflow of stormwater through sump pumps and into sewer pipes and infiltration of groundwater through leaky pipes introduce large amounts of clean water to the wastewater system causing overflows and an increase in the amount of water to be treated. These conditions can cause overflow where raw sewage bypasses the treatment facility and is discharged directly into a stream. Wastewater system overflows places public health at risk and violates state and federal water quality regulations.

Following an extensive project in 1992-1993, and then again in 1997 and 2002, I & I was substantially reduced in the Town's sewage collection system. The Town conducts I & I studies and corrective construction on a 5-year rotating basis. The Town has identified additional I & I work over the next 10-20 years in the Capital Improvements Program budget.

### *Water Quality*

Frederick County's major streams, including Catoctin Creek, have limited assimilative capacity for pollution. TMDL's are forthcoming, which will set waste load allocations to

meet local water quality standards. Since TMDL's have not yet been set, it is not possible to discuss the suitability of the Catoctin Creek as a receiving water given the lack of information at this time. Permitted point source pollutant load limits (from WWTPs) have been reached on Catoctin Creek and are unlikely to be raised.

#### *Public Investment*

Public sewer systems will require major investments in new treatment technologies, such as ENR (enhanced nutrient reduction), and infrastructure in order to meet future demand and nutrient caps on wastewater discharge.

### **Implementation – Wastewater Assessment**

To achieve water resources goals related to the **wastewater assessment**, four policies and two action items have been identified. Completion of the action items and adherence to the policy statements will be monitored regularly by the Town through review and update of the Water Resources Element, a component of the Middletown Comprehensive Plan.

### **Wastewater Policies**

1. Stage new real estate development according to the availability and adequacy of wastewater service.
2. Enhance its residential, commercial and industrial water conservation measures in order to reduce inflow to the wastewater treatment facilities.
3. Reduce inflow and infiltration into the wastewater collection system.
4. Reduce point source pollution that results from wastewater disposal.

### **Wastewater Action Items**

1. Complete additional I & I work over the next 10-20 years in the Capital Improvements Program budget.
2. Develop effective disposal of sludge removal.
3. Apply for increase in permit for East Wastewater Treatment Plant in 2013.

## **MANAGING STORMWATER AND NON-POINT SOURCE POLLUTION**

The use of land for development, industry, transportation and agriculture contributes non-point source pollution to our streams and watersheds. Land disturbance and conversion tend to exacerbate impacts, while forests, ground vegetation and wetlands maintain or improve watershed health and function. The Town's land use plan has an opportunity to mitigate non-point source pollution through concentration of growth in appropriate areas and the use of best management practices.

This section of the Water Resources Element provides a programmatic assessment of the County's Stormwater Management Program and discusses the impact of the Town's land use plan on impervious cover and non-point source loads to local streams and watersheds. It concludes with a list of policies and action items for future implementation.

### **Non-point Source Pollution**

Non-point source pollution is transported to surface and groundwater as a result of storm events. Stormwater transports sediment, nutrients, fertilizers, bacteria, heat, salt, oil, grease and other contaminants to local streams and water bodies. On naturally vegetated (forests, meadows) and agricultural lands, stormwater permeates the soil and many pollutants are captured and filtered. Healthy streamside buffers and forest stands are particularly effective in this function. In developed areas, where much of the landscape is impervious (rooftops, driveways, parking lots, compacted or clay soils, and roads) direct groundwater recharge is impeded and the volume of stormwater runoff to neighboring areas increases.

Non-point source pollution is detrimental to water quality and wildlife habitat and in our region its cumulative impacts are degrading the watershed and Chesapeake Bay. Since land use conditions affect the amount and extent of non-point source pollution, future development patterns must take into account their potential impact in order to protect the Chesapeake Bay watershed resource. The following section includes analyses aimed at connecting land use planning with non-point source pollution. The first is an assessment of Middletown's current levels of impervious cover; the second presents the potential nutrient pollution (a form of non-point source pollution) that could result from ultimate build-out of the County's land use plan. At this time, the Town does not have any numbers on stormwater management in terms of discharges. In subsequent revisions of this Water Resources Element, the Town hopes to provide information directly pertaining to the Town of Middletown.

#### *Impervious Cover*

Overall watershed imperviousness has been linked to a wide range of negative impacts to stream hydrology, stream morphology, biological habitat, and water quality. Research reveals that when impervious cover within a watershed exceeds about 10 percent, sensitive stream elements are lost. In cold-water regions supporting native brook trout reproduction, impervious cover of greater than 1 percent results in the loss of brook trout population. Once impervious cover reaches 25 to 30 percent, studies show that most indicators of stream quality shift to a poor condition as a result of severe impacts from erosion, channel instability, severe habitat degradation and decreasing biological integrity.

The County's land use plan map (compiled, 1997-2008) was analyzed to determine which watersheds were reaching or exceeding the 10% and 25% thresholds. For each of the County's twenty watersheds, the total acreage in each land use plan designation was captured and was applied a rate of impervious cover. As an example, the total acres of



Low Density Residential land use were applied a 14% impervious cover rate while 72% impervious cover rate was applied to total acres of General Commercial land use. These rates were provided by MDE.

In the Middletown area, Catoctin Creek had an estimated percent impervious cover of 3.7%. As expected, developed watersheds in the County, such as Carroll Creek and Ballenger Creek, which include the City of Frederick, had the greatest level of impervious cover at 26.5% and 18.3% respectively. More than half of the County’s watersheds (11) had imperviousness cover less than 5% and efforts should be made to maintain these low values through the local land use planning process. Within the Middletown town limits, the impervious area percentage is 22% with the greatest impervious surfaces coming from roads and buildings. The impervious areas used for the calculation included sidewalks, buildings, driveways, parking lots and roads.

*Nutrient pollution*

Excessive amounts of nutrients, particularly nitrogen and phosphorus, are the main cause of the Chesapeake Bay’s poor health.<sup>9</sup> Nutrient pollution leads to algal growth and oxygen depletion, which create an uninhabitable environment for most aquatic life. Similar to the impervious cover analysis, the County’s land use plan map was evaluated to determine its impact of land use on nitrogen and phosphorous pollution.

The methodology was provided by MDE and incorporated loading rates by land use category derived from the Chesapeake Bay Program Watershed Model (Phase 4.3) for the Potomac River basin. In the comparison of its land use plan data with the MDP land use data for the non-point source loading analysis, only land uses greater than 10 acres in size were identified. Summary results for nitrogen and phosphorus loads are provided in the tables below.

Table 7-4  
NITROGEN LOADING SUMMARY

Land Use/Cover	Current (lbs/year)	Future (lbs/year)	Change (lbs/year)
Development	428,918	1,055,798	626,880
Agriculture	2,520,798	2,088,181	-432,616
Forest	292,832	176,298	-116,534
Water	23,433	18,802	-4,631
Other	70,286	188,985	118,699
<b>Total Terrestrial Load</b>	<b>3,336,267</b>	<b>3,528,065</b>	<b>191,798</b>
Residential Septic (edus)	485,802	615,231	129,428
Non-residential Septic (edus)	18,439	21,395	2,956
<b>Total Septic Load</b>	<b>504,242</b>	<b>636,626</b>	<b>132,384</b>
<b>Total NPS Nitrogen Load</b>	<b>3,840,509</b>	<b>4,164,691</b>	<b>324,182</b>

<sup>9</sup> 2008. Chesapeake Bay Program web site. <http://www.chesapeakebay.net/nutrients>. “Nutrients”.

Table 7-5  
PHOSPHORUS LOADING SUMMARY

Land Use/Cover	Current (lbs/year)	Future (lbs/year)	Change (lbs/year)
Development	38,062	96,618	58,556
Agriculture	260,301	211,802	-48,499
Forest	3,211	1,933	-1,278
Water	1,625	1,304	-321
Other	6,407	17,319	10,912
<b>Total NPS Phosphorus Load</b>	<b>309,606</b>	<b>328,976</b>	<b>19,370</b>

### **Frederick County’s Stormwater Management Program**

Frederick County first adopted stormwater management (SWM) regulations in 1984 and maintains its current program in accordance with Environmental Article, Title 4, Subtitle 2 of the Annotated Code of Maryland. The purpose of the County’s program is to protect and maintain the public health, safety, and general welfare by establishing minimum requirements and procedures to control and minimize the impacts associated with increased stormwater runoff. Proper management of stormwater runoff minimizes damage to public and private property, controls stream channel erosion, reduces local flooding, and maintains after development, as nearly as possible, the predevelopment runoff characteristics. The Town adopted the County’s Stormwater Management and Sediment and Erosion ordinances and authorizes Frederick County to administer within the Town.

The County implemented the policies, practices, principles, and methods of the *2000 Maryland Stormwater Design Manual* through the County’s Stormwater Management Ordinance and its Design Manual in 2001. The Board of County Commissioners adopted the County’s *Storm Drainage and Stormwater Management Design Manual* in 2003, which has since been updated in 2009.

The County continues to work with the real estate development community to implement the goals of the *2000 Maryland Stormwater Design Manual*. Enhancements will continue to be made as the manual is updated to comply with the MDE Stormwater Management Act of 2007. The County will also continue to educate both the real estate development community and the general public in ways to determine the proper type of design for site-specific areas, as well as in facility installation timetables and maintenance issues. County staff will continue to work to address stormwater management earlier in the process to achieve the best product at the end of the process.

## **Watershed Restoration Efforts**

Frederick County approaches watershed restoration through new stormwater management ponds, stormwater management pond retrofits, Low Impact Development (LID), stream restoration/bank stabilization, and buffer enhancement. These approaches include a myriad of techniques. For example, LID techniques include rain gardens, bio-filtration swales, and tree boxes.

Here in Middletown, watershed restoration projects have included stream buffer protection, stream bank restoration and rain gardens. For the past three years, Middletown, through a partnership with the Interstate Commission on the Potomac River Basin (ICPRB) and the Chesapeake Bay Trust, has received grants for the purchase of rain barrels at a reduced cost to its residents. The rain barrel program has been very successful and well received by the town's residents.

Many opportunities exist to educate citizens and business owners that water is a limited natural resource fundamental to healthy, sustainable communities, both human and biological. Water conservation, low impact development, water reuse, and the reduction of water use during summer months are examples of tools the Town can promote to maintain the quality and quantity of the resource and ensure it is available for our diverse needs.

## **Implementation – Managing Stormwater and Non-point Source Pollution**

To achieve water resources goals related to **managing stormwater and non-point source pollution**, six policies and seven action items have been identified. Completion of the action items and adherence to the policy statements will be monitored regularly by the Town through review and update of the Water Resources Element, a component of the Town's Comprehensive Plan.

### **Stormwater Policies**

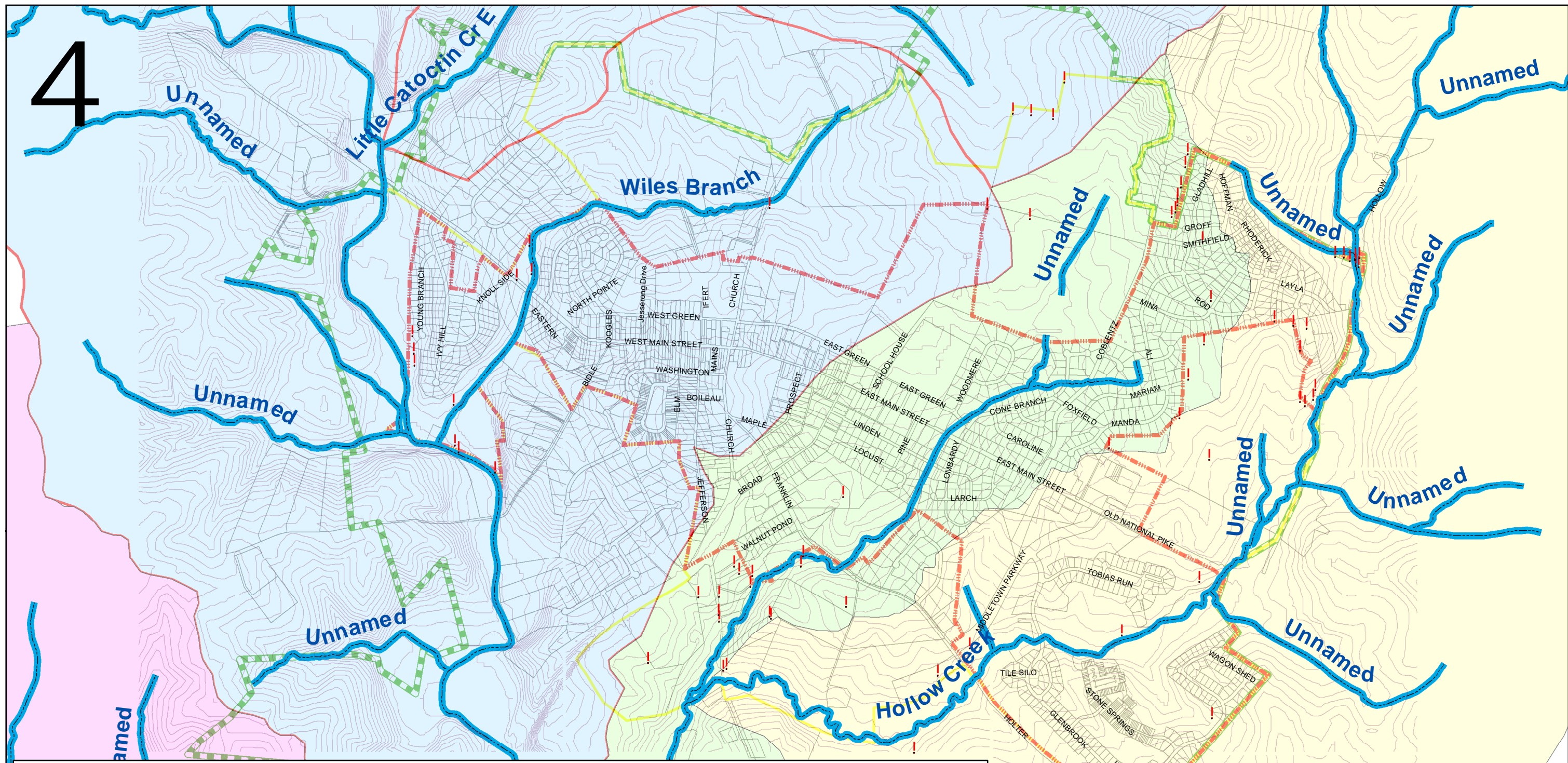
1. Encourage innovative technologies for stormwater management.
2. Promote coordinated planning between agencies responsible for drinking water, wastewater, and stormwater management.
3. Require the protection of groundwater quality in the approval of residential and non-residential development.
4. Minimize impervious cover within residential and non-residential development in order to reduce stormwater runoff.
5. Integrate watershed planning and management in the comprehensive planning process.
6. Encourage and support research on and monitoring of local ground water conditions, aquifer recharge, watersheds and streams.

## **Stormwater Action Items**

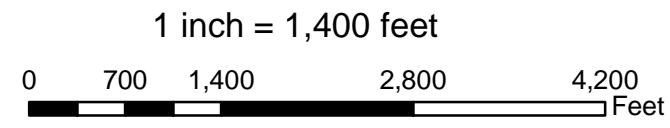
1. Incorporate the use of non-structural best management practices (BMPs) (vegetated swales, rain gardens, and bio-retention) with maintenance and monitoring agreements.
2. Reduce regulatory barriers to implementation of low impact development measures and create incentives to facilitate their use where appropriate.
3. Showcase examples of low impact development and environmental site design techniques to increase public awareness of BMPs.
4. Recommend development guidelines and BMPs that minimize development's impact on watersheds and water resources.
5. Build the environmental dataset in the Town's Geographic Information System and utilize during the development review process.
6. Develop a water-resources-based GIS database to review in regard to development plans and proposals.
7. Continue to engage the public in watershed conservation and promote a stewardship ethic.



4



# Watersheds & Drainage Basins Middletown, Maryland 3/10/2010



Legend	
!	Wells
— (orange)	Bussard Branch
— (blue)	Streams
— (red)	Catoclin
— (green)	Cone Branch
— (yellow)	Hollow
— (pink)	Middle
— (brown)	10 ft. Contours
— (dashed red)	Town Boundary
— (dashed yellow)	Growth Boundary
— (dashed green)	Conservation Boundary
— (thin grey)	Parcels

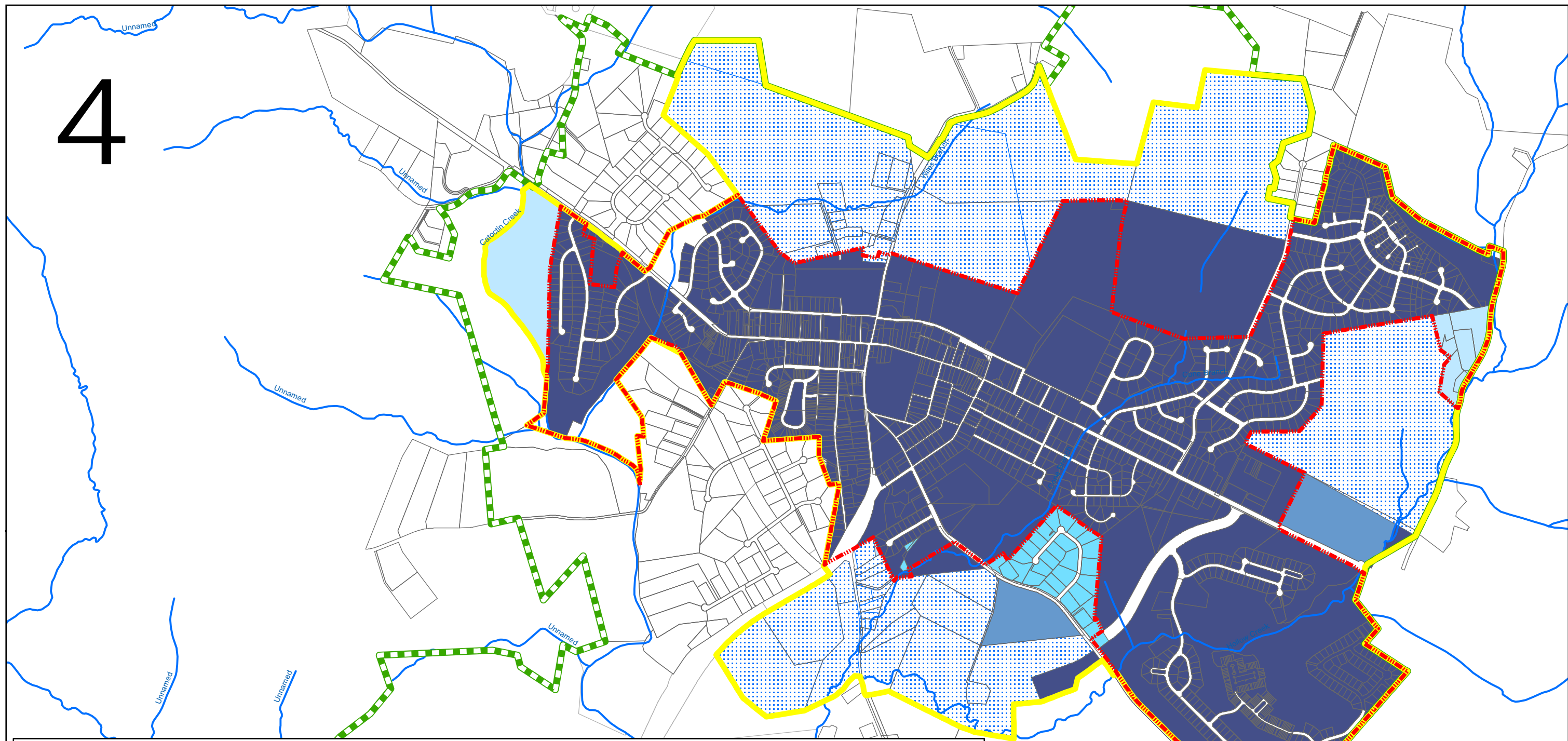


**Figure 7-1**

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4



# Water Service Map Middletown, Maryland

3/10/2010



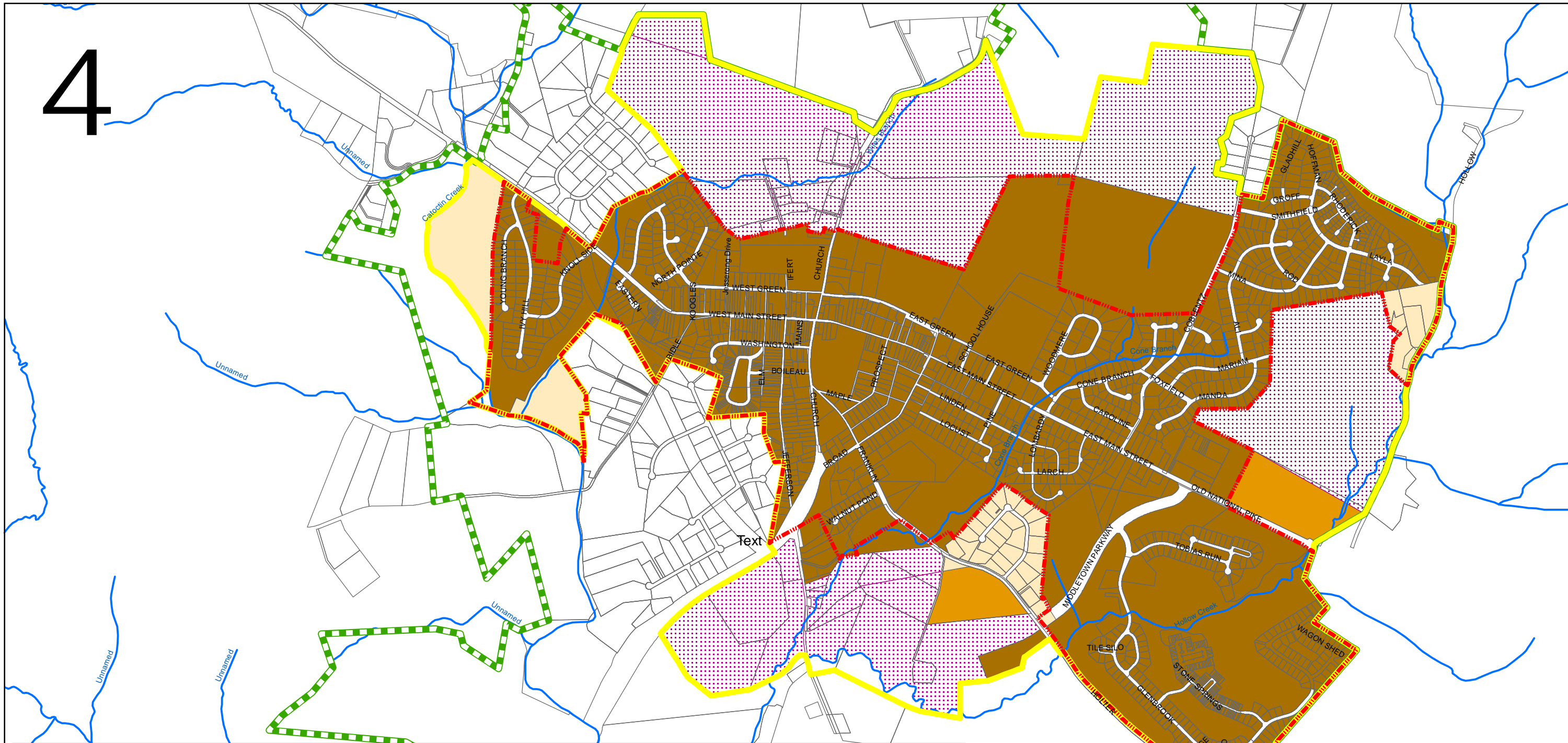
## Legend

- W-1 - Connected in Town
- W-3 - 1-3 Year
- W-4 - 4-6 Year
- W-5 - 7-10 Year
- PS - Planned Service - 11-20 Years
- NPS - No Planned Service
- Streams
- Parcels
- Town Boundary
- Growth Boundary
- Conservation Boundary



Figure 7-2

4



# Sewer Plan Map Middletown, Maryland

3/10/2010

1 inch = 1,400 feet



## Legend

- S-1 - Connected
- S-3 - 1-3 Years
- S-4 - 4-6 Years
- S-5 - 7-10 Years
- Planned Service - 11-20 Years
- NPS - No Planned Service
- Streams
- Parcels
- Town Boundary
- Growth Boundary
- Conservation Boundary

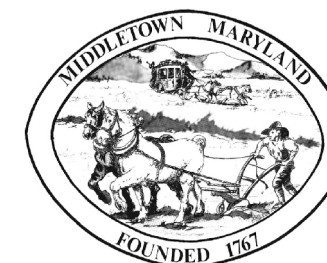


Figure 7-3

## **Chapter 8 Municipal Growth Element**

The purpose of the Middletown Comprehensive Plan’s “Municipal Growth Element” is to examine the interrelationships among land use, population and housing growth, and their impacts on public facilities and services. In this regard, Middletown Town officials will have a stronger basis for setting land use and growth management policies in the future through a better understanding of the multi-dimensional implications of change.

This chapter presents analyses of land consumption and facilities impacts that can be expected as a result of the projected growth of the town’s population from 4,198 in 2009 to Maryland Department of Planning’s projection of 5,092 in the year 2030. The growing population will require the identification and development of additional water resources, and could impact existing surface water features such as Hollow Creek and Wiles Branch. Additional development will also require an increase in school capacity and wastewater capacity.

### **Municipal Growth Goals**

- *Manage the rate of growth to be consistent with the provision of adequate services and infrastructure.*
- *Maintain the historical rural community nature of the Town.*
- *Continue to provide a sustainable quality of life for residents of the town.*

## **BACKGROUND**

Middletown is located in the western portion of Frederick County. It is a small town in a rural valley setting with outlying picturesque farms and plentiful natural and heritage resources. Major arterials for the region include U.S. Route 40-A and Maryland Route 17. Urban areas near Middletown include Frederick City to the east and the city of Hagerstown to the northwest. These urban areas represent potential places of employment for Town residents, along with Montgomery County and the District of Columbia further to the southeast, and Baltimore further to the east.

Middletown adopted a Policy on Residential Growth for all new residential development, on July 17, 2003, and a Policy on Commercial Growth for all new commercial development on June 14, 2005. The growth criteria under these policies include the provision for adequate water and sewer, adequate school capacity, a traffic impact study identifying all traffic issues related to the requested development (and the correction of those issues), usable recreation space, written Public Works Agreements, a limit on the number of residential permits per calendar year, and the payment of municipal real estate taxes for all properties requesting annexation for commercial development. These policies (attached in Appendix A) address municipal growth issues through 2015 and have established elements of an adequate public facilities ordinance. These policies have proven to be very effective in the last six years in controlling growth in the Town of



Middletown. Currently, the Town is evaluating the development of these growth policies into an Adequate Public Facilities Ordinance.

## **FREDERICK COUNTY LAND USE PLANNING**

Middletown is located in western Frederick County. Predominant land uses in the Middletown region include agriculture, commercial and low density residential development. Rural residential development in the County is located to the south, west and north of the Town, with large-scale development to the east.

Several agricultural preservation easements are currently located south and north of the town. The Haines farm north of the town's growth boundary is under the Maryland Agricultural Land Preservation Foundation (MALPF), as is the Keller farm southwest of the town's growth boundary. According to Frederick County government's website, the MALPF Program has a purpose of preserving prime farmland for future food and fiber production and is designed to pay farmers to extinguish their development rights, therefore keeping the farm in agricultural use in perpetuity. MALPF has been highly successful in Maryland as well as in Frederick County.

The Hawker farm south of the Town's growth boundary at Glenbrook is under the County's Installment Purchase Program (IPP). Frederick County began the Installment Purchase Program in 2002. The IPP program works through installment purchase agreements that pay the farmer tax-free interest over a period of 10-20 years with a balloon lump sum principle payment at the end of the term according to information provided on the County's website.

## **PRIORITY FUNDING AREAS**

Middletown has been designated a growth area in Frederick County in the Frederick County Comprehensive Plan. (add date reference). The region surrounding the Town consists of large agricultural parcels and substantial land exists for municipal growth. The twelve incorporated municipalities in the County as well as twelve unincorporated communities make up the County's Community Growth Areas which are the County's principal residential, commercial, and business centers. These areas are the best locations for future growth and development. The primary goal of this designation as Community Growth Areas is to encourage development to occur within the designated growth areas while preserving the existing character of the communities and their historic and cultural features.

Middletown has also been designated a "Priority Funding Area" (PFA) for Frederick County in the Frederick County Comprehensive Plan. (add date reference). The requirement for designating PFAs was established under the 1997 *Neighborhood Conservation and Smart Growth Areas Act* (Smart Growth) and supports the State "Visions" for growth as expressed in the 1992 Planning and Zoning Enabling Act (*Article 66B of the Annotated Code of Maryland*). PFAs are locally-designated areas targeted for eligible State funding. PFA designations include municipalities, rural villages,

communities, industrial areas, and planned growth areas to be served by public water and sewerage. The 2003 corporate boundaries of Middletown define the current Middletown municipal PFA.

The intent of the State’s “Smart Growth” legislation, as well as other recent changes to Maryland laws affecting PFAs, is to marshal the State’s financial resources to support growth in existing communities and limit development in agricultural and other resource conservation areas. The designation of new PFAs in the State of Maryland must meet minimum density, water and sewer service and other criteria outlined in the law.

It is important to note that as of October 2006, new municipal annexations seeking PFA designation must be submitted to the Maryland Department of Planning (MDP) for “PFA Certification.” According to MDP, County properties annexed into the Town that currently have PFA status, do not retain such status and do not automatically become PFAs if annexed. Annexed properties in Middletown in the last decade include property on Franklin Street that the Middletown Primary School is now located on, property on Coblentz Road that is now the 9-lot Land of Lancaster subdivision, and property to the southeast of the Foxfield subdivision upon which the town’s reservoirs are located.

**GROWTH TRENDS & PATTERNS**

Middletown dates back to the mid-1700’s when it provided agricultural related businesses and services to the nearby rural community. As shown in Table 8-1 from 1900 to 1980, the growth rate for the Town of Middletown was persistently on the rise. From 1960 to 1980, there was a significant increase in population with a 22% increase from 1960 to 1970, and a 39% increase from 1970 to 1980. This is the period in which several large residential subdivisions were started and completed. This growth rate from 1900 to 1980 is consistent with the growth in Frederick County.

The decade of the 1980’s, however, was a period of much slower population growth for the Town of Middletown. Only a 5% increase in population took place between 1980 and 1990, while for the same period the County showed a 31% increase in population. Municipal growth during the early 1980’s was constrained by limits on sewer capacity. Much of the growth occurred outside the Town in developments that used well and septic systems which began during the 1970’s and continued to be built out.

**TABLE 8-1  
HISTORIC POPULATION GROWTH**

Year	Town of Middletown		Frederick County	
	Population	% Increase	Population	% Increase
1900	665	--	51,920	--
1910	692	4	52,673	1
1920	749	8	52,541	--
1930	818	9	54,440	4
1940	839	3	57,312	5

1950	936	12	62,287	8
1960	1,036	11	71,930	16
1970	1,262	22	84,927	18
1980	1,748	39	114,792	35
1990	1,834	5	150,208	31
2000	2,668	45	199,369	33

Growth in the larger Middletown Valley Region was consistent with County growth in the 1990's. As shown in Table 8-2 the Middletown Valley Region during this time frame had a 23% population increase indicating ample development beyond the corporate limits of the Town. The Middletown Valley Region extends south of Middletown, north of Wolfsville, and includes Braddock Heights to the east and South Mountain to the west. The only other municipality included in this region is the Town of Myersville, to the north. The agricultural areas during the 1980's and 1990's were under considerable pressure from development in the Middletown Valley Region as well as other Regions in the County.

TABLE 8-2  
FREDERICK COUNTY  
POPULATION INCREASE BY PLANNING REGION\*  
1980 - 2000

<u>Municipality</u>	<u>1980</u> <u>Census</u>	<u>1990</u> <u>Census</u>	<u>2000</u> <u>Census</u>	<u>Increase</u> <u>1990-2000</u>	<u>%Increase</u> <u>1990-2000</u>
Adamstown	3,093	4,919	6,825	1,906	39%
Brunswick	10,386	12,145	14,201	2,056	17%
Frederick	40,849	59,070	78,760	19,690	33%
Middletown Valley	12,872	14,084	17,383	3,299	23%
New Market	10,627	14,903	27,604	12,701	85%
Thurmont	14,517	15,027	17,267	2,240	15%
Urbana	7,605	9,339	10,686	1,347	14%
Walkersville	14,843	19,344	22,605	3,261	17%
<b>TOTAL</b>	<b>114,792</b>	<b>150,208</b>	<b>195,331</b>	<b>45,123</b>	<b>30%</b>

\*Planning Region Population totals reflect consolidation of Census Tract Population estimates, and may differ slightly from boundaries as defined in Regional Plans

Source: U.S. Census 2000 & Frederick County Planning Department 2008

In comparison with the other 11 municipalities in Frederick County, Table 8-3 shows that Middletown, with the sixth largest population, had the fifth largest percent increase in population during the period of 1990 - 2000. This increase from 5% growth during the 1980's to 45% growth during the 1990's was due to constant residential development in the northeast section of Town and completion of mandatory upgrades to the municipal water and sewer facilities. Based on population estimates from Frederick County Planning Department, as shown on Table 8-4, the growth rate in Middletown from 2000 thru the present (2009) has been even greater at approximately 52%.

**TABLE 8-3**  
**1990-2000 POPULATION CHANGE**  
**FREDERICK COUNTY & MUNICIPALITIES**

<u>Municipality</u>	<u>1980 Census</u>	<u>1990 Census</u>	<u>2000 Census</u>	<u>Increase 1990-2000</u>	<u>%Increase 1990-2000</u>
Brunswick	4,572	5,117	4,894	(223)	-5%
Burkittsville	202	194	171	(23)	-12%
Emmitsburg	1,552	1,688	2,290	602	36%
Frederick City	28,086	40,148	52,767	12,619	31%
Middletown	1,748	1,834	2,668	834	45%
Mt. Airy (F.C.part)	540	1,497	2,967	1,470	98%
Myersville	432	464	1392	918	198%
New Market	306	328	427	99	30%
Rosemont	305	256	273	17	7%
Thurmont	2,934	3,398	5,588	2,190	64%
Walkersville	2,212	4,145	5,192	1,047	25%
Woodsboro	506	513	846	333	65%
<b>Municipal Total</b>	<b>43,395</b>	<b>59,582</b>	<b>79,465</b>	<b>19,883</b>	<b>33%</b>
<b>Non-Municipal</b>	<b>71,397</b>	<b>90,626</b>	<b>120,223</b>	<b>29,597</b>	<b>33%</b>
<b>Frederick County</b>	<b>114,792</b>	<b>150,208</b>	<b>195,277</b>	<b>45,069</b>	<b>30%</b>

Source: County & Municipal Building Permits Issued (2000). Estimates include the Frederick County portion of Mt. Airy

Note: Areas of population decline reflect no building activity and a declining household size.

**Table 8-4**  
**MIDDLETOWN POPULATION ESTIMATES 2001-2009**

<u>Date</u>	<u>Total Estimated Housing Units</u>	<u>Total Estimated Population</u>	<u>Population Percent Increase</u>
Jan. 2001	1,017	2,768	-
Jan. 2002	1,084	2,951	6.6%
Jan. 2003	1,189	3,237	9.7%
Jan. 2004	1,348	3,655	12.9%
Jan. 2005	1,408	3,833	4.9%
Jan. 2006	1,427	3,882	1.3%
Jan. 2007	1,475	4,013	3.4%
Jan. 2008	1,510	4,110	2.4%
Jan. 2009	1,543	4,198	2.2%
<b>CHANGE</b>	<b>526</b>	<b>1,430</b>	<b>51.7%</b>

Source: Frederick County Department of Planning, 2009

*Future Population Growth*

Population growth for the Town of Middletown from 2010 to 2030 is projected to increase by approximately 892 according to projections received from the Maryland Department of Planning. The projected annual average growth rate between 2010 and 2030 will be approximately 5%. The most substantial increases for Middletown are expected from 2015 to 2020 as additional water sources become available to serve planned developments.

Table 8-5  
FUTURE POPULATION GROWTH

<u>Date</u>	<u>Total Population</u>	<u>Population Percent Increase</u>
2010	4200	-
2015	4423	5.3%
2020	4646	5.0%
2025	4869	4.8%
2030	5092	4.6%
<b>CHANGE</b>	892	21.2%

Maryland Department of Planning, 2009

*Assumptions for Population Projections*

Population projections for Middletown are based on the following assumptions:

- Middletown is expected to grow at a slower rate than other municipalities in Frederick County from 2010 to 2030 due to water supply constraints.
- Population projections account for new infill development in Middletown, which includes completion of the Foxfield and Glenbrook subdivisions, Old Town Villas, Caroline’s View Apartments, Chesterbrook Apartments expansion, and the Coblenz Neo-Traditional Residential development.
- Population projections assume that construction of dwelling units for all developments will occur only after adequate water supply is available.
- Population projections assume Middletown’s average household size will follow the Maryland Department of Planning’s (MDP) projected trend for average household size for Frederick County (a decrease from 2.78 persons per household in 2008 to 2.65 persons per household by 2030 for Middletown).
- Population projections for the year 2030 are based on MDP’s Average Development Pressure Methods (without High and Low)<sup>1</sup> with alterations made based on conversations with staff at MDP taking into account water supply issues.

<sup>1</sup> See Maryland Municipal Projections Methodology in the Appendix B for more information.

**INFILL AND REDEVELOPMENT**

*Infill & Redevelopment Capacity*

Residential infill potential examines a theoretical capacity associated with vacant and underutilized land in the Town. Infill capacity is based on the number of vacant lots currently available for development within the municipal Priority Funding Area for Middletown. Potential yield in Middletown was determined by identifying vacant and underutilized parcels using aerial photography in the Town’s GIS system. These sites constitute lots of record and are expected to develop within the planning period from 2010 to 2030.

Infill capacity includes the Old Town Villas property, the Caroline’s View Apartments property, expansion at the Chesterbrook Apartments, and completion of construction at Glenbrook and Foxfield. The Coblentz property, a neo-traditional residential development, yet to be developed, is also included in this capacity estimate. The estimated total infill and redevelopment potential for Middletown by 2030 is an additional 219 residential dwelling units (see Table 8-6).

Table 8-6  
INFILL AND REDEVELOPMENT POTENTIAL

<b>Land Use</b>	<b>Development</b>	<b>Units</b>	<b>Additional Population</b>
<b>Approved Final Plats</b>			
R-3	Glenbrook - Townhouses	16	44.8
R-1	Glenbrook - Single Family	20	54.0
R-20	Foxfield - Active Adult	23	46.0
R-20	Foxfield - Single Family	24	62.4
<b>Existing Lots of Record</b>			
R-1	204 Lombardy	1	2.7
R-1	108 Linden Blvd.	1	2.7
R-1	217 East Main Street	1	2.7
R-1	500 East Main Street	1	2.7
R-1	502 East Main Street	1	2.7
R-1	201 Franklin Street	1	2.7
R-1	7523 Coblentz Road	2	5.4
R-2	28 Walnut Street	1	2.7
R-2	Walnut Street	1	2.7
R-3	116 East Main Street	1	2.8
R-3	211 South Jefferson Street	1	2.8
TC	406 West Green Street	1	2.8
<b>Approved Site Plans</b>			
R-3	Caroline’s View Apartments	9	25.2
R-1	Old Town Villas	4	10.8
R-3	Chesterbrook Apartments	16	44.8
<b>Concept Plans</b>			
R-3	Coblentz - East Green Street	94	263.2
<b>Totals:</b>		<b>219</b>	<b>586.6<sup>1</sup></b>

<sup>1</sup> Based on population projections of 2.6 for R-20 zoning, 2.7 for R1 and R2 zoning, 2.8 for R3 zoning and TC zoning districts.

### *Assumptions for Infill & Redevelopment*

Infill and redevelopment capacity for Middletown is based on the following assumptions:

- Infill capacity accounts for new infill development in Middletown, which includes Glenbrook and Foxfield (presently being developed), the Old Town Villas and Coblentz subdivisions (potential new developments), and other infill lots within the existing Priority Funding Area.
- Build-out capacity for infill and redevelopment assumes that at least 25% of the Coblentz subdivision will be used for roads, open space, and other uses unrelated to dwelling units.
- Infill capacity assumes development of the Coblentz property, Chesterbrook Apartments expansion, and Caroline’s View Apartments based on current Town residential zoning (R-3), and development of the Old Town Villas based on Town residential zoning of R-1.
- Commercial development assumes an equated amount of allocable water per tap as calculated by the Town of 300 gallons per day (gpd/unit).
- Population estimates assume Middletown’s average household size will decline over time proportionate with the MDP projected average household size for Frederick County, decreasing from 2.78 persons per household in 2000 to 2.68 persons per household by 2030.

## **GROWTH & ANNEXATION AREA PLAN**

The Middletown Growth and Annexation Area (Growth Area) has been refined during this comprehensive planning process to reflect new Town goals in relation to annexation, growth, and future development. Therefore the Growth Area, as defined in the 2003 *Middletown Comprehensive Plan*, has been somewhat resized and altered to a small extent. See Figure 8-1, Growth Boundary Map, following at end of chapter.

### ***Growth Area Analysis***

The total acreage for the Growth Area is roughly 655 acres; not including the subdivisions already established in the County (Remsburg Acres, the Ifert subdivision and Middletown Manor on Coventry Drive) and contains 21 parcels. As shown on Figure 8-1 Growth Boundary Map, the growth boundary represents the Town’s long range growth expectations. Much of the Growth Area is comprised of larger parcels, some of which are already developed.



**Table 8-7  
PROPERTIES IN GROWTH BOUNDARY  
GREATER THAN 2 ACRES**

<b>Tax ID</b>	<b>Acreage</b>	<b>Map</b>	<b>Parcel</b>	<b>County Zoning</b>
1103161021	6.54	65	216	Ag
1103143856	45.2	65	206	Ag
1103139379	2.26	65	140	Ag
1103157474	30.3	65	183	Ag
1103157660	12.41	65	208	Ag
1103155528	7.56	65	183	Ag
1103155501	3.42	65	183	Ag
1103143937	8.84	65	78	Ag
1103133729	3.36	65	132	Ag
1103155633	20	65	184	Ag
1103158012	26.58	65	210	Ag
1103143880	2.43	65	128	R1
1103154696	3.9	55	51	R3
1103124681	105.6	55	92	Ag
1103140547	13.81	55	46	Ag
1103144364	3.28	55	93	Ag
1103124703	2.3	55	103	Ag
1103128636	48.8	55	53	Ag
1103165531	70.07	55	48	Ag
1103135632	93.87	55	54	Ag
1103142582	144.98	65	12	R3
<b>Total</b>	<b>655.51</b>			

Five of the parcels in Table 8-7 are parkland and a town wastewater treatment plant and total 97 acres. Table 8-7 also includes a parcel that occupies a church on 20 acres of land. Fifteen Growth Area parcels, indicated as green in Table 8-7, have the potential for new development. These parcels total approximately 538 acres and are currently being used for agricultural purposes.

***Annexation & Growth Area***

Middletown’s Growth Area has the potential for approximately 829 dwelling units with an estimated population of 2,196 using the Town’s R-20 zoning household size. Additional water and sewer demand associated with this level of growth is 248,700 gallons per day (gpd) respectively (see Table 8-9). Twenty-six acres in the growth area are designated on the 20-Year Plan as commercial land use along Route 40-A.

All land within the Middletown Growth Area currently has a county land use plan designation other than Agricultural/Rural, which generally indicates that development would be appropriate on these properties within a 20-year timeframe subject to

completion of other staging mechanisms (according to the Frederick County Middletown Region Plan adopted December 1997). The vast majority of residentially designated land within the Growth Boundary is zoned Agricultural on the County’s zoning map.

Within the Middletown Growth Area, the annexation process will be the primary staging mechanism used by the Town in relation to its growth. Annexation agreements negotiated between the Town and the petitioner will address development phasing, development limits, and responsibilities for public facilities and transportation improvements.

Middletown’s Comprehensive Land Use plan acknowledges that these properties may be incorporated into the Town at some future date. However, annexation of these properties will not occur until water and sewer capacity issues associated with infill development within the current corporate limits are adequately addressed. In the meantime, the Town would request that the County hold these properties in agriculture and conservation zoning, thus limiting the potential for premature, low-density development on well and septic systems. Middletown has several reasons for this position including:

- Protecting Middletown’s unique identity by controlling the quality of development occurring around the Town corporate boundaries within the Conservation Boundary;
- Requiring development site design that includes mandatory open space requirements;
- Enabling densities for new development that support Smart Growth **if** water resources are adequate;
- Requiring appropriate water-saving construction materials for new development to protect water quantity;
- Requiring “Best Management Practices” (BMPs) for stormwater management to protect and enhance water quality in potential receiving waters;
- Ensuring appropriate expansion of water and wastewater treatment systems to accommodate new development; and
- Eliminating the potential for future failing septic systems.

### ***Annexation Policies***

Annexation of properties located within Middletown’s Growth Boundary will be subject to site specific annexation agreements. The following annexation policies will apply to all future annexations:

1. Proposed annexation areas will be economically self-sufficient and will not result in larger municipal expenditures than anticipated revenues, which would indirectly burden existing Town residents with the costs of services or facilities to support the area annexed.
2. The costs of providing roads, utilities, parks, other community services will be borne by the developer gaining the most value from such facilities through income, profits, or participation.

3. Specific conditions of annexation will be made legally binding in an executed annexation agreement. Such agreements will address, among other things, consistency with the goals, objectives and recommendations contained in the Middletown Comprehensive Plan, planning, zoning and development expectations, responsibility for appropriate studies, and preliminary agreements concerning responsibilities for the cost of facilities and services provided by the Town.
4. For annexations involving larger parcels of land, the Burgess and Commissioners and/or the Planning Commission may require appropriate impact studies, including a traffic impact study, fiscal impact study and an environmental impact assessment that addresses the potential impacts of the proposed annexation and planned development on the environment of the site and surrounding area.
5. Applicants for annexation shall pay the cost of completing all studies related to expanding capacity in existing public facilities and/or services and fund needed capacity expansions.
6. Proposed development must provide 300 gallons of allocable water per unit, and may be required to cover all costs of physical connection to the Town water and sewer system.
7. Proposed development must pay a proportionate share of cost to upgrade/increase sewer capacity, based on all factors at time of Water/Sewer certification.
8. Proposed residential development must provide usable recreation space, as determined by the Town's Planning Commission, at 0.05 acres/unit for the total number of units in the development.
9. Proposed residential developments will receive no more than 20 residential units per year. However, the Town shall not approve more than 30 residential permits per calendar year for all residential development within the Town, and all residential permit allocations for each residential development will be determined by the Town.
10. Proposed commercial development may receive Plan approval from the Town for uses creating a trip generation rating at or above level D as defined in the most recent edition of the Highway Capacity Manual.
11. Proposed commercial development must provide usable contiguous recreation space, as determined by the Planning Commission, at 0.2 acres/gross acreage, which may not be allowed to include required setback, Forest Conservation areas, stormwater management areas, or buffer areas.
12. All property requesting annexation for commercial development shall pay municipal real estate taxes at time of annexation.

Prior to annexing any land area not included in the Growth Boundary Plan, the Town will first consider appropriate amendments to this Comprehensive Plan and will follow the procedural requirements for comprehensive plan amendments and annexation established in State law (Articles 66B and 23A), including those of Maryland House Bill 1141. This will ensure that the proposed annexation is consistent with the goals and objectives of this comprehensive plan, that appropriate consideration has been given to the adequacy of public facilities and services, and that County and State agencies are afforded an opportunity to comment on the proceedings.

***Assumptions for the Growth Boundary Area***

The Growth Boundary Area analysis for Middletown is based on the following assumptions:

- Growth Boundary Area capacity accounts for potential new development on existing agricultural properties and vacant land in the Growth Boundary Area, totaling 538 acres.
- Build-out capacity for these properties utilizes the MDP methodology, which assumes that 25% of the land will be used for roads, open space, and other uses unrelated to dwelling units or commercial/industrial buildings.
- Growth Boundary Area capacity assumes a dwelling unit density based on current Town residential R-20 zoning, which requires a minimum lot size of 20,000 square feet.
- The resulting total developable area in the Middletown Growth Boundary Area is approximately 403.5 acres. This equates to 829 dwelling units, and a commercial area of approximately 27 acres.
- Small, previously-developed lots in the Growth Boundary Area do not have development potential but may require water and sewer service.
- Growth Boundary Area population projections assume Middletown’s average household size will decline in proportion with the MDP projected average household size for Frederick County over time.

**IMPACTS OF GROWTH**

Population growth will impact public services and facilities provided by Middletown and Frederick County. Table 8-8 summarizes the potential impacts of growth from infill and redevelopment in the planning period on public facilities and services (Town and County) based on population projects. Impacts include projected dwelling units from infill and redevelopment, projected population increases, sewer and water demand, as well as other public facilities and services such as schools, libraries, police, recreation land demand, and fire and rescue (emergency services).

**Table 8-8  
IMPACTS OF INFILL/REDEVELOPMENT GROWTH ON PUBLIC FACILITIES  
& SERVICES BASED ON POPULATION PROJECTIONS THROUGH 2030**

<b>Classification</b>	<b>Infill/Redevelopment Areas</b>
<b>Dwelling Units</b>	<b>219</b>
<b>Population</b>	<b>587</b>
New Residential Water/Sewer Demand (gpd)	65,700
New Non-Residential Water/Sewer Demand (gpd)	860
<b>TOTAL</b>	
New Residential/Non-Residential Water/Sewer Demand (gpd)	66,560
<b>School (new students)</b>	<b>96</b>
- High School	42
- Middle School	26

- Elementary/Primary School	28
<b>Library (gfa)</b>	440
<b>Police (personnel)</b>	1
<b>Recreation Land (acres)</b>	none
<b>Fire &amp; Rescue</b>	
- Personnel	Info still needed
- Facilities (gfa)	Info still needed

***Assumptions for Impacts from Infill & Redevelopment Areas***

Impacts from Middletown’s infill growth utilize the following sources and assumptions:

- Future population and dwelling unit projections from 2010 to 2030, as described in this chapter;
- Middletown growth policies which require developer to provide 300 gallons per day of water and sewer per unit;
- Maryland Department of Planning (MDP) multipliers for recreation land;
- Frederick County Public Schools multiplier for school enrollment;
- Frederick County Public Library (facility standards);
- Frederick County Sheriff’s Department (personnel multiplier);
- International City Council Management Association (fire personnel multiplier);
- National Planning Standard (fire facility square footage multiplier).

***Implications of Growth***

The most significant implications of growth (summarized in Table 8-8) are impacts on water and wastewater demand, school facilities, and police. Large-scale developments with significant potential impacts might be required to conduct a fiscal impact analysis to determine if revenues will cover the cost of public services and facilities.

**Public Schools:** The impact of Middletown’s growth on public school facilities during the planning period (by 2030) is illustrated in Table 8-8: a total of 96 new students: 28 elementary school students; 26 middle school students; and 42 high school students. The high school population will experience the largest increase in students by 2030, potentially severely impacting Middletown High School. The facility, and the services it provides, will require expansion to serve the increased demand. The 2009 high school enrollment already exceeds the state rated building capacity.

**Library:** Residents of the Middletown Valley are located within a 6-mile drive of the Middletown branch of the Frederick County Public Libraries, which occupies a total of 2,500 square feet. Currently library facilities will not adequately serve the needs of the projected increase in Middletown’s population. However, the County’s most recent Comprehensive Plan anticipates the need for expansion of the Middletown public library facility by constructing a new facility of 15,000 square feet, which is the current standard for the County, to meet the level of service necessary for the Middletown area.

**Recreation Land:** Between 2010 and 2030, an additional 587 people are projected to be added to the Town from infill development. Based on the State's ratio of 30 acres per every 1,000 people, and the current park acreage in the town (59 acres), Remsburg Park outside of town (88 acres), and including the County Park (78 acres), no additional recreation land will be required in the Town by 2030 to serve additional demand for recreation land as a result of the projected increase in population.

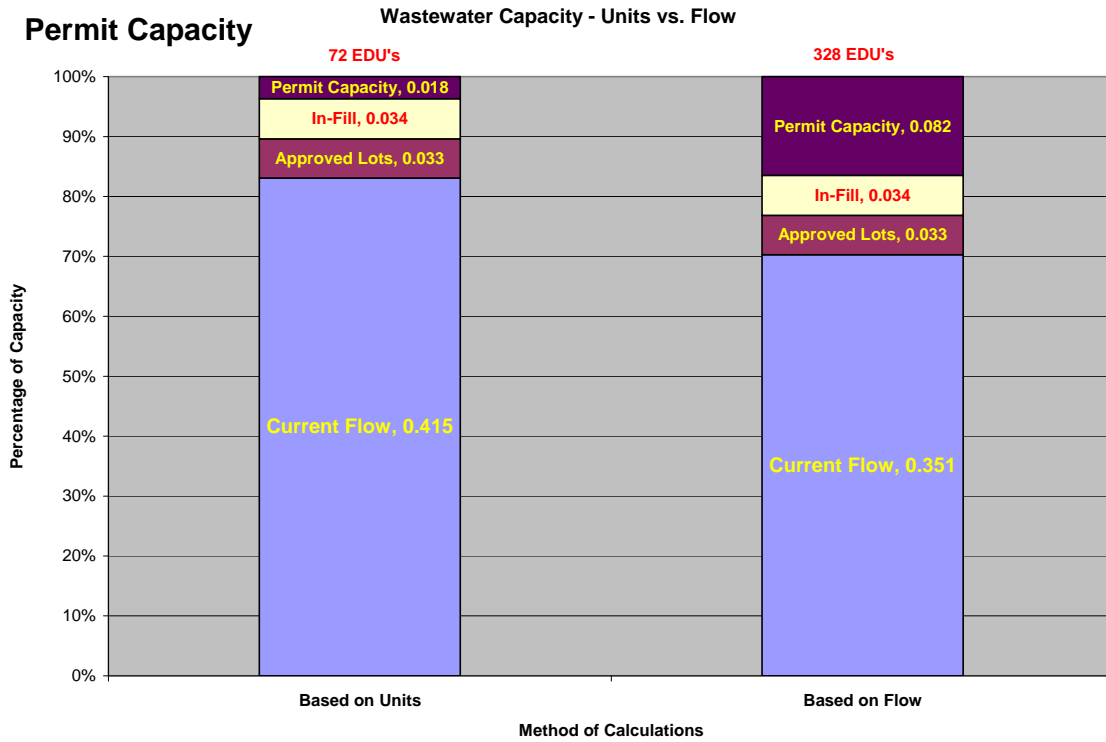
**Public Safety:** Fire and emergency medical services are provided to Middletown residents through the Middletown Fire and Ambulance Company. Police protection in Middletown is provided by the Frederick County Resident Deputy service.

As illustrated in Table 8-8, police and emergency services will be impacted to a moderate degree as a result of the projected increase in Middletown's population by 2030. Based on industry standards for calculating staffing levels of emergency services personnel, one additional police person will be needed by 2030 to serve the projected increase in population. The additional police person will need to be added through the Frederick County Resident County Deputy Program. Information is still needed for the population increase on fire and ambulance personnel and facilities.

**Additional Facility Needs:** Middletown recognizes that any gain in population will require an equivalent increase in municipal meeting space, Town administrative staff, and municipal services (street repairs, trash collection, etc.). The existing Town Hall is currently adequate to serve the needs for hearing and meeting space. A review of staffing levels for administration should be conducted by the Town annually to determine adequacy. In addition, Middletown should review the need to expand the Public Works department. Expansions of Town staff and municipal services can be made and funded as the population and assessable tax base in the Town expands.

**Water and Sewer:** According to Town and Frederick County sources, the Middletown wastewater treatment plants (WWTP) have an existing design capacity of 600,000 gpd and permit capacity of 500,000 gpd. The average flow in 2008 was 340,000 gpd. Regarding permit capacity, as of February 2009, the Town is at 96% capacity based on calculation by units and 84% capacity based on calculation by flow according to the *Middletown Wastewater Capacity Management Plan 2009*. In terms of design flow, the Town is at 80% capacity based on calculation by units and 70% capacity based on calculation by flow. Based on the current permitted capacity of 500,000 gpd, capacity is not adequate for more than 72 EDU's (equivalent dwelling units) outside of the units accounted for in the in-fill projections provided for in the management plan. It is recommended that the Town consider increasing the NPDES Permit for the East WWTP to the full design capacity of 350,000 gpd at the time of permit renewal in 2013. Appendix C, *Middletown Wastewater Capacity Management Plan 2009*, is attached to this Plan with all appropriate back up and calculations.

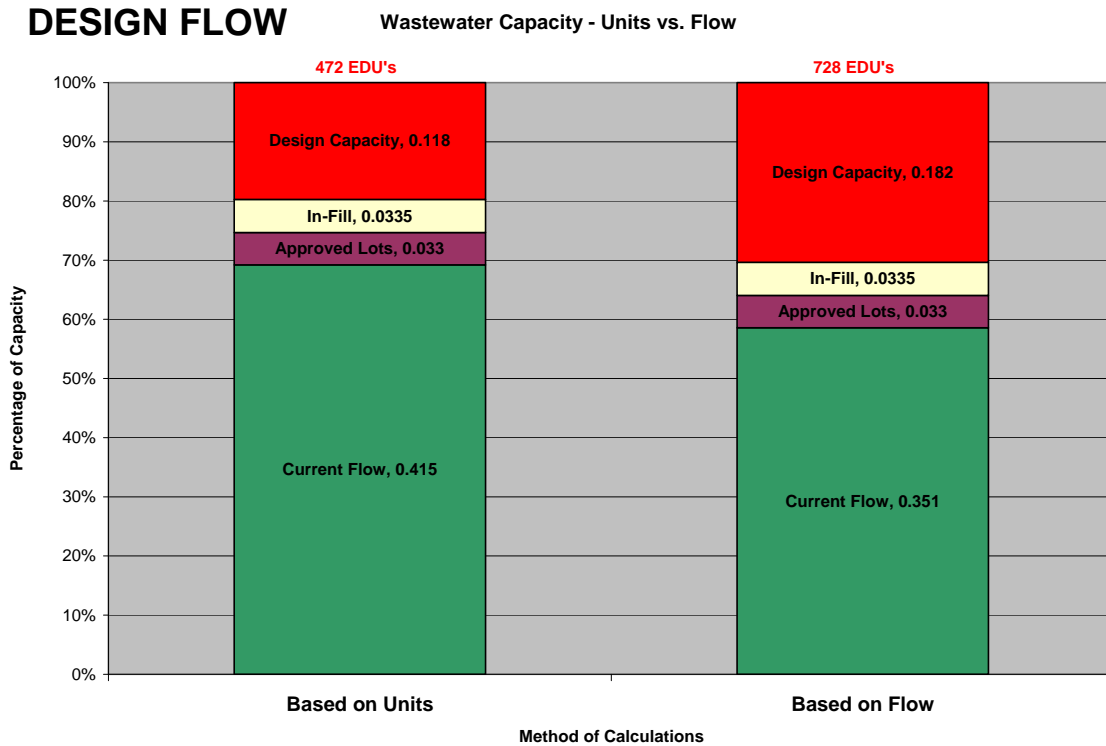
Figure 8-2  
WASTEWATER PERMIT CAPACITY



Source: Wastewater Capacity Management Plan 2009, Burgess and Commissioners of Middletown, MD



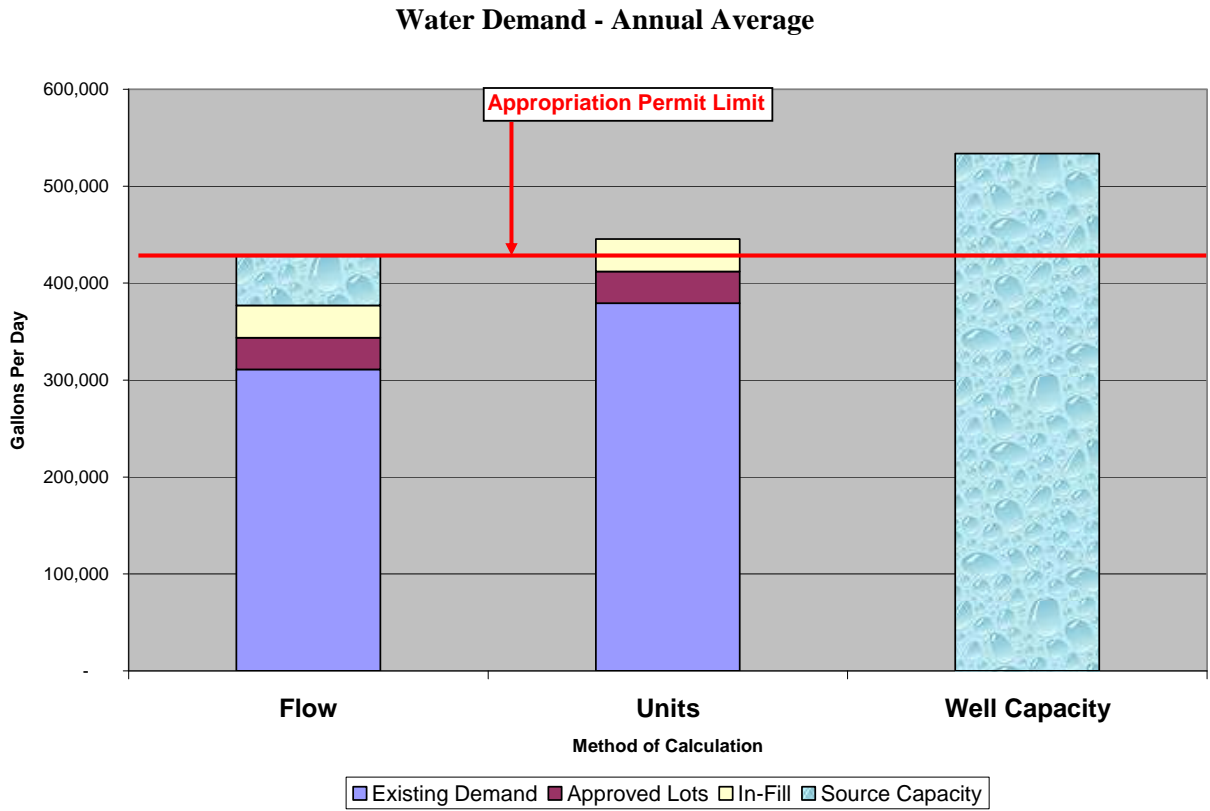
Figure 8-3  
WASTEWATER CAPACITY DESIGN FLOW



Source: Wastewater Capacity Management Plan 2009, Burgess and Commissioners of Middletown, MD

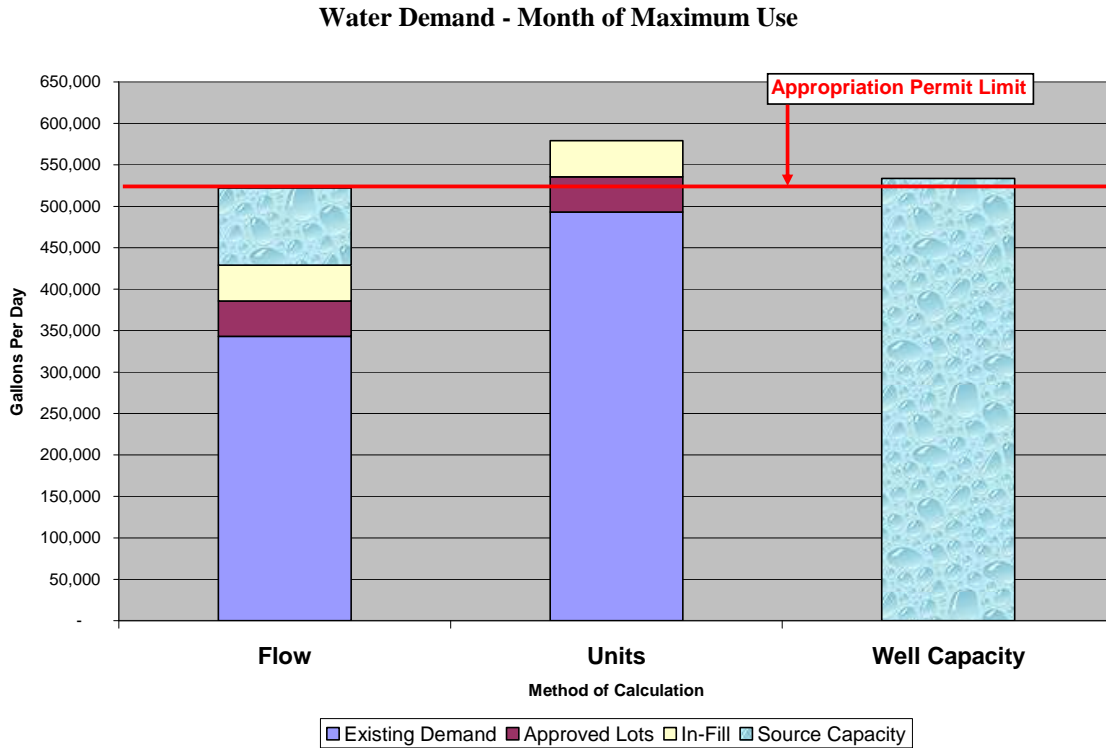
Additional water capacity will be required during the planning period of 2010 to 2030, as water and sewer demand are each projected to increase as a result of residential and non-residential (commercial and/or industrial) infill and development. The combined water appropriation permits limits for withdrawal in the Hollow Creek, Cone Branch, and Catoctin watersheds is 427,900 gpd (Annual Average) and 522,000 gpd (Month of Maximum Use), according to the *Middletown Water Supply Capacity Management Plan 2009*. The current capacity of the Town’s water supply as of February 2009, during drought conditions, has been determined by MDE to be 533,640 gpd for month of maximum use (MOMU). The Town is at 88.1% capacity based on calculations by flow and 104.1% capacity based on calculations by units for Annual Average. Based on Month of Maximum Use, the Town is at 82.2% capacity based on calculations by flow and 110.9% capacity based on calculation by units. Both the Town’s Annual Average and Month of Maximum Use capacities, based on units, exceed 100%. The Town of Middletown has entered into a Consent Agreement with MDE to address the over allocation of water. Appendix D, *Middletown Water Supply Capacity Management Plan 2009*, is attached to this report with all appropriate back up and calculation.

Figure 8-4  
WATER SUPPLY DEMAND – ANNUAL AVERAGE



Source: Water Supply Capacity Management Plan 2009, Burgess and Commissioners of Middletown, MD

Figure 8-5  
WATER SUPPLY DEMAND – MONTH OF MAXIMUM USE



Source: Water Supply Capacity Management Plan 2009, Burgess and Commissioners of Middletown, MD

Development of the Growth Area will require additional upgrades to water and wastewater treatment systems. Water system upgrades will include new wells, storage tanks, and distribution facilities. The East WWTP was designed so that it can be expanded up to 700,000 gpd, subject to permit requirements. Construction of new aeration tanks and clarifiers would be required to complete this expansion. While Middletown is capable of providing wastewater service to its current population, expansion and upgrades will be required to meet its 2030 demand.

***Potential Impacts Associated with the Growth & Annexation Area***

Annexation of most of the Middletown Growth Area is not anticipated within the planning period from 2010 to 2030. The Middletown Growth Area is approximately 538 acres, not including the established subdivisions outside of the town limits, land reserved for parkland and a 20-acre church parcel.

**Table 8-9  
IMPACTS OF MIDDLETOWN GROWTH ON PUBLIC FACILITIES & SERVICES  
GROWTH AREA PLANNING PERIOD – BEYOND 2030**

<b>Classification</b>	<b>Growth Boundary Areas</b>
<b>Dwelling Units</b>	<b>829</b>
<b>Population</b>	<b>2,196</b>
New Residential Water/Sewer Demand (gpd)	248,700
New Non-residential Water/Sewer Demand (gpd)	2,226
<b>School (new students)</b>	<b>363</b>
- High School	157
- Middle School	99
- Elementary/Primary School	107
<b>Library (gfa)</b>	1,650
<b>Police (personnel)</b>	2
<b>Recreation Land (acres)</b>	None
<b>Fire &amp; Rescue</b>	
- Personnel	Info still needed
- Facilities (gfa)	Info still needed

The hypothetical impacts for the Middletown Growth Area are calculated based on potential additional dwelling units and population. The Growth Area includes a potential total of 829 dwelling units. In addition, population is estimated at 2,196 new Town residents.

Accommodating growth in the Growth Area will require an expansion of school facilities, increases in personnel for police services, and water and sewer demand will increase substantially. Increases might also be needed in personnel for fire and rescue emergency services. Development of the Middletown Growth Area will require new water and wastewater systems.

**The Middletown Comprehensive 20-Year Land Use Plan, (Figure 8-6).**

The Land Use Plan is a set of proposals including objectives, map designations and suggestions for the Town to enact regulating changes. Also included is a proposal for a comprehensive zoning map which will implement the proposals in the Comprehensive Plan. Any discussion of the land use plan must include identification of issues and formulation of objectives and policies.

The Land Use Plan Concept

The overriding concepts behind the Middletown Comprehensive Plan are: for the Town of Middletown to be the focus for the development which takes place in the Region; and, that Middletown remains an identifiable and distinct community. This Municipal Plan coincides with the Frederick County Comprehensive Plan’s “Community Growth Area”. This concept prescribes that development should be located in and around the existing communities where public facilities and services are in place to efficiently serve new development, and where these communities already have a sense of identity and

community focus. Middletown realizes its importance to the Middletown Planning Region and shares the responsibility for growth management in the Region. It is the intent of this Plan that all new major growth in the vicinity of the Town will first be considered for annexation in cooperation with the Frederick County Board of Commissioners.

To this end, the Town has adopted a growth boundary that includes lands outside the Town boundaries which shall be considered for annexation. It is the intent of the Plan that all properties located within the growth boundary are to develop according to the needs and timing of the Town. It is also the intent of the Plan that properties beyond the growth boundary are not to be developed for new residential, commercial or industrial use except as permitted by existing County zoning. Any rezonings or water and sewer changes outside the corporate limits should be done in full cooperation with the Town.

The ultimate growth limits for the Town of Middletown as defined by this Plan include the Town boundaries to extend ultimately west to Catoctin Creek, generally south along Hollow Creek, east to Hollow Road, and north to those properties which would include a potential northern parkway or collector. These growth limits are intended to be a limit to the eventual expansion of the Town boundaries. Properties within this growth boundary are not necessarily appropriate for annexation or development within 5 or even 20 years, but will be appropriate for development as facilities and services are in place to serve this area. Of prime importance is that major new areas will not be added to the Town ahead of a road system to support the development. New annexations will not be encouraged which will increase the congestion in downtown Middletown. It is envisioned that new annexations will occur from east to west in order for the roads to be built which will carry traffic to Frederick and Interstate 70 to the east.

Middletown desires to remain as a distinct community. In order to ensure this, the Plan proposes a greenbelt or conservation boundary around the growth boundary. The Town's definition for its conservation boundary as shown on Figures 8-1 and 8-6 is: a greenbelt around the designated growth area that defines the community and maintains its rural character, and limits its growth. All new development will be required through the subdivision review process or annexation process to reserve or dedicate lands for open space. The other intent of the greenbelt is to look at the ability to secure water recharge easements on properties in the greenbelt which are under agricultural preservation easements.

### Plan Designations

Plan designations are the proposed land use categories for use by the Town. Plan designations are not specific zoning classifications which include specific zoning regulations, but are guides as to future land uses. In some cases, the zoning and plan designations will correspond but in other cases, the zoning envisioned by the plan designation is not applied until other factors such as community facilities and roads are in place. The proposed zoning changes are designated in Figure 8-7, Proposed Zoning Map. As shown in the text box above the legend on the map, there are five areas in the Town of

Middletown that zoning changes are proposed for. More specific information regarding these changes is referred to in the text below.

### Residential

The predominate Land Use Plan category is Medium Density Residential. Medium Density Residential is designated for those areas currently in Town which have previously been designated as Low Density Residential R-1 or zoned as R-2 Residential. The density of development in the Medium Density Residential areas is approximately 4-7 dwelling units per acre. The compatible zoning categories for the Medium Density Residential designation are R-1 Residential with a minimum lot size of 10,000 sq.ft, and R-2 Residential with a minimum lot size of 6,000 sq. ft. Medium Density Residential areas include the newer subdivisions of Glenbrook and portions of Cone Branch Estates and Foxfield.

High Density Residential which has a maximum density of 6 - 11 units per acre is designated for most of those areas in the middle of Town which have R-3 Residential zoning and/or were previously designated on the Town Plan as High Density Residential. High Density Residential is designated for the Jefferson Village development due to the existing zoning and development density. An additional area shown for High Density Residential is the Chesterbrook Apartments. There are eleven properties on the south side of Main Street in the 100 block that are proposed to be rezoned from R-3 to R-1. An additional property on the south side of Main Street in that same block is proposed to be rezoned from R-3 to R-2. On the north side of the 100 block of Main Street, six properties are proposed to be rezoned from R-3 to R-1, and three properties are proposed to be rezoned from R-3 to R-2. Additionally, two properties on Green Street adjacent to the Main Street properties are proposed to be rezoned from R-3 to R-2.

A Low Density zoning district was created in 1988 in order to give the Town more of a transition from the rural densities found outside of town with the more concentrated development densities in Town. The corresponding zoning classification for the Low Density Residential Plan category is the R-20 Residential zone with an average minimum lot size of 20,000 sq.ft. This is to be located on most of the land within the unincorporated growth boundary. Development in the Low Density Residential area is proposed at approximately two dwelling units per acre, but may include increased levels of density through flexible design of subdivisions that minimize the impact on municipal resources.

The Neo-Traditional Residential (NTR) overlay zoning district was created in 2008 which is intended to permit planned development in the R-3 zoning district. This zoning district has been applied to the Coblenz property on the north side of Green Street adjacent to the school complex. The placement of an NTR district must provide for appropriate vehicular accessibility to major thoroughfares which service the community and surrounding area. Green Street and nearby Route 17 provide that accessibility, and the property is near to the center of town which is appropriate for a higher density planned development.

Commercial:

Commercial land uses in Middletown are in the General Commercial (GC), the Town Commercial (TC), and the Service Commercial/Light Manufacturing districts. Regardless of which district commercial development is located in, the commercial businesses are expected to be of a size and scale that fits in with the existing commercial establishments and the historical context of the Town. Commercial businesses in the TC district are dependent on the character of the older development and restricted parking that is generally available in these areas of Town. The GC businesses are also dependent on the character of the portion of Town in which they are located; however more flexibility is available due to the various locations of the GC districts in town. Some GC districts are located in the older area of Middletown and have many of the limitations generally associated with the TC, while other GC districts are located in newer areas of Town without the restrictions of existing historic development. The SC/LM district is intended to provide areas for business services, light manufacturing, and commercial uses that are relatively nuisance free and compatible with surrounding residential and commercial uses. Commercial development in Middletown is therefore influenced by both the characteristics of the area in which it is to be located as well as by the standards adopted for the district in the Middletown Zoning Ordinance.

A new commercial zoning district was established in the Town's zoning ordinance in 2004 called the MB – Mixed Business District. The Mixed Business district is intended to provide a park-like setting for a community of small to medium sized businesses on a planned tract of land. Unlike the other commercial zoning districts, this district includes more specific performance standards that must be adhered to in the zoning ordinance. This zoning district is not yet reflected on the zoning map of the Town.

Factors such as the location of the commercial development in relation to surrounding uses and the standards for the various commercial zoning districts in the Town ordinance should be considered during future annexations and rezoning requests as the Town addresses the need for additional commercial zoned acreage within the Town to meet the consumer needs of the growing municipal population.

General Commercial (GC) District: This commercial zoning district is defined in the Middletown Zoning Ordinance as intended to provide areas for general commercial activities that service the needs of the entire community and the surrounding area. It also states that such areas should be located such that stores and commercial activities can be grouped together in an attractive and convenient manner that will not infringe on residential areas. This district is also required to be on major thoroughfares in order to provide for vehicular accessibility. In keeping with these requirements, Middletown has five GC zoned areas in town. (1) One located in the center of Town, extending from the Main Street/Church Street intersection northward on the east side of North Church Street. (2) Another GC area is located on West Main Street and Walnut Street in the vicinity of an existing furniture sales business. (3) GC also includes the Town Centre Shopping Center on East Main Street, (4) includes the golf course restaurant and Pro Shop in the Glenbrook development that is located off the Middletown Parkway and an area off the



parkway just south of East Main Street with a proposed re-zoning of the Newton property from R-1 to GC, and (5) also includes a proposed rezoning of two parcels on the north side of East Main Street on the former Ingalls property and the gas station next to it. An additional proposed re-zoning is about 3 acres from R-1 to GC on the rear of the Ahalt and Moser properties adjacent to the Newton property when subdivision of those properties occurs.

**Town Commercial (TC) District:** This commercial zoning district is defined in the Middletown Zoning Ordinance as intended to provide areas that allow for a mixture of uses including residential and small commercial businesses that can meet performance standards that allow for compatibility with the surrounding residential environment. The TC is intended for small attractive commercial uses that cater primarily to pedestrian traffic, allowing for limited parking and minor road (street) access. The uses allowed in this district are generally of a less intense and smaller scale than the commercial uses found in the GC district. The TC zoned areas are located in three general locations in Middletown. (1) The largest TC zoned area is located in the older (center) portion of Town along West Main Street; part of this area includes properties on the north side of Washington Street between South Church Street and Elm Street, and also includes some properties on the south side of the intersection of East Main Street and South Church Street. (2) The other TC zoned area is located on South Church Street and south of Boileau Street (Alley), and includes a few properties fronting on Jefferson Street near Boileau Street. (3) The former Middletown Primary School property and the adjacent library property on Prospect Street.

Properties zoned for light manufacturing uses in Middletown are in the Service Commercial/Light Manufacturing (SC/LM) District. The standards for this district are identified in the Middletown Zoning Ordinance. This district is intended to provide areas for business services, light manufacturing, and commercial uses that are relatively nuisance free and compatible with surrounding residential and commercial uses. The uses permitted in this district have low traffic generation, limited noise and environmental impacts, and includes development scaled to serve local patrons. These areas must have access to a major road as identified in this Comprehensive Plan. Historically, this area has included warehouses and offices with some retail uses. There is one area designated in this Plan for manufacturing use; this is the SC/LM zoned area east of North Church Street and north of East Green Street. It is proposed that the two Coblentz parcels that are currently in this zoning district are to be rezoned to R-3 for development of that property.

**Mixed Business (MB) District:** As stated previously, there currently are no areas in Town designated in this zoning district. This district is intended for “showcase locations” which are planned, promoted and developed for businesses in a park-like setting.

Open Space:

Properties designated as Open Space are zoned in the Open Space District (OS) and are intended primarily for providing permanent open space for its natural beauty and

recreational value, particularly for use as parks. It is also available for limited development for use by essential public services such as schools, medical centers, fire protection services and the like. Areas designated as Open Space are located throughout Middletown including town parks, cemeteries, stream valleys and some essential public service facilities. Development is by definition very restricted in the OS zone.

Institutional:

Institutional properties in the Town of Middletown include schools, wastewater treatment facilities, water treatment facilities and cemeteries. There is no zoning district entitled institutional, therefore these land uses typically use the Open Space zoning district for zoning purposes.

Other Land Use Implementation Recommendations: In addition to the Comprehensive Plan Land Use designations, it is proposed that the following actions be taken:

1. Limited Comprehensive Zoning - The Middletown zoning map is being amended in conjunction with the comprehensive plan update.
2. Consider Potential Low-Impact Development Options - New techniques for land development will be analyzed. In addition, techniques for preserving surrounding agricultural lands will be considered.
3. Evaluation of Development Review Process - The steps involved in development review for site plan, subdivision, annexations, rezonings, and Board of Appeals cases will be reviewed to eliminate unnecessary delays and to streamline the process..
4. Wellhead Protection – Although Frederick County now has a Wellhead Protection Ordinance, steps will be taken to attempt to encourage the Board of County Commissioners to further strengthen that Ordinance.

## **INTER-JURISDICTIONAL COORDINATION**

The *2009 Middletown Comprehensive Plan* highlights the need for increased inter-jurisdictional coordination with Frederick County. From Middletown’s perspective, substantive issues include the following:

- Peripheral development in Frederick County, within the Middletown Growth Area and Conservation Boundary is a concern and should be discouraged, especially in terms of the Town’s recharge area. The Town believes that new development in and around the Town should be consistent with Smart Growth given the water resource limitations, and sound place-making principles. Frederick County should work closely with the Town to address the nature of allowable development adjacent to the Town.
- Protection of the Town’s springs is of utmost importance, and the County should ensure that they remain protected through the County’s Wellhead Protection Ordinance.

- Although towns have been designated as growth areas, no construction of new roads or improvement to existing roads is planned by the County to help existing traffic problems or provide for any new development.
- Discussions with the County need to take place towards the creation of a water resource easement that allows municipalities to purchase water rights on protected lands. Properties need to be identified where conservation easements could be combined with such water resource easements to protect valuable water resources and augment water supplies in terms of water balance.

Issues with the Maryland State Policy of Smart Growth are also a concern and include the following:

- Urban Plan of 3.5 homes per acre is a concept that is not well suited to new developments in existing small towns that are dependent on groundwater as a drinking water supply.
- The Policy does not allow for flexibility of planning to maintain a source of Community identity.
- There is no system for the Town to direct State and County funds to solve problems created by development.
- The Rural Legacy and Agricultural Programs do provide some funds designed to remove land from the possibility of future development.

The Middletown Comprehensive Plan includes the following matters in relation to Municipal Growth:

1. The Town's design for growth at the edges of Town is at a lower density than required by the Smart Growth Plan.
2. The Town does not have adequate services and resources for dense growth i.e., police, schools, roads, water and sewer.
3. Development and revitalization of commercial areas need to be consistent with the character of the Town.
4. Preservation of Open Space and establishing a buffer zone or greenbelt around the Town should be explored through the established Agricultural District and Land Trusts.
5. Preserve Natural Resources and Sensitive Areas found in and around Middletown such as Catocin Creek, Cone Branch, Hollow Creek and prime farm land.
6. The most probable residential growth areas are located north of Town. West of Town would not be appropriate for development in the near future. Development of commercial areas north of Town may be acceptable in the future, but must be done on Town water and sewer and not on well & septic systems in the County.

#### Municipal Growth Element Objectives and Policies

The municipal growth objectives and policies have been developed in the context of the overall goals of the Town through Staff and Planning Commission input.

1. Development shall be orderly and utilize good design techniques. Consideration will be given to the impact of growth on the existing community and facilities.
2. The scale of development shall be compatible with adjoining land uses. This shall include identification of the uniqueness of existing adjoining development.
3. Development will be allowed only where it can be served adequately by public facilities and roads. New development will be planned with respect to future transportation needs.
4. Adequate land shall be reserved for commercial/light manufacturing activities. Commercial uses will be designed and scaled to be compatible with the neighborhood in which it is located.
5. The Town shall give consideration to the historic significance of structures and neighborhoods during the development review process.
6. The Town shall seek to obtain and maintain a physical buffer from the unincorporated areas.
7. The Town shall direct development away from all stream valleys, steep slopes, and natural areas.
8. The Town shall work to provide a buffer around its water resources.

### ***Coordination for Effective Growth Management***

There is a critical need for the Town and County to work together on growth-related impacts. Future growth will depend on sound strategies to address such issues as water quality and quantity, school capacity, demand on emergency services, public infrastructure, and transportation facilities. Growth management in Middletown primarily hinges on effective coordination between the Town and Frederick County because municipal growth thru annexation is located in Frederick County. This sentiment was underscored by the *Frederick County's Future Plan 2009* and provides an open dialogue to begin discussions.

Like public infrastructure, water quality and quantity issues cannot be addressed by the Town alone. Going forward, effective management of non-point source pollution must be based on watershed-wide land use strategies and coordinated administration and enforcement of sediment and erosion control and stormwater management regulations. The planning requirements from Maryland House Bill 1141 direct the Town and County Planning Commissions to meet and discuss this Comprehensive Plan prior to adoption.

At a minimum, an agenda for such a joint County/Town meeting should include coordination of the following:

- Cooperative watershed planning initiatives including discussions of adequate public water supplies;
- Coordinated policies concerning County land uses and PFA designations adjacent to the Town;
- Coordinated policies concerning conservation of green infrastructure and the Middletown Conservation Boundary Area, and the ability to use water rights on land within the greenbelt to increase water supply in the Town;

- Funding for public facilities and services.

Effective mechanisms for County/Town dialogue, coordination, and agreement are needed. Acceptable coordinated strategies should be formalized in ways that bind each participant to a policy process. Forums for on-going coordination and cooperation include the Frederick County municipal and county leaders meetings, and joint steering committees (for example for watershed planning initiatives). Examples of potential formal mechanisms for recording joint policies include a County-Municipal Planning Agreement which is an action item in the County's comprehensive plan.

## **SUMMARY**

Middletown population projections are based on an average annual growth rate of 5 % which is indicative of measured growth. The projections rely on the basic assumption that the Coblenz property and other infill developments will commence construction after 2010 and develop at an average rate of 25 dwelling units per year (250 dwelling units per decade). Regardless of when actual development commences (2010 or later), or how quickly it proceeds (10 units per year or 30 units per year), the impacts over time will be the same and will need to be addressed. Given the Town's limited water supply and sewage capacity, it is not expected that rapid growth would be either possible or desired in the near future. For this reason it is critical that the Town anticipate these consequences of growth and have policies and strategies in place to address them well in advance of need.

4

# Growth Boundary Map Middletown, Maryland

3/10/2010

1 inch = 1,800 feet

0 700 1,400 2,800 4,200 Feet






-  Town Boundary
-  Growth Boundary
-  Conservation Boundary/Greenbelt
-  Parcels
-  Streams



Figure 8-1

x:\projects\comp plan\Growth Boundary map - Figure 8-1.mxd












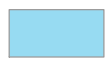






4

# Middletown 20-Year Land Use Comprehensive Plan

3/10/2010

0 500 1,000 2,000 3,000 4,000 Feet  
1 inch = 1,800 feet

- |   |                            |   |               |
|---|----------------------------|---|---------------|
|  | Town Boundary              |  | Commercial    |
|  | Growth Boundary            |  | Institutional |
|  | Conservation Boundary      |  | Open Space    |
|  | Streams                    |  | Residential   |
|  | 100' Stream Buffer         |   |               |
| <b>20 Year Plan</b>   |                            |   |               |
|  | Agricultural/Rural         |   |               |
|  | General Commercial         |   |               |
|  | Institutional              |   |               |
|  | Low Density Residential    |   |               |
|  | Medium Density Residential |   |               |
|  | Natural Resources          |   |               |
|  | Public Parks/Open Space    |   |               |

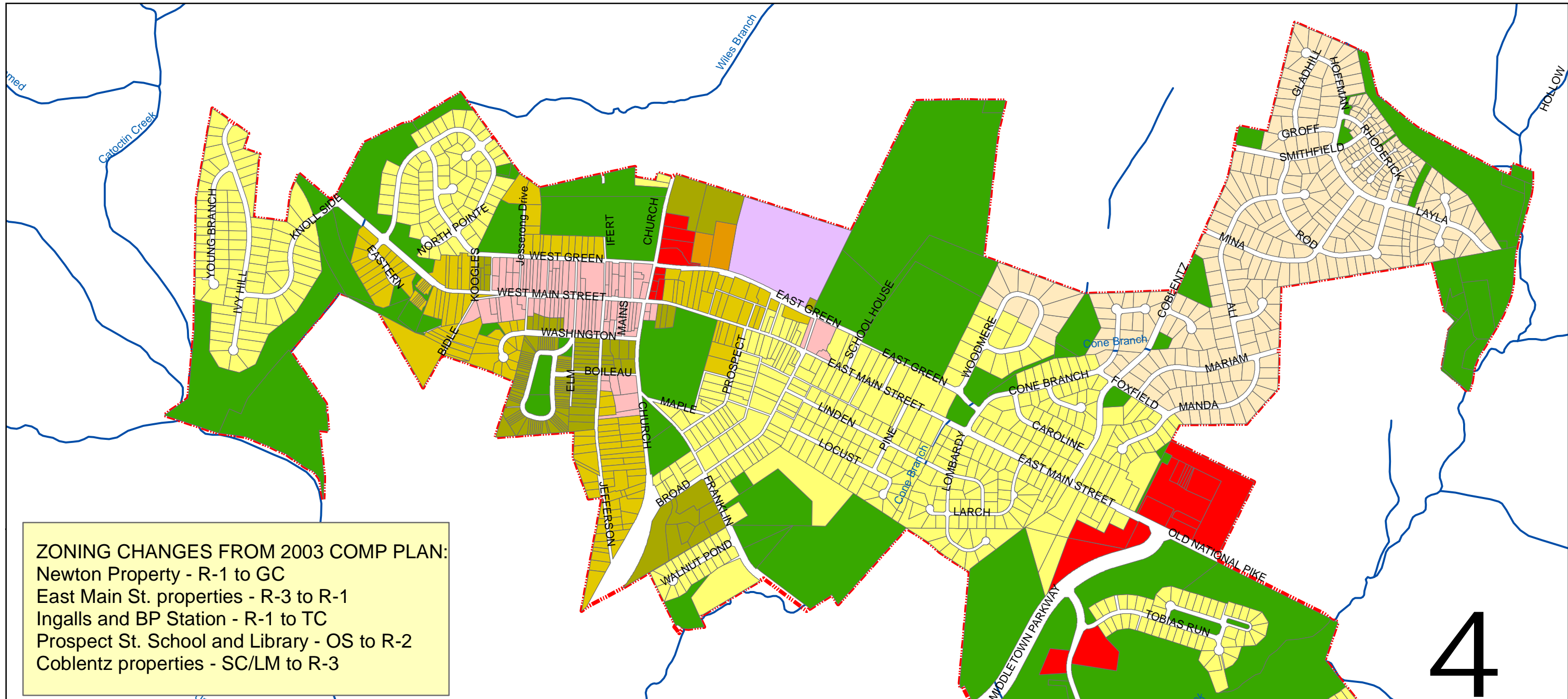
NOTE: This is a land use map and not a zoning map.



Figure 8-6

x:\projects\comp\_plan\Middletown 20-Year Comprehensive Plan\_Map.mxd



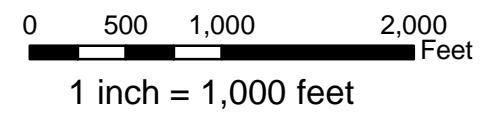


ZONING CHANGES FROM 2003 COMP PLAN:  
 Newton Property - R-1 to GC  
 East Main St. properties - R-3 to R-1  
 Ingalls and BP Station - R-1 to TC  
 Prospect St. School and Library - OS to R-2  
 Coblenz properties - SC/LM to R-3

# 2010 Zoning Map Middletown, Maryland

**3/10/2010**

Effective March 28, 2010



### Legend

	General Commercial		Streams
	R-3/Neo-Traditional Res.		
	Open Space		
	R-1 Residential		
	R-2 Residential		
	R-20 Residential		
	R-3 Residential		
	Service Comm./Lt. Manu.		
	Town Commercial		
	Town Boundary		



**Figure 8-7**

## **Chapter 9 CONCLUSION**

The Town of Middletown is committed to fiscally, socially and environmentally responsible land use development. Sustainable development integrates the needs of the Town and its residents in the present generation without sacrificing the ability of future generations to meet their needs by balancing the economy, society and the environment in the process. In looking towards the future, the Town of Middletown will strive towards sustainable living and planning.

The Middletown Comprehensive Plan will be judged in the future on the progress made on specific recommendations contained in the Plan. This conclusion identifies priority actions which should be addressed for Middletown to be able to accommodate a municipal population of 5,092 persons by 2030. The actions are in four main categories: Transportation, Land Use, Natural Features, and Community Facilities.

### Transportation

1. New developments will be required to dedicate lands and potentially partially construct portions of Middletown Parkway.
2. Middletown will incorporate procedures to establish a greenways system.
3. Needed sidewalk connections will be identified and constructed.
4. Upgrade existing streets.

### Land Use

1. Annexation shall be phased to coordinate development activities with needed improvements per the Town's commercial and residential growth policies.
2. The Town shall conduct periodic comprehensive reviews of zoning policies and ordinances.
3. The Town Planning Commission shall promote sustainable development practices thru its development review process.

### Natural Features

1. The Town shall identify priority areas for reforestation under the reforestation ordinance along steep sloped stream banks and other areas as determined by the Town.
2. The zoning ordinance shall require appropriate setbacks along all perennial and intermittent streams.

Community Facilities

1. The Town shall continue the studies necessary to evaluate the preferred methods of upgrading the Water & Sewer Facilities.
2. The Town shall continue to ensure that community facilities are adequate to meet the Town's needs.

## APPENDIX A

### Town of Middletown - Policy on Residential Growth

June 14, 2005

#### **Policy Statement**

It is the policy of the Town of Middletown that all new residential development beyond those that have an approved Preliminary Site Plan prior to 7/14/03, will not occur before the first quarter of 2015.

Existing lots of record for single-family units are excluded from this policy, provided that adequate water and sewer capacity exists at the time of requested residential development.

#### **Development Criteria**

For development to be considered in the year 2015 and beyond, all of the following criteria must be met:

- Developer must provide 300 gallons of allocable water per unit, and may be required to cover all costs of physical connection to the Town system,
- Developer must pay a proportionate share of cost to upgrade/increase sewer capacity, based on all factors at time of Water/Sewer certification,
- Prior to Preliminary Site Plan approval, all Middletown schools located within the corporate limits of Middletown must be less than 105% capacity as rated at the time of the most recently submitted Frederick County Public Schools Quarterly Enrollment report, and approval will only be valid for two years after the Plan is signed by the Middletown Planning Commission,
- Developer must provide a Traffic Impact Study at the request of the Town, to be conducted during a period of time approved by the Town, and solutions to all identified problems related to the requested development must be corrected at the cost to the developer,
- Developer must provide usable recreation space, as determined by the Planning Commission, at .05acres/unit for the total number of units in the development,
- No development will receive permit approval to construct more than 20 residential equivalent dwelling units per year. However, the Town shall not approve permits for more than 30 total residential equivalent dwelling units per calendar year for all residential development within the Town, and all residential permit allocations for each residential development will be determined by the Town.
- The Town will determine and negotiate through Public Works Agreements all necessary off-site improvements that will be required to be constructed by and at the cost to the developer,
- Other factors as determined by the Town that may be applicable to each individual development request in addition to those listed herein.

## **Town of Middletown - Policy on Commercial Growth**

June 14, 2005

### **Policy Statement**

It is the policy of the Town of Middletown that commercial growth be encouraged to occur within the Town limits to meet the consumer needs of the growing local population within the Middletown Region.

### **Development Criteria**

For commercial development to be considered, all of the following criteria must be met:

- Developer must provide and pay all tap and meter fees for an equated (300 gpd/equivalent dwelling unit) amount of allocable water per tap as calculated by the Town, and shall be required to cover all costs of physical connection to the Town system
- Developer must pay all tap and meter fees as well as a proportionate share of cost to upgrade/increase sewer capacity, based on all factors at time of Water/Sewer certification
- Developer must provide a Traffic Impact Study at the request of the Town, to be conducted during a period of time approved by the Town, and solutions to all identified problems directly related to the requested development must be corrected at the cost to the developer
- No development may receive Plan approval from the Town for uses creating a trip generation rating below level D as defined in the most recent edition of the Highway Capacity Manual.
- Developer must provide usable contiguous recreation space, as determined by the Planning Commission, at .2acres/gross acreage, which may not be allowed to include required setback, FRO, SWM, or buffer areas
- All property requesting annexation for commercial development shall pay at time of annexation municipal real estate taxes,
- The Town will determine and negotiate through Public Works Agreements all necessary off-site improvements that will be required to be constructed by and at the cost to the developer,
- Other factors as determined by the Town that may be applicable to each individual development request in addition to those listed herein.

## Maryland Municipal Projections Methodology

Long range population and household projections for Maryland's municipalities are inherently difficult. Typical problems are the relatively small number of residents in many municipalities leading to possibly large percentage errors; an often wildly fluctuating historical growth path because of changing municipal boundaries or other local characteristics; and, a lack of data on the components of population growth – births, deaths and migration. In addition, fluctuating household size and vacancy rates, and uncertainty about group quarters population, often make the link between population and households difficult to determine several decades into the future.

With the uncertainty inherent in doing municipal projections, the Maryland Department of Planning undertook a variety of projection techniques designed to generate a reasonable range of population projections for each of Maryland's 157 municipalities. These techniques can be grouped into two broad categories: 1) naïve methods and 2) development pressure methods.

### A. Naïve Projection Techniques

The naïve population projection methods involve seven different techniques that are based on past growth trends or past relationships between the municipality and the county and the county's projected growth. They are classified as “naïve” because they rely totally on the past to project the future. These techniques include the following:

- **Constant share** – the municipality's projected share of its county's projected population remains the same as its 2000 share
- **Shift share based on 1990 – 2000** – the municipality's projected share of its projected county population is altered based on the change in its share during the 1990 to 2000 time period
- **Shift share based on 1980 – 1990** – the municipality's projected share of its projected county population is altered based on the change in its share during the 1980 to 2000 time period
- **Share of growth** - the municipality's share of county-wide growth over a specific historic period (typically 1990 to 2000) is applied to future projected county-wide population
- **Weighted average of change** – the municipality grows in each time period by the weighted average of change over the 1970 to 2000 time period (with greater weights applied to more recent time periods)
- **Geometric Growth** – the municipality grows at a historical rate of change in all future time periods
- **Regression** - historic municipal growth path is regressed against time to generate future municipal growth path

Each of the above techniques are applied to all of the municipalities (as well as the non-municipal portion of the county (the “balance of the county”) at the same time for each projected time period and then controlled to the previously projected county control total

## B. Development Pressure Technique

The development pressure population projection methodology assumes that a municipality's growth pressure will be directly related to the recent development activity that has occurred just outside the municipality's borders. That is, the more development outside of a municipality's boundaries, the greater likelihood for that municipality to grow either within its current boundaries or through annexation. This change in development pressure is reflected by modification (either up or down) to the municipality's constant 2000 share of its county's projected population in each projection period.

The development activity in and around municipalities is derived from housing unit counts from Md Property View, MDP's GIS database that tracks the location and type of development by parcel for all jurisdictions in Maryland. Municipal boundary map layers are those updated and maintained by MDP in support of Priority Funding Area mapping.

A total of nine scenarios are run based on three different historical time periods and three different development rings around each municipality's boundaries:

- Time periods – 1990 to 2005, 1997 to 2005 and 2000 to 2005
- Development rings – one-eighth mile, one-quarter mile and one-half mile

These development pressure scenarios are run for each municipality at the same time, with the balance of the county being the difference between the previously projected county total and the sum of the projected municipality populations

## C. Municipal Population and Household Projections

Between the naïve and development pressure techniques, there are a total of 16 individual population projections for each municipality. In order to narrow the range, the following are chosen for each municipality (in addition to the results from the constant share method) from each of the two different techniques:

- the lowest total
- the highest total
- the average total
- the average after dropping the lowest and highest totals

The population projections from these selected results (four from the naïve methods and four from the development pressure method, plus the constant share results) are then translated into household projections. This is done by adjusting for (1) projected group quarters population (if any) and (2) projected household size of the municipality, where the change in the municipality's household size over time is assumed to be proportional to the change in the previously projected county household size.





**Burgess and Commissioners of  
Middletown, Maryland**

**Wastewater Capacity Management Plan 2009**

Approved and Adopted on  
February 9, 2009

## **General Information**

### PURPOSE OF THE WASTEWATER CAPACITY MANAGEMENT PLAN (WWCMP)

This WWCMP is provided to assist the Town Board and Planning Commission to determine plant capacity and to track the remaining available capacity for allocation. Because of the significant lead time required for measures such as sewer rehabilitation or facility expansion, the WWCMP emphasizes the need to plan ahead to ensure that growth takes place without overloading sewage facilities. The guide enables the Town to:

- ❖ • Identify when a treatment plant's actual flows are approaching or exceeding the design capacity;
- ❖ • Make commitments for new connections with confidence that there is adequate capacity to serve the new as well as existing customers;
- ❖ • Determine when the issuance of additional building permits must be curtailed until improvements are completed so that the treatment plant can maintain compliance with its discharge permit;
- ❖ • Have more lead-time to plan for needed collection and wastewater treatment system upgrades to accommodate new growth and to arrange for the financing of the improvements;
- ❖ • Become more aware of how your facility is performing; and be encouraged to take appropriate steps to address or prevent increased flows before effluent violations, regular bypassing, or overflows occur; and
- ❖ • Provide Town Board and Planning Commission with the information needed to make informed decisions about the capacity of their wastewater systems and the ability to accommodate new connections.

### LEGAL MANDATES

The Town faces many challenges to maintain and operate these systems in compliance with federal and State laws and regulations. The cost to keep these increasingly complex facilities operating properly continues to increase. The ability to raise rates to keep pace with these costs is a challenge. Perhaps most challenging, however, is the need to manage the allocation of flow to new customers for residential, commercial, and industrial use, in conformance with local land use, water and sewerage plans, and the NPDES permit limits. The following language from the Maryland Environment Article makes it clear that the authority responsible for issuing building permits and subdivision plat approvals must ensure that adequate capacity is or will be available:

#### **§ 9-512 (b) Building Permits – Conformity with County Plan; Issuance of Building Permits**

*(1) A State or local authority may not issue a building permit unless:*

*(i) The water supply system, sewerage system, or solid waste acceptance facility is adequate to serve the proposed construction, taking into account all existing and approved developments in the service area;*

*(ii) Any water supply system, sewerage system, or solid waste acceptance facility described in the application will not overload any present facility for conveying, pumping, storing, or treating water, sewage, or solid waste;...*

#### **§ 9-512 (d) Subdivision Plats**

*(1) A State or local authority may not record or approve a subdivision plat unless any approved facility for conveying, pumping, storing, or treating water, sewage, or solid waste to serve the proposed development would be:*

*(i) Completed in time to serve the proposed development; and*

*(ii) Adequate to serve the proposed development, once completed, without overloading any water supply system, sewerage system, or solid waste acceptance facility.*

*(2) Each water supply system, sewerage system, and solid waste acceptance facility in a subdivision shall:*

*(i) Conform to the applicable county plan; and*

*(ii) Take into consideration all present and approved subdivision plats and building permits in the service area.*

In addition to the required State mandates, the Town has also passed legislation to ensure capacity is available. In April of 2003, the Town Board passed the Water & Sewer Certification Ordinance which requires capacity to be available prior to the approval of improvement plans:

#### **16.12.055 Water and sewer capacity certification**

*A. Upon approval of the preliminary plat, the town administrator shall conduct a review and analysis of the capacities of the town water and sewer systems in order to determine whether there exists sufficient water and sewer capacity to service the proposed subdivision or the development project thereon. The review and analysis shall be conducted in coordination with the director of operations and construction and the water and sewer superintendent who shall provide the administrator with pertinent information and data regarding the capacity of the town to provide water and sewer service to the proposed subdivision or project. In the review and analysis of the town water and sewer capacity, the demands of the proposed subdivision or project for water and sewer shall be based upon a daily consumption of three hundred (300) gallons per equivalent dwelling unit as per the standards of the American Water and Wastewater Association.*

*B. If the town administrator determines that there is sufficient water and sewer capacity to service the proposed subdivision or project, then he shall issue a certificate of water and sewer capacity for the proposed subdivision or project.*

*C. If the town administrator determines that there is not sufficient water and sewer capacity to service the proposed subdivision or project, then a certificate of water and sewer capacity shall not be issued for the proposed subdivision or project.*

*D. The planning commission shall not approve any improvement plans for the proposed subdivision or project unless a certificate of water and sewer capacity has been issued for the proposed subdivision or project.*

*E. If an approved preliminary plat is revised after a certificate of water and sewer capacity has been issued and the revision is approved by the planning commission, and if the effect of the revision does not increase the previously determined water demand of the proposed subdivision or project based upon the standards provided for in subsection (A) of this section, then a new certificate of water and sewer capacity shall not be required, and the previously issued certificate shall remain valid. If the effect of such approved revision is to increase the previously determined water demand of the proposed subdivision or project based upon the standards provided for in subsection (A) of this section, then the previously issued certificate shall be void, and a new certificate shall be issued, if appropriate, in accordance with the procedures set forth above.*

*(Ord. 03-04-01 §1, 2003)*

## Executive Summary

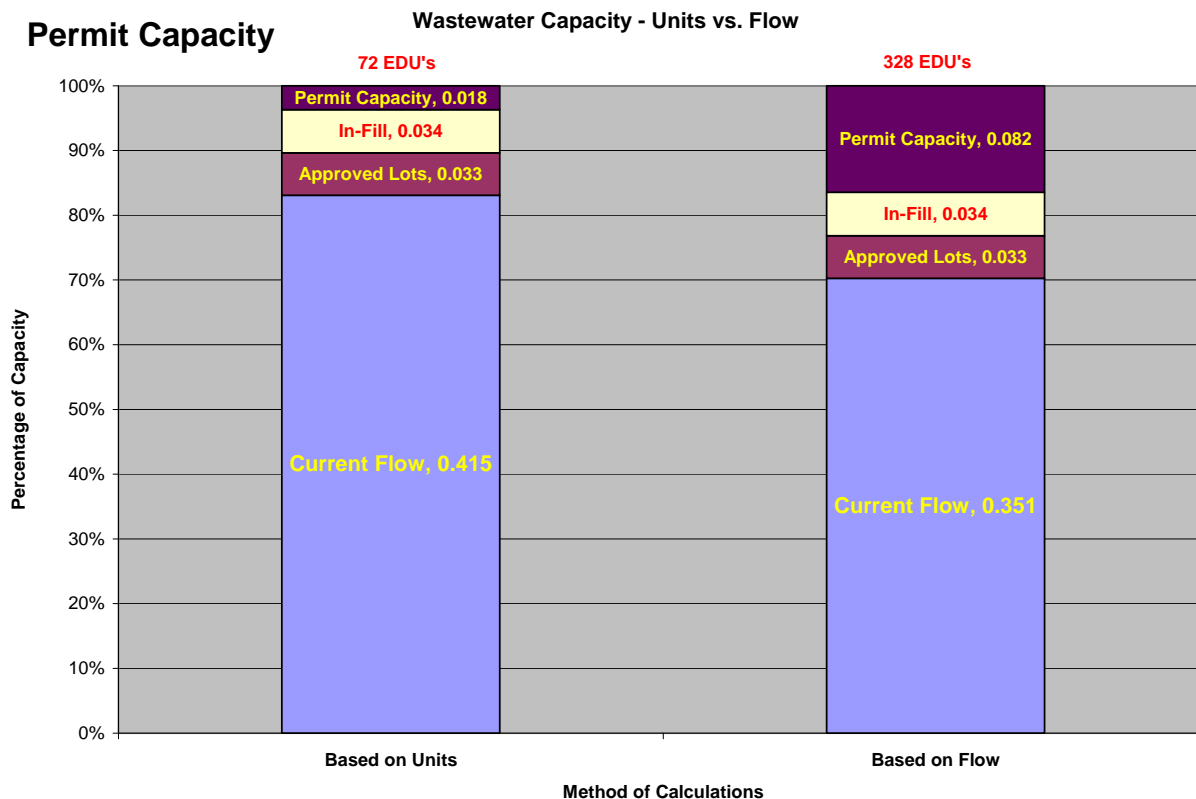
The Middletown sewage system consists of a 0.250 mgd treatment plant located on the west side of Town (West WWTP), and a 0.350 mgd activated sludge plant (expandable to 0.700 mgd), three (3) sewage pump stations, and a network of 8” to 12” sanitary sewer lines. The West WWTP, which was designed in 1973, became operational in 1976 and replaced an older facility. The east wastewater treatment plant (East WWTP), located on Holter Road, was constructed in 1999-2000 and became operational on June 14, 2000.

The West WWTP plant has a design capacity of 0.250 mgd with an NPDES Permit for the same. The East WWTP plant has a design capacity of 0.350 mgd with an NPDES Permit for 0.250 mgd. In calculating the capacity for the Town, the design and permit capacities were combined for an overall total of 0.600 mgd and 0.500 mgd respectively.

The information contained in this report was generated following the details specified in the Guidance Document – *Wastewater Capacity Management Plans* as prepared by the Maryland Department of the Environment.

### Permitted Capacity

The Town of Middletown is at 96% capacity based on calculation by units and 84% capacity based on calculation by flow.

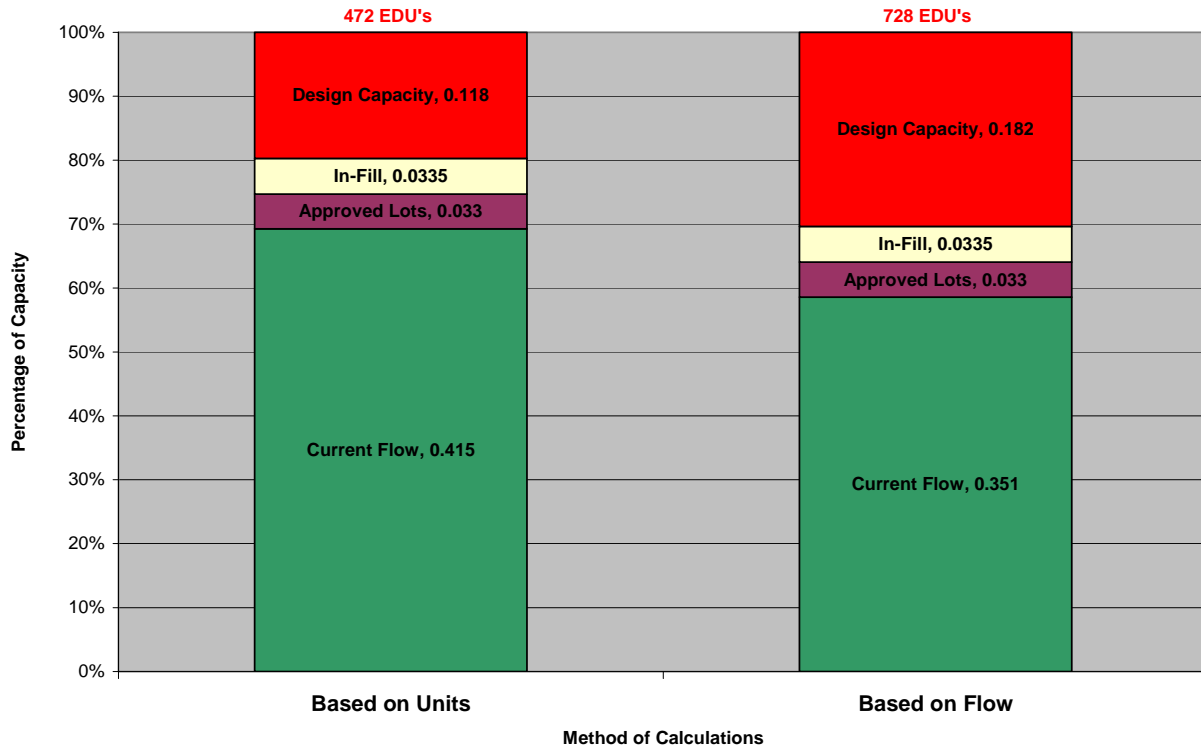


**Design Capacity**

The Town of Middletown is at 80% capacity based on calculation by units and 70% capacity based on calculation by flow.

**DESIGN FLOW**

Wastewater Capacity - Units vs. Flow



**Summary and Recommendations**

Based on the current permitted capacity of 0.500 mgd the Middletown Planning Commission should not approve any subdivision or site plan that creates the demand for more than 72 EDU’s outside of the units accounted for in the in-fill portion of this analysis, without the approval of the Town Board. Approval beyond the 72 EDU’s will require authorization by the Burgess and Commissioners for an increase in the current NPDES permit for the East WWTP. There shall be no approvals of subdivision or site plans that require a demand of more than 472 EDU’s without plans for the expansion of the East WWTP.

It is recommended that the Town Board consider increasing the NPDES Permit for the East WWTP to the full design capacity of 0.350 MGD at the time of permit renewal in 2013.

**Appendix**

A detailed appendix is attached to this report with all appropriate back up and calculation.



**Burgess and Commissioners of  
Middletown, Maryland**

**Water Supply Capacity Management Plan**  
**2009**

Approved and Adopted on  
February 9, 2009



## **General Information**

### PURPOSE OF THE WATER SUPPLY CAPACITY MANAGEMENT PLAN (WSCMP)

This WSCMP is provided to assist the Town Board and Planning Commission in determining the capacity of their water supply systems and in allocating the remaining capacity in a responsible manner. Having an adequate water supply that meets the existing and future water demand in a community is vital for public health protection. Having accurate allocation information, combined with reasonable demand projections, will help ensure that water supply systems achieve a high level of public health protection; operate within Water Appropriation Permit parameters; operate within the limitations of their system to produce safe water; and meet the water supply needs of future residential, commercial, and industrial users in a timely manner. This plan enables the Town to:

- ❖ • Identify when the demand for water is approaching or exceeding the safe capacity of the water supply system;
- ❖ • Provide timely and critical information to the Local Health Officer, Environmental Health Director, and elected officials for the approval of subdivision plats and building permits;
- ❖ • Make commitments for new connections with confidence that there is adequate capacity to serve new as well as existing customers;
- ❖ • Determine when the approval of subdivision plats and the issuance of additional building permits need to be curtailed until improvements are completed to meet the additional water demand;
- ❖ • Plan for needed water supply system improvements to ensure continued adequacy of the water system as new growth occurs and as water demand increases; and
- ❖ • Provide an adequate water supply in order to ensure the protection of public health.

### LEGAL MANDATES

It is essential for local governments to carefully manage the allocation of water to new residential, commercial and industrial customers, in conformance with local Comprehensive Plans, County Water and Sewerage Plans, Water Appropriation Permits, and the requirements of the Annotated Code of Maryland pertaining to building permits and subdivision plats. Local governments must ensure that the water supply will be adequate to meet the demand of existing and new users and must allocate any available water in accordance with State as well as local requirements.

The Environment Article of the Annotated Code of Maryland sets forth the State requirements for insuring the adequacy of the water supply to serve new development as well as the authority of the Secretary of the Department to require Water Supply Capacity Management Plans:

***§ 9-512 (b) Building Permits – Conformity with county plan; issuance of***

**building permits. –**

(1) A State or local authority may not issue a building permit unless:

- (i) The water supply system, sewerage system, or solid waste acceptance facility is adequate to serve the proposed construction, taking into account all existing and approved developments in the service area;
- (ii) Any water supply system, sewerage system, or solid waste acceptance facility described in the application will not overload any present facility for conveying, pumping, storing, or treating water, sewage, or solid waste; ...

**§ 9-512 (d) Subdivision plats – Conformity with county plan; recording or approving subdivision plats. –**

(1) A State or local authority may not record or approve a subdivision plat unless any approved facility for conveying, pumping, storing, or treating water, sewage or solid waste to serve the proposed development would be:

- (i) Completed in time to serve the proposed development; and
- (ii) Adequate to serve the proposed development, once completed, without overloading any water supply system, sewerage system, or solid waste acceptance facility.

(2) Each water supply system, sewerage system, and solid waste acceptance facility in a subdivision shall:

- (i) Conform to the applicable county plan; and
- (ii) Take into consideration all present and approved subdivision plats and building permits in the service area.

**§ 9-205. Submitting plans for existing water supply system, sewerage system, or refuse disposal system for public use.**

(a) “Authority” defined. – In this section, “authority” means a water, sewerage, or sanitary district authority.

(b) Application of section. – This section applies only to any water supply system, sewerage system, or refuse disposal system that is for public use in this State.

(c) Required plans, specifications, and reports – In general. – Any authority or person who owns a water supply system, sewerage system, or refuse disposal system or who supplies or is authorized to supply water, sewerage, or refuse disposal service to the public shall submit to the Secretary:

(1) A certified copy of the complete plans for the water supply system, sewerage system, or refuse disposal system that:

- (i) Is correct on the date of submission; and
- (ii) Is of the scope and detail that the Secretary requires; and

(2) Any existing specifications of or reports on the water supply system, sewerage system, or refuse disposal system.

(d) Same – Exceptions. – If plans do not exist or are of insufficient scope or detail, the authority or person who is required to submit the plans shall:

- (1) Prepare and submit to the Secretary new or supplemented plans; and
- (2) Make any investigation that is necessary to ensure that the new or supplemented plans are correct.

*(e) Additional information. –*

*(1) The Secretary may request any other information about the water supply system, sewerage system, or refuse disposal system, including information or records on maintenance and operation, that the Secretary considers appropriate.*

*(2) Any authority or person to whom a request is made under paragraph (1) of this subsection shall submit the information or records to the Secretary.*

In addition to the required State mandates, the Town has also passed legislation to ensure capacity is available. In April of 2003, the Town Board passed the Water & Sewer Certification Ordinance which requires capacity to be available prior the approval of improvement plans:

### **16.12.055 Water and sewer capacity certification**

*A. Upon approval of the preliminary plat, the town administrator shall conduct a review and analysis of the capacities of the town water and sewer systems in order to determine whether there exists sufficient water and sewer capacity to service the proposed subdivision or the development project thereon. The review and analysis shall be conducted in coordination with the director of operations and construction and the water and sewer superintendent who shall provide the administrator with pertinent information and data regarding the capacity of the town to provide water and sewer service to the proposed subdivision or project. In the review and analysis of the town water and sewer capacity, the demands of the proposed subdivision or project for water and sewer shall be based upon a daily consumption of three hundred (300) gallons per equivalent dwelling unit as per the standards of the American Water and Wastewater Association.*

*B. If the town administrator determines that there is sufficient water and sewer capacity to service the proposed subdivision or project, then he shall issue a certificate of water and sewer capacity for the proposed subdivision or project.*

*C. If the town administrator determines that there is not sufficient water and sewer capacity to service the proposed subdivision or project, then a certificate of water and sewer capacity shall not be issued for the proposed subdivision or project.*

*D. The planning commission shall not approve any improvement plans for the proposed subdivision or project unless a certificate of water and sewer capacity has been issued for the proposed subdivision or project.*

*E. If an approved preliminary plat is revised after a certificate of water and sewer capacity has been issued and the revision is approved by the planning commission, and if the effect of the revision does not increase the previously determined water demand of the proposed subdivision or project based upon the standards provided for in subsection (A) of this section, then a new certificate of water and sewer capacity shall not be required, and the previously issued certificate shall remain valid. If the effect of such approved revision is to increase the previously determined water demand of the proposed subdivision or project based upon the standards provided for in subsection (A) of this section, then the previously issued certificate shall be void, and a new certificate shall be issued, if appropriate, in accordance with the procedures set forth above.*

*(Ord. 03-04-01 §1, 2003)*

## Executive Summary

The Middletown water system is supplied by eighteen (20) wells and four (4) major groups of springs located on the west side of the Catocin Mountain, north of town. Water from the springs flow by gravity to two (2) in-ground reservoirs with a combined capacity of two million gallons. Water treatment consists of adding caustic soda, for pH adjustment, chlorine, as a disinfectant to protect against microbial contaminants and fluoride to promote dental health. From the plant, the water is pumped to our 400,000 gallon elevated storage tank.

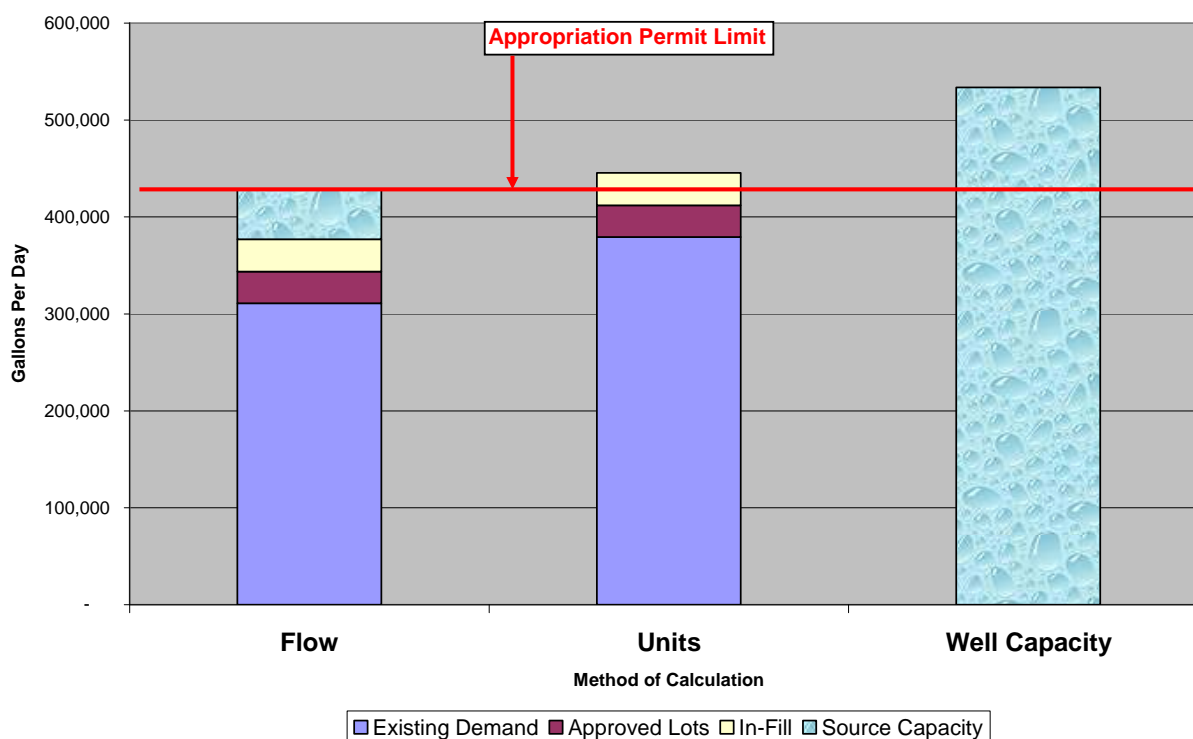
The Town currently has Water Appropriation Permits in the Hollow Creek, Cone Branch, and Catocin Watersheds. The combined permit limits for withdraw are 427,900 gpd Annual Average and 522,000 gpd Month of Maximum Use. The current capacity of the Town's water supply, during drought conditions, has been determined by MDE to be 533,640 gpd.

The information contained in this report was generated following the details specified in the Guidance Document – *Water Supply Capacity Management Plans* as prepared by the Maryland Department of the Environment.

### Annual Average

The Town of Middletown is at 88.1% capacity based on calculations by flow and 104.1% capacity based on calculations by units.

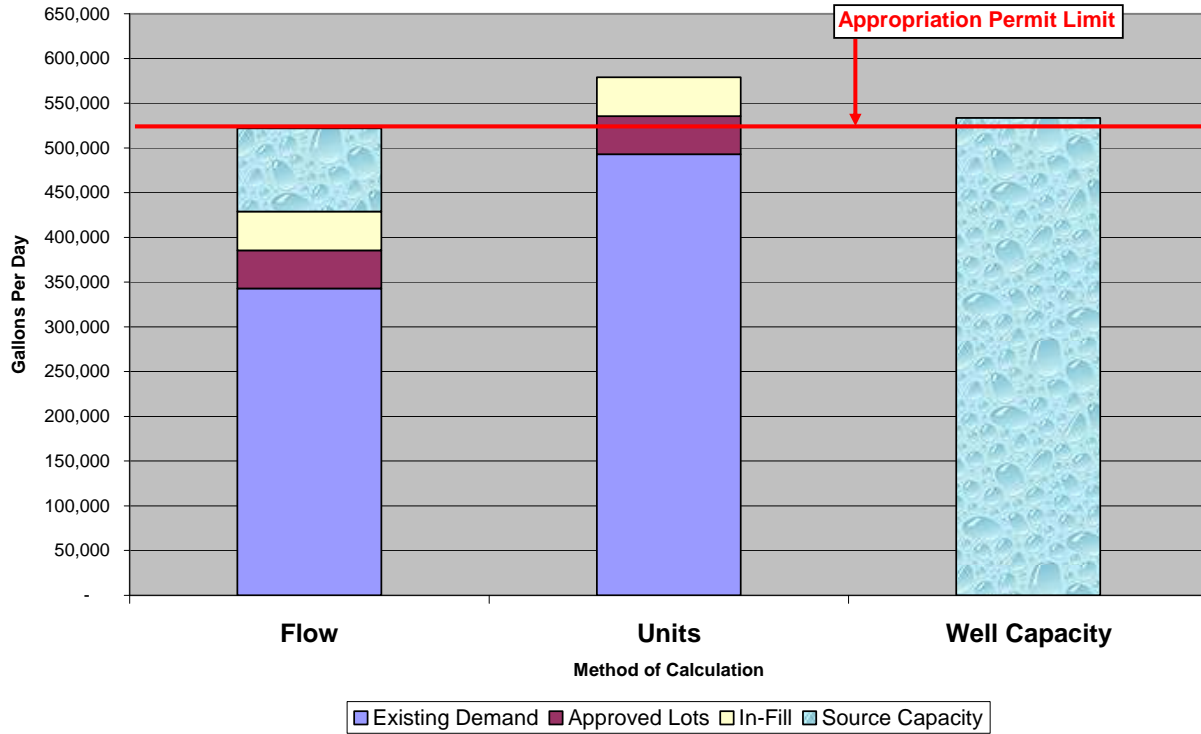
**Water Demand - Annual Average**



## Month of Maximum Use

The Town of Middletown is at 82.2% capacity based on calculations by flow and 110.9% capacity based on calculations by flows.

### Water Demand - Month of Maximum Use



## Summary and Recommendations

Both the Town's Annual Average and Month of Maximum Use capacities, based on units, exceed 100%. The Burgess and Commissioners of Middletown have entered into a Consent Agreement with MDE to address the over allocation of water. The Town is currently working on developing a number of new water sources.

**Until additional water sources are brought on-line, the Planning Commission should not approve any Final Plats for recordation, outside the properties identified in the approved lots or in-fill sections of the appendix, without the express approval of the Town Board and MDE.**

## Appendix

A detailed appendix is attached to this report with all appropriate back up and calculation.