

CITY OF BRUNSWICK 2010 MASTER PLAN

Effective November 4, 2011

Mayor and Council:

Carroll A. Jones, Mayor
Andy Alger
Mary Elizabeth Bowie
Tom Smith
Walt S. Stull III
Karin Tome
Angel White

City Administrator

Rick Weldon



Planning Commission:

Connie J. Koenig, Chair
Donald A. Krigbaum, Vice Chair
Wayne S. Dougherty
Ellis Burruss
Walter S. Stull III, *ex officio*,
Secretary
Vacant, Alternate

City Attorney

David A. Severn

Brunswick Planning Staff:

Bruce R. Dell, Planning and Zoning Administrator
Kimberly A Mezzanotte, Development Review Coordinator

Frederick County Planning Staff:

John Dimitriou, Frederick County Planning Department Liaison

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Introduction

Preface

The City of Brunswick adopted its first Master Plan in 1967. The first Plan made recommendations for future land use, transportation, community, facilities, and capital improvements in and around Brunswick. Included was a section on economic development strategies, and downtown revitalization. Implementation for the plan was made possible through a Zoning Map, Zoning Ordinance and Subdivision Regulations, which were adopted shortly after the plan.

The next major re-write of the Plan was completed in the early 1990's with the help of Frederick County. Many things had changed from 1967 to 1994. Brunswick became a hub for rail commuters due to the increase in ridership of the MARC Train System. In addition, more people moved to Frederick County in search of affordable housing and to find residences in rural communities.

In 1997 the Master Plan updated the Transportation Section to include Goals and Objectives with bicycle lanes, pedestrian trail ways, and other alternative transportation. The Plan was readopted in total in 2004, in compliance with Maryland State Law. In 2006 two out of sequence amendments were adopted into the Master Plan. In 2007, the Plan was updated to include revisions of the previous plans that have been adopted since 1967.

Years after the implementation of the 1994 Plan many of the features that were outlined in earlier plans have proved to be correct. Frederick County continues to grow as a whole, with more people moving into the region in search of affordable housing.

Since 2000 the City of Brunswick has had three annexations which have produced the City's current Corporate Boundary. In 2000 the Biser property or present day Gayln Manor was annexed bringing 141 acres into the City. Two years later the City underwent another transformation when the Hope-Enfield farms brought an additional 455 acres into the City limits and along with the Long farm spawned Brunswick Crossing. In 2008 the Cooper property reconfigured the City once more with an additional 126 acres and completes the current City boundary.

This Plan builds on over 40 years of planning history of the City of Brunswick dating to the City's first Master Plan which was adopted in 1967. The City of Brunswick has experienced numerous changes and transitions during the past 40 years that have taken the City from predominance in the B&O railroad system to a more suburbanized bedroom community.

Plan Purpose

The 2010 Brunswick Master Plan is an update of all previous plans that have been adopted since 1967. The original Plan was designed to serve as a guide for the future of Brunswick, with recommendations for land uses, transportation patterns, capital improvements, and public facilities. This plan is designed to work in the same fashion by:

- Providing information about the Demographic Profiles, the Environment and Sensitive Areas, Land Use, Transportation, Water Resources, Municipal Growth, and Community Facilities;
- Creating a guide for all growth within Brunswick, and decisions related to public facilities;
- Identifying issues that will need to be addressed in the Plan;
- Coordinating City plans with County Regional Planning;
- Address the state mandates from HB 1141 including the Water Resource and Municipal Growth Elements.
- Incorporate the new State Planning Visions as a result of the Smart and Sustainable Growth Act of 2009 adopted by the State of Maryland.
- Creating a vision for the future of Brunswick, as stated by the Goals, Objectives, and Policies set forth in this Plan;
- Serving as a guide to local decision makers, and to set an agenda for public action;
- Examining the ability to supply future infrastructure service.

Plan Update Process

Each chapter of the Master Plan contains sections focusing on the different steps of the planning process. The following steps highlight the preparation process:

Background: Background studies were compiled and prepared to show past trends and existing conditions. Information obtained from the resident survey, population and housing data, Development Capacity Analysis, Environment and Sensitive Areas, land use, transportation concerns, and community facilities are included in the Plan. The information that comes from each of these sources is critical in understanding the City's history, resources, problems, and potential.

Identifying Issues: After reviewing the background studies, issues were presented that had to be addressed in the Updated Master Plan.

Goals, Objectives, and Policies: The base of the Master Plan is composed of Goals, Objectives, and Policies. Without these, a community would not be able to showcase its values, priorities, and, most importantly, its vision. **Goals**, as defined in the premise of this Plan, are broad, end-state desires for the future of Brunswick. In contrast **Objectives**, are more solution oriented. The Objectives serve as ways of accomplishing Goals.

Policies, are statements which act as guidelines in public decision-making. The establishment of Policies helps ensure that the actions taken by the City of Brunswick are consistent with the Plan's Goals and Objectives.

Proposals and Recommendations: The Plan's Proposals and Recommendations are focused on the Environment and Sensitive Areas, Land Use, Transportation, Community Facilities, Municipal Growth, and Water Resources.

Implementation: The final section of the Master Plan focuses on how the Proposals and Recommendations included in the plan should be implemented. Implementation includes regulatory changes, capital projects, and studies.

Summary of the 1967 Plan Recommendations

In 1967 the first Master Plan was adopted for Brunswick. This Plan represented an effort to establish policies for planning and zoning in the City. The Plan featured the areas of Natural Features, Population Trends, Economic Activity, Building and Neighborhood Conditions, Development Standards, Transportation, Community Facilities, and other Financial Considerations.

Highlights of the 1967 Plan include Revitalization, Economic Growth and Development, Neighborhood Characteristics, and Parks and Recreation Facilities. The following is a list of the Goals and Objectives that was created in that Plan:

- To make every possible effort to reverse the tendency toward out-migration of young people and the core of business, religious and intellectual leaders whose presence is so essential for a progressive community.
- To provide a healthful, attractive, and convenient living environment with the complete range of high quality, community facilities, services and amenities necessary to encourage a renewed sense of community pride, and esteem.
- To promote the revitalization of the local commercial activity that is so critical to the economic health, appearance, and cohesion of the community.
- To attract new commercial and industrial enterprises by improving the attractiveness of the community and by assisting them in fulfilling their needs for sites, structures and public utilities, facilities, and services.
- To seek a faster and more convenient highway and mass transit linkage with faster growing areas of the region, particularly toward the Interstate 70 (I-270) corridor.
- To preserve the remaining natural beauty in the community by retaining and maintaining the steep slopes, stream beds, floodplains, and historic and scenic

areas as recreation and open space sites and to promote the Brunswick area, as an intricate part of the recreation potential in the Potomac River Basin.

- To develop a more complete and well-rounded inventory of recreational facilities, and programs for all age groups on a year-round basis in an effort to compensate for the lack of commercially operated recreation and entertainment facilities.

Summary of the 2004 Plan Recommendations

The second Update to the Master Plan was completed in 1994. This Plan was an update to the 1967 Plan and highlighted many areas that had been created under the State Planning Enabling Legislation found in Article 66B of the Annotated Code of Maryland. This version of the Master Plan features sections on Natural Features, Land Use, Transportation, Community Facilities, and also featured a Resident Survey that was conducted in 1991. In 1997 additional revisions were added to the Transportation element. These revisions encouraged the use of alternative transportation and also pathways for use by both pedestrians and bicycle transit.

In 2004 this Plan was re-adopted. Two out of sequence amendments were approved with the first on May 23, 2006, and the second on August 8, 2006. The first amendment was a revision to the Master Plan Map for the removal of the proposed extension of Florida Avenue south of West Potomac Street, and the second amendment added the Heart of the Civil War Heritage Area Plan to the Brunswick Master Plan Appendix. In 2007 the Plan was updated and adopted to include a brief description of the elements mandated by HB 1141.

Revisions to the 2007 Plan include Water Resources and Municipal Elements. The following is a list of the Goals and Objectives that were included in the 2007 plan.

- Foster the growth of Brunswick as a regional center for residential, commercial, and employment development.
 - Encourage residential growth within the City and in areas to be annexed to the City to accommodate future population growth.
 - Allow for a variety of housing types to be constructed in the City to accommodate the needs of a variety of household types.
 - Identify and reserve the most suitable land for future employment and industrial activities.
 - Provide opportunities for retail and service uses to serve both the City and the surrounding region.
 - Encourage annexation of surrounding properties.

- Cooperate with Frederick County, the State of Maryland and other jurisdictions in the development of long-range plans and planning regulations.
- Development Capacity Analysis
- Protect Brunswick’s Natural, Historic and Scenic Resources
 - Protect steep slope, flood plain and wetland areas, and stream valleys from being cleared and developed.
 - Encourage the planting of trees, particularly in stream valley and steep slope areas to prevent erosion and protect water quality.
 - Protect the Potomac River as a water supply source and as a scenic and recreation resource.
 - Set aside land for future park and recreation areas as properties are annexed into the City.
 - Enhance the City’s scenic qualities, such as streetscapes, historic structures, the Chesapeake & Ohio Canal (C&O Canal) and Potomac River, and the stream valleys.
 - Encourage property owners to restore and maintain the integrity of historic structures, particularly in the historic district.
 - Create linear parks through the City’s stream valleys.
 - Minimize the negative impact of development on the City’s natural, historic, and scenic resources.
- Provide a quality living environment for all City residents
 - Provide for a compact and orderly development pattern.
 - Maintain the City’s “small-town” character by encouraging development of a scale and design, which is consistent with existing structures.
 - Provide convenient and adequate road access to all neighborhoods.
 - Provide suitable buffers between residential and non-residential areas.
 - Improve pedestrian connections within the City, particularly between neighborhoods, schools and shopping areas.

- Provide needed public services to all citizens while maintaining affordable tax rates and fees.
- Encourage volunteers and private groups to assist in the provision of public services.
- As properties are developed, set aside land for public facilities, such as schools, fire and police stations, and parks.

With the combination of Plans it can be seen that great strides have been made when planning for Brunswick's future. This Update is the next step. By allocating resources for the future, transitions will be accomplished in a timely, coherent, and planned manner. This Plan sets those resources into logical and comprehensive settings and eventually into reality.



Goals, Objectives, and Strategies

Preface

A Master Plan is a vision statement, describing problem areas, recommending actions, and infrastructure for the future. The purpose of this section is to adequately discuss the Goals that this Master Plan will try to accomplish. The Goals of this Plan were developed by incorporating Goals found in the Frederick County Comprehensive Plan, with previous Plan Goals together with future trends and needs for all City departments.

The Smart and Sustainable Growth Act of 2009

This package of amendments to Article 66B of the Annotated Code of Maryland, was geared toward protecting Maryland's environment and natural resources and to promote sustainable growth in Maryland. In addition, the new Planning Visions law modernizes the State's eight existing planning visions with 12 new visions that more accurately reflect Maryland's ongoing aspiration to develop and implement sound growth and development policy.

State Visions

- 1. Quality of Life and Sustainability:** 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. Public Participation:** Citizens are active partners in the planning and implementation of community initiatives and are sensitive to their responsibilities in achieving community goals;
- 3. Growth Areas:** Growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers;
- 4. Community Design:** 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. Infrastructure:** Growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner;
- 6. Transportation:** 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. Housing:** A range of housing densities, types, and sizes provides residential options for citizens of all ages and incomes;

- 8. Economic Development:** 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. Environmental Protection:** 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. Resource Conservation:** Waterways, forests, agriculture areas, open space, natural systems, and scenic areas are conserved;
- 11. Stewardship:** Government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection; and
- 12. Implementation:** 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.

The twelve visions will be implemented in Brunswick through Goals and Objectives listed in this Plan. They will also be implemented through the Recommendations of this Plan and by a successful update of Local Land Use Regulations. Additionally, House Bill 1141 mandated in 2006 by the Maryland General Assembly, required action by municipalities to incorporate two new elements, Water Resources and Municipal Growth, into their Master Plans. It is the City's intention to comply with this Bill and to update the Master Plan accordingly with these amendments.

1997 PRIORITY FUNDING AREAS ACT

The Maryland General Assembly passed the Neighborhood Conservation and Smart Growth initiatives in 1997. This legislation enhances the Planning Act passed in 1992 that established the eight visions to guide growth and development throughout the State. The Smart Growth initiatives go much further by establishing a variety of State programs and fiscal tools in an effort to protect sensitive areas, plan for better growth, and direct resources. The State's Smart Growth toolbox includes a wide range of policies and programs that address land preservation, economic development, neighborhood revitalization, transportation, environmental protection, historic preservation and other initiatives. Some of the more significant initiatives affecting Frederick County are described below.

Priority Funding Areas

Priority Funding Areas (PFA) define geographical areas within each county where the State wants to target its programmatic efforts and infrastructure funding to support economic development and new growth. Existing or new developments located outside of a State certified PFA would not be eligible to receive state funding for infrastructure

improvements such as roads, water, or sewer. Generally the PFA criteria require a property to be within a designated growth area, have appropriate zoning, and be classified in a 10-year water/sewer service area.

2006 STATE PLANNING INITIATIVES

The 2006 Maryland Legislative session produced several planning related requirements that will affect the way Maryland's counties and municipalities exercise planning and zoning authority. The specific legislation came out of House Bill 1141, described below.

Water Resources Plan Element (WRE)

Addresses the relationship between water and wastewater capacities with planned growth. The three components of the WRE include: drinking water supply; wastewater treatment and disposal; and non-point source and storm water management.

Municipal Growth Element

Required of municipalities to identify areas for future growth consistent with a long-range vision. This element also requires coordination with the County and recommends the use of joint planning agreements between the municipality and the County.

Frederick County Comprehensive Plan

The Goals and Objectives for Frederick County can be found in the Frederick County Comprehensive Plan 2010 Edition. The Organization and Structure of the Plan is as follows:

ORGANIZATION AND STRUCTURE OF THE PLAN

The organization of this Plan departs from the traditional list of comprehensive plan elements (environmental features, community facilities, transportation, and land use) that typically define the individual chapters of a plan. Both the format of this Plan as well as the injection of new and revised planning concepts has established this Plan as a new benchmark rather than merely updating the previous 1998 Countywide Plan.

The format of this Plan is organized around nine themes that serve several purposes. The nine themes provide an opportunity to focus on significant aspects of the County that have, in previous plans, been given very little attention and have been buried within traditional plan elements. A second purpose of the themes is to create a more dynamic Plan document where the individual themes can stand alone in terms of page numbering to facilitate periodic amendments. The first page of each theme includes an Amendment Status block that will be used to document subsequent amendments to the goals/policies/action items, maps, and/or background information for that theme. This will also facilitate the insertion of new theme/chapters in response to either new State requirements or as otherwise identified by the County.

Each theme has a list of goals, policies, and action items that have a numbering reference using letters (G – goal, P – policy, A – action item) and numbers preceded by an

abbreviation for each theme. In this way each goal, policy, and action item will have a unique reference that will facilitate their implementation and allow for subsequent amendments to a theme.

City of Brunswick Goals

When developing the goals for Brunswick, the past, present, and future was examined. Also fitting in with the regional community concept of Frederick County, Brunswick was seen as an area of growth with the highest MARC ridership in the County. As a Priority Funding Area, Brunswick is suited for growth over the rural areas in the County jurisdiction. The following are goals that this Plan addresses:

Goal 1, Management of Future Growth

- Redesign of Growth Boundaries to implement a manageable City Growth Policy.
- Evaluate and Recommend Zoning Regulations.
- Committing infrastructure and Community Facilities needs in the future.

Goal 2, Protection of the Natural Environment

- Promote stewardship of the land as a universal ethic with community responsibility for its management.
- Maintain the high quality of Brunswick's environment as a unique local and regional resource.
- Focus efforts on the protection and conservation of critical resources in situations where current or proposed land uses have the potential for, or are, causing negative impacts.

Goal 3, Creating a Quality Community for all Brunswick Citizens and Businesses

- Promote the safety, health, and wholesomeness of Brunswick as a necessity to ensure a high quality of life for all residents.
- Promote economic vitality.
- Provide City services in a timely manner to facilitate the needs of residents, business owners, and property owners.

In sections of this Plan, Goals, Objectives, and Policies are listed for their corresponding category. The Goals, Objectives, and Policies in those sections work together with Recommendations to support the three overall Goals stated above.



Demographic Profile

Preface

Demographic information is extremely important when assembling projections for the Master Plan. Demographic data has the ability to project increases in population, thus envisioning where growth is necessary and where it is not. Demographic data also helps to identify land uses that may become necessary as the City evolves. The 1967 Plan emphasized the transition that was occurring with younger people moving away from Brunswick as industry declined. The 2004 Plan also highlighted this same theme by showing how, due to changes in commuting, more people were now living in Brunswick and traveling outside of the City and even outside of Frederick County to work. This trend continues today with the ridership on the MARC train being one of the highest from Martinsburg, WV to Silver Spring, MD.

The purpose of this section is to illustrate population changes that have occurred. In addition to those changes, this section also gives projections to the future of the City of Brunswick. With this information it will be possible to better anticipate which services will be needed in the future and where resources should go.

Regional Context

Brunswick is located in the southwestern area of Frederick County. It is located adjacent to the Village of Rosemont and the Potomac River. According the 2010 U.S. Census Brunswick has 5,870 people. Frederick County as a whole has 233,385 people according to the 2010 U.S. Census. The estimated average annual growth of Frederick County since 2000 is approximately 3,811 people per year, and current projected population for Frederick County is approximately 331,700 by 2030.

In 1980, Frederick County was included in the Washington Standard Metropolitan Statistical Area. The inclusion of Frederick County highlighted the change that had been occurring with a large population base working either in D.C. or areas around D.C. In 1987 Frederick County joined the Metropolitan Washington Council of Governments.

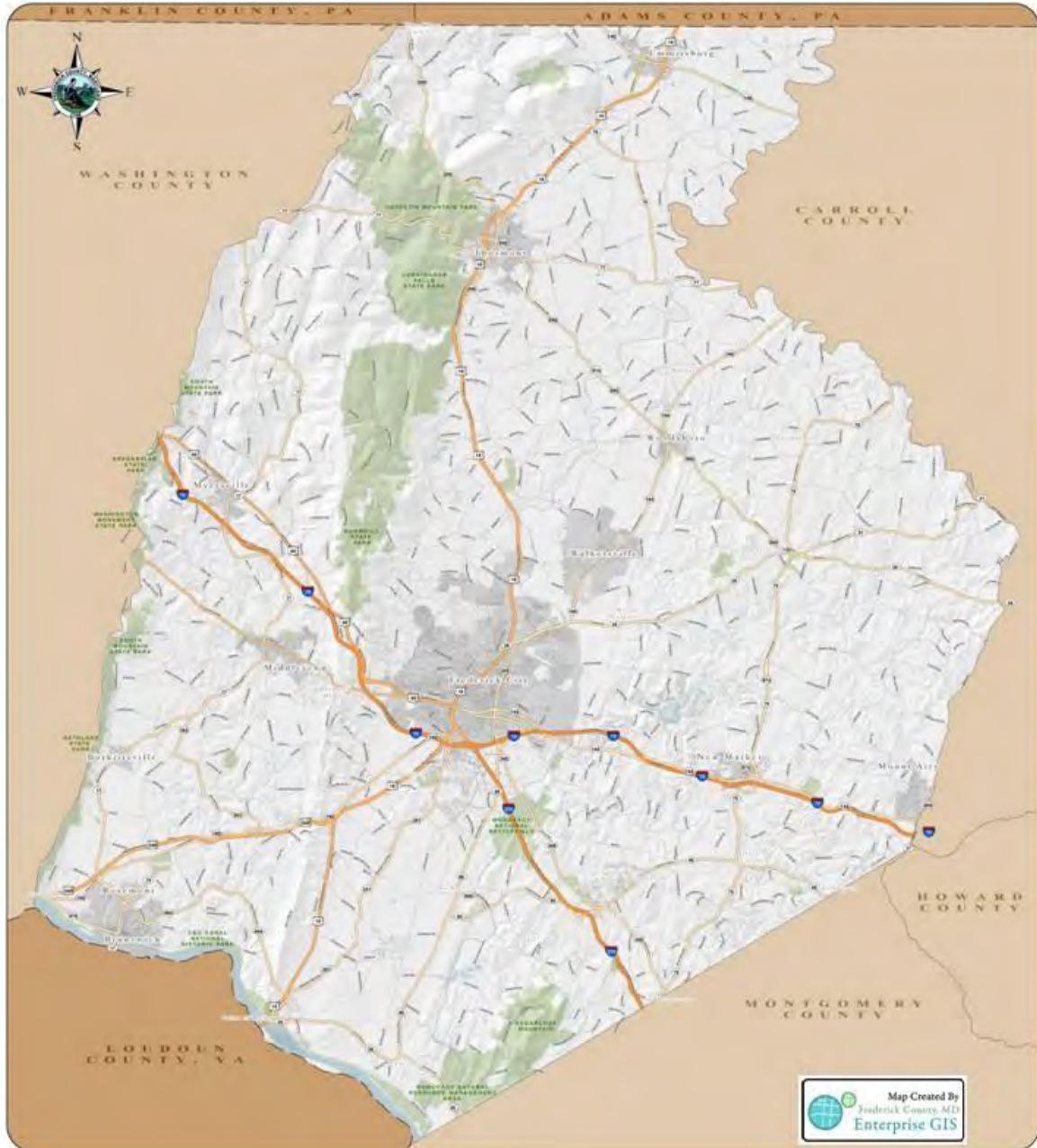
Image 3.1
Brunswick and the Census Region



Source: Frederick County GIS, May 2011

Image 3.2

Frederick County and Municipalities



Source: Frederick County GIS Dept, May 2010

Even though Brunswick is located on the southwestern edge of Frederick County, Brunswick has become increasingly more oriented to Washington D.C. MARC trains provide a link to residents by allowing them to travel to portions of Montgomery County, Prince Georges County, Baltimore, and Washington D.C. also, with U.S. Route 340, access to Frederick is easily achievable. I-70 and I-270 provide driving access to most of Maryland, and to I-95, and especially to the Capitol Beltway (I-495). In addition, expansion of jobs in Loudoun County, VA has provided employment opportunities for the citizens of Brunswick.

Due to its location, Brunswick serves as a minor hub for the surrounding areas. Lovettsville, VA is located less than three miles to the south of Brunswick. Residents of Lovettsville come to Brunswick for some shopping and service needs, and like other residents of Loudoun County, use the MARC service. Alternative shopping areas for Brunswick include:

Charles Town, West Virginia, which is located 14.43 miles to the southwest

Leesburg, Virginia, which is located 18.58 miles to the southeast

Frederick, Maryland, which is located 16.73 miles to the northeast

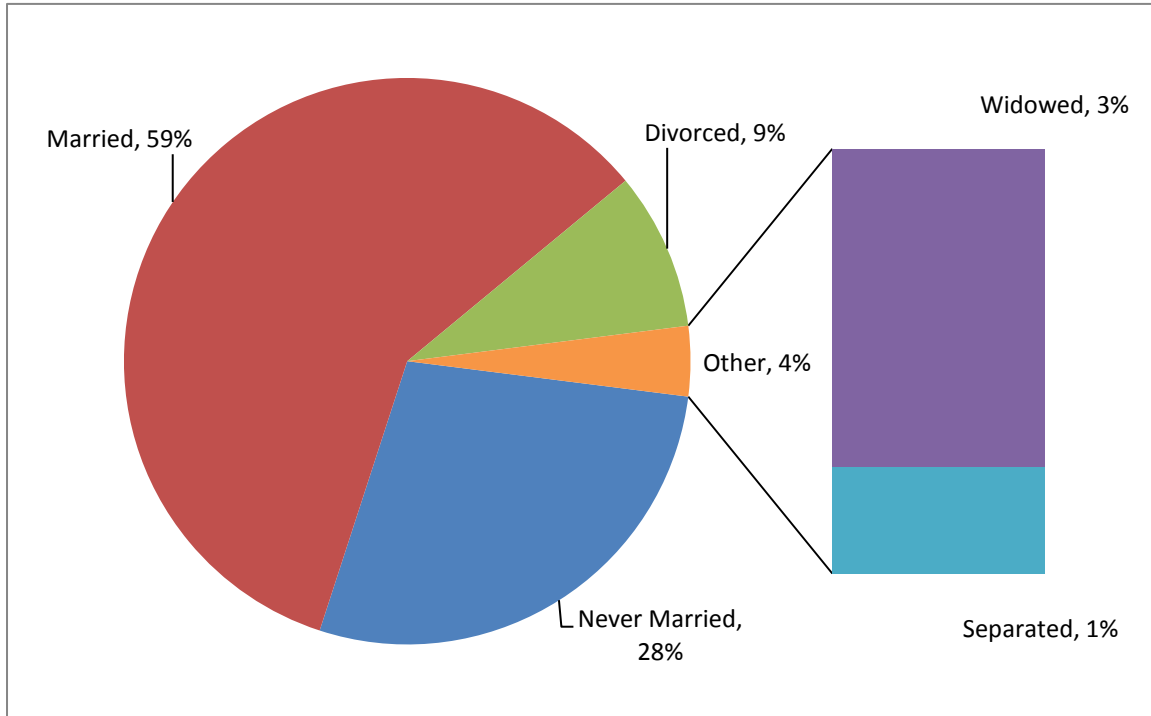
Brunswick residents use these areas for many shopping needs that cannot be met within the City limits.

Population and Housing Characteristics

The 2010 U.S. Census reported that the population of Brunswick was approximately 5,870. In the 2010 data set there were approximately 2,330 total housing units with 175 units or 7.5% being vacant. Excluding data from the 2000 census Brunswick's population has increased steadily since 1960. There has been an increase of over 2,315 residents in the City over the past 50 years; with projected development, that number will continue to increase.

The number of people per household has been mostly steady for the past 20 years. Prior to 1990 the average household consisted of 2.99 persons per household in 1980, down from almost 3.27 in 1960. This decrease indicates that over that period of time more single person households and households with fewer children were being created in Brunswick. This trend appears to have continued as an increase in single person households has occurred for 1990, 2000, and 2010.

**CHART 3.1
MARITAL STATUS IN 2005-2009**



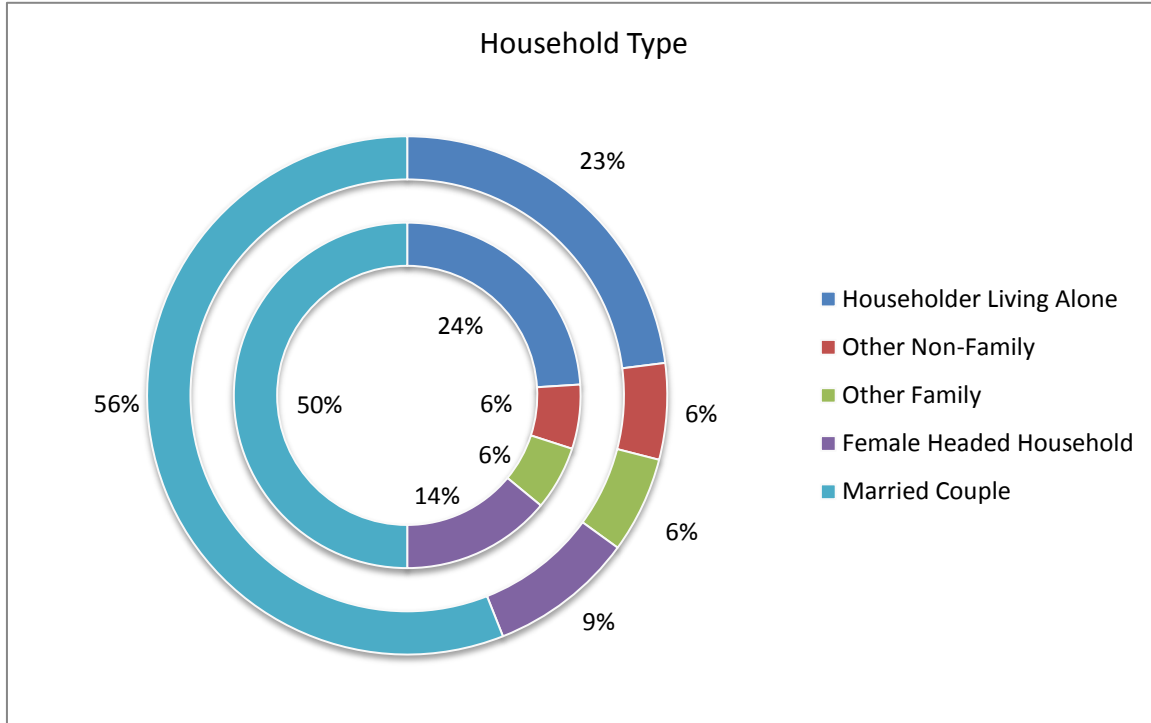
Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

**Table 3.1
Marital Status Percentages Since 1980**

	1980	1990	2000	2010
Single	19%	23%	26%	28%
Married	71%	58%	54%	59%
Widowed	5%	8%	8%	3%
Divorced	3%	8%	8%	9%
Separated	2%	3%	4%	1%

Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

**CHART 3.2
HOUSEHOLD TYPE
INNER CIRCLE REPRESENTS 1990
OUTER CIRCLE REPRESENTS 2005-2009est.**



Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

**Table 3.2
Population and Housing Trends from 1960 to 2010**

	1960	1970	1980	1990	2000*	2010**
Persons in Household	3,541	3,566	4,572	5,106	4,894	5,870
Percent Change		0.7%	28.2%	11.7%	-4.2%	15.0%**
Households	1,082	1,147	1,530	1,810	1,957	2,114
Percent Change		6.0%	33.4%	18.3%	8.1%	28.7%**
Persons Per Household	3.27	3.11	2.99	2.82	2.62	2.70
Percent Change		-4.9%	-3.9%	-5.7%	-7.1%	-4.3%**

* Population Data for this year comes from the Census 2000 which may be incorrect.

** Percentages in this column are from changes from 1990 to 2010 due to inconsistencies in the 2000 Census.

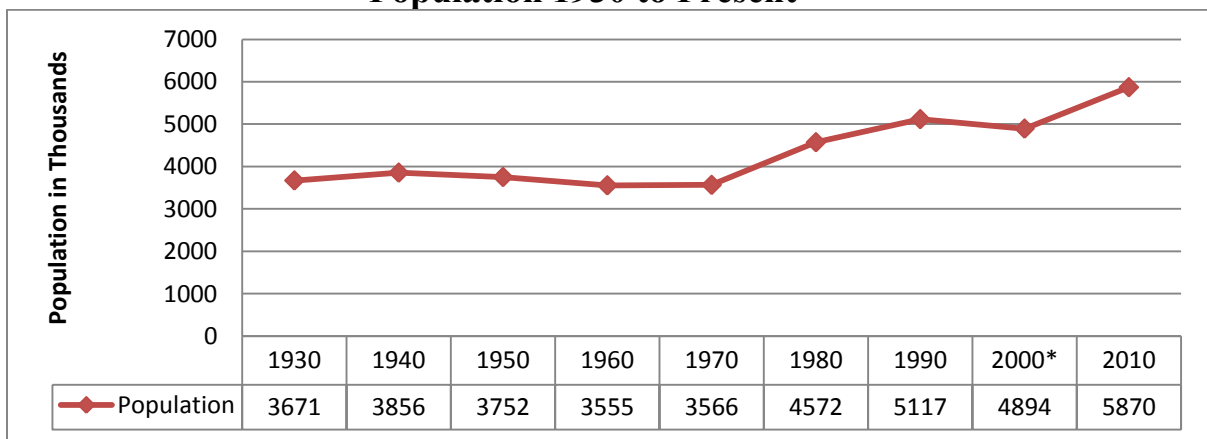
Source: U.S. Census 2005-2009 American Community Survey 5 year estimate and Frederick County Planning Dept, 2010

Brunswick has slightly more people per household than both the U.S. and state averages for 2010 with 2.6 for both. The need for additional housing units geared towards single person households does not appear to be great, but should be planned in accordance with additional development.

Married couple families are still the predominant type of household in Brunswick but this trend is decreasing and has been for some time. In 1980 over two thirds of all households in the City were comprised of married couples; In 1990, this had declined to 59% and in 2000, married couple (non-separated) households represented 50.4% of all household types. In 2010 there was an increase in this group to 51.6%. According to 2005-2009 American Community Survey 5 year estimate Census data, 8.9% of families were headed by a female only, a decrease of over 5% from the 2000 Census data. Non-family households comprise 25% of Brunswick’s households, which means they are either living alone or in a group that is not related. This is 5% lower than what was found in 2000, when of the 559 non-family households, 442 or 79% were single person households.

With a base of residents living alone, and households being comprised of different segments of families, the need for different housing options is clear. In 2010, 51.6% of residents in the City of Brunswick were married. This is a slight increase from 2000 but a decrease has been occurring for a long period of time. In 1980 that number of residents married was at 71%. This change also demonstrates the changing diversity in Brunswick. According the Census 2005-2009 American Community Survey 5 year estimate data 1052 people were not and never had been married, or 26%. This is an increase of 97 people from the 2000 data.

**Chart 3.3
Population 1930 to Present**



* Population Data for this year comes from the Census 2000 which may be incorrect.

Source: U.S. Census & Frederick County Planning Dept

During the period between 1970 and 1980 every age group in the City increased. The group with the largest increase of 56% was the 25-44 year old category. From 1980 to 1990, growth as a whole decreased from 28% growth to only 12%. During this time the 25-44 age group had a 35% increase, while other groups did not increase as much, and

two groups 5-14 and 15-24 each had decreases of 2%. Brunswick, as a whole, has grown 15% in the past 20 years.

One of the reasons that age groups change so drastically over time can be attributed to the effects of housing prices in the rest of the area. Brunswick usually has a lower home price than county average. This results in younger families purchasing homes in Brunswick and then leaving after they have built up equity or the influx of retirees. Rental properties also explain an increased number of younger people. Tenants can move in and out of the town more quickly than those that purchase a home. Once again younger people without equity are unable to buy and will then have to rent housing.

Economic Characteristics

The 2005-2009 American Community Survey 5 year estimate from the U.S. Census reported that 2,868 residents above the age of 16 were in the labor force. Labor force refers to both employed and unemployed workers. The total of the labor force that was unemployed was 141 or 3.6% of all citizens. 2,694 were employed which accounts for 68.8% of all citizens. Brunswick ranks within the average for the State, which has 6% unemployment, and is very similar to Frederick County with an unemployment rate near 4.2%. During the period of 2000 to 2010, the number of City residents in the labor force increased from around 66% to almost 69%, which is an increase of 4.5%.

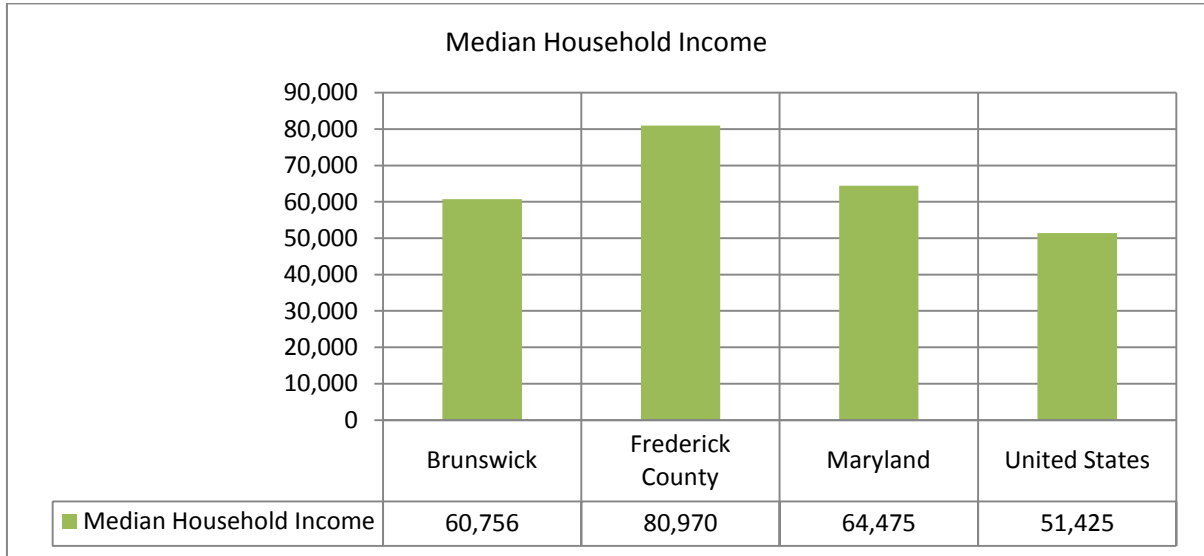
A large percentage of employed Brunswick residents work in sales or do office work, 862 residents or 32%. An additional 905 or 33.6% work as management, professional, or other related types of occupations. Combined, this accounts for over 65.6% of all Brunswick's employed citizens working in more "white collar" professions. The comparison with 2000 is from 54% in 2000 to 65.6% in 2010 resulting in a change of 21%. This compares to 68.7% white-collar workers reported in Frederick County. Almost 14% of employed Brunswick citizens were in service sector jobs, and 14.4% were in construction and maintenance type jobs. The remaining 6.2% work for production or moving operations. There were no workers in the agricultural or fishing sectors.

When comparing these percentages to that of Frederick County there are some outstanding differences. More citizens in Brunswick were employed in the service sector, construction/maintenance sector, and production/moving sector, than in Frederick County, which was 13.6%, 10.6%, and 6.7% respectively. In Frederick County there was 0.3% in agriculture and fishing sectors.

According to the 2005-2009 American Community Survey 5 year estimates, a very large portion of Brunswick citizens who were employed drove to work alone, 77.9%. This is compared to 78.9% that drove to work alone in 2000. In 2005-2009, 13.3% carpooled, and only 6.8% used public transportation, which is a 50% increase as compared to 2000. The increases in public transportation and carpooling can be linked directly to less people traveling alone. It can be assumed that one of the reasons for this change is due to the locations of where people are working although another assumption that may hold true is the economic downturn since 2006.

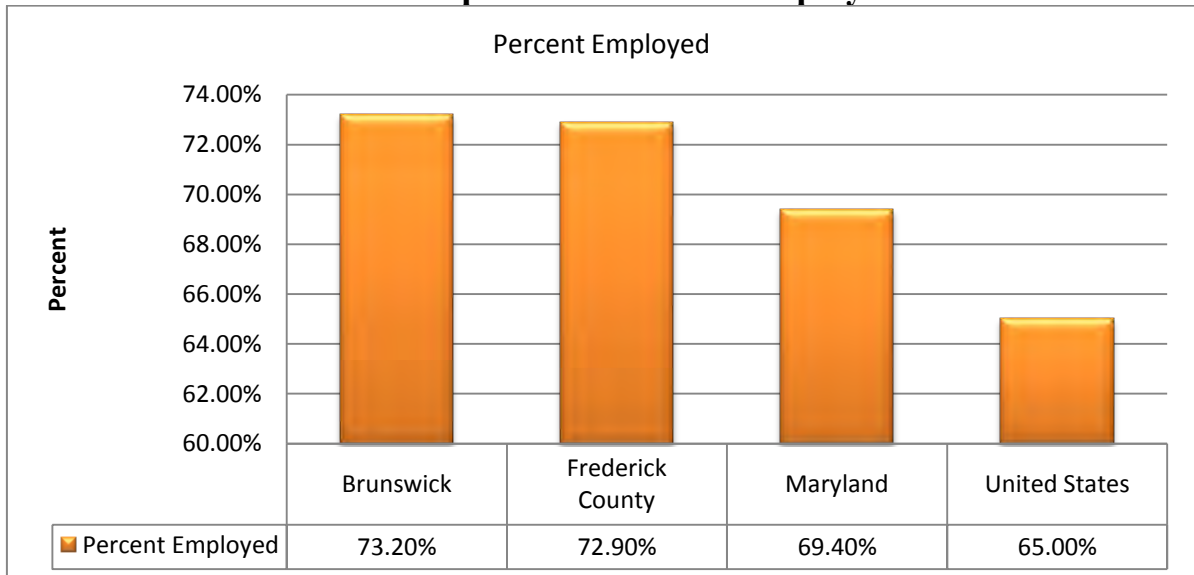
The median income level for households in 2009 was approximately \$60,756. This is much lower than the median income of Frederick County, which is \$80,970. Slightly more than ten percent of households earned less than \$25,000, with 5.3% making less than \$15,000. Almost 42% percent of households earned more than \$75,000; this is much larger than in 2000 when only 20% earned more than \$75,000.

CHART 3.4
Median Household Income in 1999



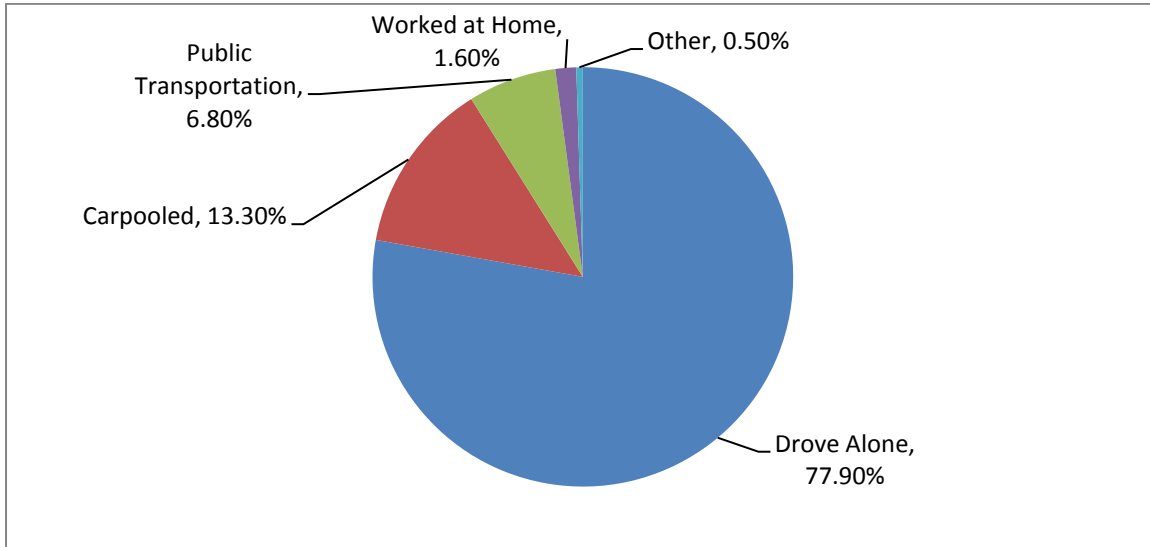
Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

CHART 3.5
Percent of Population Over 16 Employed



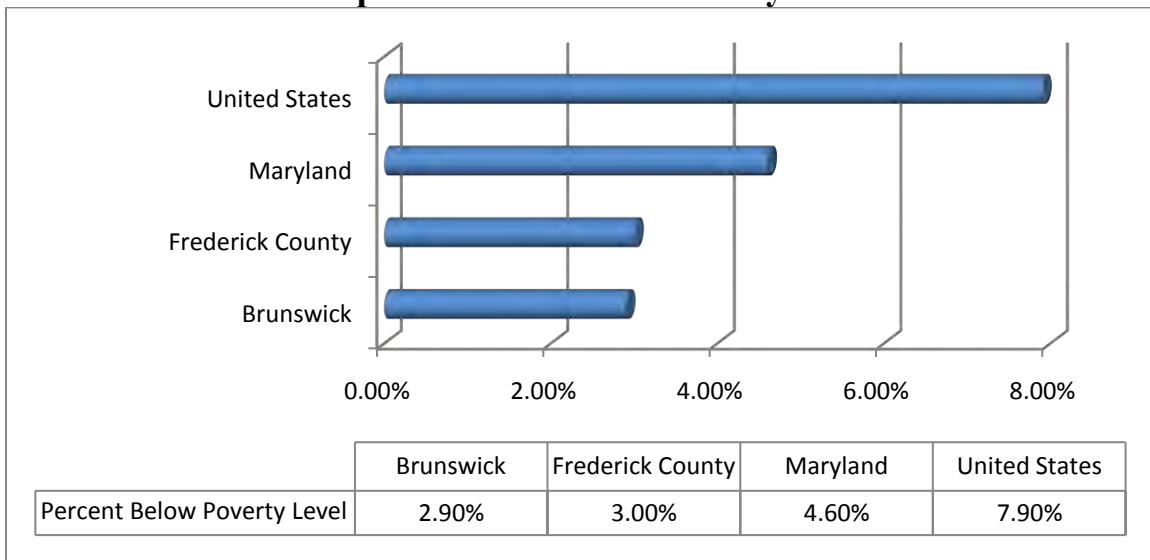
Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

**CHART 3.6
TYPE OF COMMUTE TO WORK**



Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

**Chart 3.7
Percent of Population below the Poverty Level in 2009**



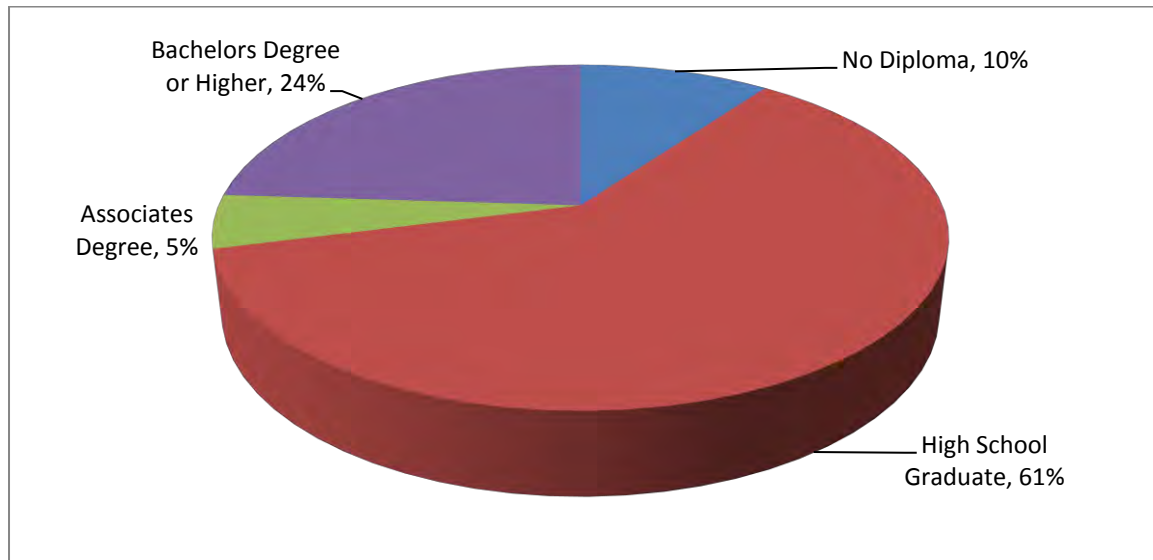
Source: U.S. Census 2005-2009 American Community Survey 5 year estimate

A decrease was noted in the 2000 Census with regards to the poverty level. One hundred seventy four individuals or 3.7% of citizens were living below the poverty level. This is a decrease of 96 people as noted in the 1990 Census.

Approximately 5% of related children aged 5 to 17 were living below the poverty level. Thirty-two families in Brunswick were living below the poverty level representing 2.5%. This however is much different with female-headed households with no husband present. In these households 13.3% are below the poverty level. In female-headed households with children under 18 years of age, the level increases to 17.8%. This represents an increase from the 1990 Census, which stated that only 9.6% of female-headed households with no husband in Brunswick were below the poverty level.

Data shows that education has been improving in Brunswick for some time. In 1970 only 32% of citizens over 25 were high school graduates. In 1980 it had increased to 52% and by 1990 it was at 72%. In 2000 84% of citizens over 25 and over had graduated high school. The percentage of Brunswick Citizens with a bachelors degree or higher was at 11.3% and 3.9% had obtained their associates degree age 25 and older.

Chart 3.8
Educational Achievement



Source: U.S. Census 2005-2009 American Community Survey 5 year estimate



Environment and Sensitive Areas

Preface

The amount, type, extent, and intensity of development on land are often constrained by the physical characteristics of the land itself. Brunswick is no different in this respect. The physical environment that Brunswick occupies contains the Potomac River, steep slopes in excess of 30 percent, and other characteristics that make development challenging. In addition to those challenges, wetlands and woodlands are also dotted throughout the City. These areas must be protected as to not damage the ecological processes that they house. Finally, the Potomac River and tributary stream channels that flow into Brunswick restrict all development in the floodplain due to hazards associated with floods or other natural disasters.

The purposes of this section are to: describe Brunswick's physical characteristics, identify the areas that constrain development, identify natural features that should be protected from development, and to state recommendations for the protection of sensitive environmental areas.

Topography

Brunswick's topography is the most significant feature in planning for future land use and development. A high plateau originates in the area of northern Brunswick. The area from MD Route 17 and U.S. Route 340 towards Little Catocin Creek in the east is defined by this plateau. The Village of Rosemont is also located on this plateau, adjoining the City along the northern Boundary. Many subordinate plateaus extend south from this main plateau and continue towards the Potomac River. The plateaus and their accompanying ravines define the shape of Brunswick's neighborhoods. Due to the topography, a grid system for streets was unachievable leaving some east to west streets disconnected. The north to south streets follow over these plateaus accompanied by steep grades in some sections of the streets. Steep grades can be found on Gum Spring Rd, Ninth Avenue, Second Avenue, Maple Avenue, and Petersville Road. All of those roads are associated with rolling hills that generally flow up towards the north. The Downtown Commercial Core is located in the southern section of town and is at the base of many of the hills in the City. Galyn Manor located to the far north east of the City is in an area which can be defined as a valley, and does not have slopes that are as steep as other areas of the City. Brunswick Crossing Planned Unit Development is located at the top plateau and development will not intrude into the steeply declining slopes.

The ravines that separate the plateaus change in characteristic from one side of the City to the other. The eastern side ravines have steeper slopes than those found generally on the western side. While the western ravines tend to stretch the entire length of the City, the eastern ravines taper off near the center of the City. These slopes have limited the road access in portions of the city and the only major roads that run east/west are Potomac Street and Souder Road.

The ravines that separate the plateaus also create development restraints. For the most part development is prohibited on the steeper slopes especially in areas of 35 degrees or

greater. In addition, the Design Manual prohibits roads which exceed 15 percent slopes. Many of the streets in the City that connect houses built on steep grades are greater than 15% grade. As a result, many streets that are in existence today would not be allowed to be constructed under present guidelines. With more land in the City being developed and less prime land not on steep grades available, the desire to build on the steeper grades will go up resulting in lots in areas which had previously been thought to be undevelopable.

Geology and Mineral Resources

Geologic data is important to land planning because depending on the types of underlying rock, and structures associated with them, this data can determine the landforms that make up the City as well as hydrology and other drainage patterns.

Brunswick is part of the lower Middletown Valley, which is a section of the Blue Ridge Province. The Blue Ridge Province and the lowlands portion of the Piedmont Province combine to make up Frederick County. The Blue Ridge Province is a small strip that is between the Catoctin and South Mountains.

The Blue Ridge Province is made up of primarily folded and faulted sedimentary rocks. In the Brunswick Region there is a large anticline fold, and the outer most portions of the folds are the Catoctin and South Mountains. A Cambrian Quartzite at the base forms these ridges, and the valley floor is composed primarily of Precambrian Gneiss.

Soils found in Brunswick and in the Middletown Valley tend to run deep due to the nonresistance of the underlying bedrock to weathering. Some of the more weather resistant bedrock slices through the soil and form out-croppings throughout the valley.

The geology associated with a region also determines the relative hydrology. Aquifers in the region are considered to be very limited due to the bedrock gneiss surrounding the area. In 1994 it was reported that the average well yield was only 7 gallons per minute. The City of Brunswick does not rely on wells for its water supply given the proximity of the Potomac River and its ability to provide water. However, Brunswick does utilize springs in Washington County to provide additional water to the City. Refer to the Water Resource Element for a detailed analysis of the City of Brunswick water and sewer capacity.

Throughout Frederick County geologic resources are mined, none however are mined in Brunswick or the Brunswick Region. limestone, shale, and stone aggregate are mined in the Frederick Region. No mineral resources have been identified for mining in the Brunswick region and mining has not been recommended in the Brunswick Regional Plan.

Soils

Information related to soils indicates the area is suited for different land uses. Most soils in the area are classified as Myersville-Catoctin-Urban-Land, Mt. Zion-Rohrersville Complex, and Spoolsville-Burkittsville Complex. These soils are suited for agriculture due to their high productivity. These soils are also found to be suitable for residential and commercial development. Soil classifications were provided by the U.S. Department of Agriculture under the Soil Survey Geographic Database.

Streams and their buffers

The Potomac River is the most significant water resource in Brunswick. The Potomac formed the basis for Brunswick's economy as a trading center. With the C&O Canal, growth increased in Brunswick. As time went on the C&O Canal became less important as the railroad industry moved into town. As the transportation route declined, the area around the river and canal became more of a scenic park like it is today. Sound planning is required to ensure this natural resource continues to provide for the City and continues to thrive naturally.

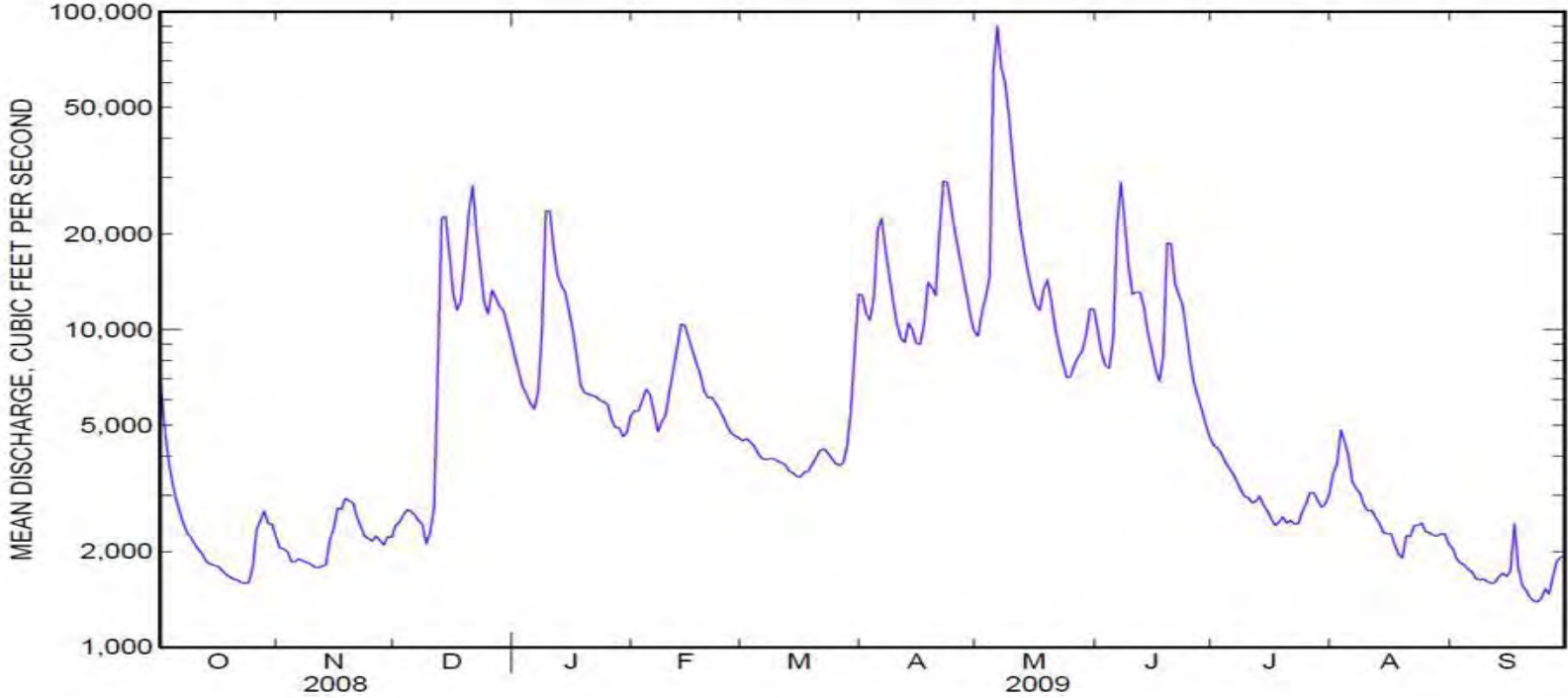
The southern boundary of Brunswick is the Potomac River, as well as the southern boundary for Frederick County and Maryland. The Potomac originates in West Virginia and continues to the Chesapeake Bay. The River has a drainage area of approximately 14,700 square miles and includes all of Frederick County and areas of Virginia, Pennsylvania, West Virginia, Washington D.C. and other counties in Maryland. Catoctin Creek and the Monocacy are the two main tributaries of the Potomac in Frederick County. In addition, smaller streams throughout Brunswick flow into the River.

Water discharge for the Potomac River is recorded at Point of Rocks, approximately six miles to the east of Brunswick. The average discharge in 2000 was 7,450 cubic feet per second. A maximum discharge was recorded in 1936 with approximately 480,000 cubic feet per second. A minimum discharge was recorded in 1966 at 530 cubic feet per second. The average width of the Potomac River in Frederick County is approximately 1,000 feet. The Potomac at one point in the 1960s was referred to as a national disgrace by President Lyndon B. Johnson, due to large amounts of fecal coliform bacteria and evidence of nutrient overloads in the form of algae blooms. Since then the Potomac has become much healthier and the effects of eutrophication have decreased significantly. In 1997 the river was added to the EPA's American Heritage Rivers.

As for the Potomac's recreational potential the river currently is used for boating, canoeing, kayaking, and fishing. The C&O Canal National Park and the Brunswick Campground provide recreational access to the river.

There are a number of streams that are found in Brunswick. Martin's Creek is the largest extending from Petersville Road through the Downtown Commercial Core. On the western side of Brunswick is Dutchman's Creek and its tributary.

Chart 4.1
October 2008 to September 2009
Discharge flow of the Potomac River at Point of Rocks Maryland



Source: United States Geological Survey

Several unnamed streams flow within Brunswick and can be found between Maple Avenue, Second Avenue, and Fifth Avenue, in Gum Springs Hollow, and between Ninth Avenue and the Woodside Station development. Little Catoctin Creek is to the east of the City limits, but has been included in the revised Master Plan Map. This Creek flows into the Potomac River and has been selected as a possible site for a Wastewater Treatment Plant. When the area around Little Catoctin Creek outlined in the Master Plan Map becomes part of the City this area should be studied to determine water flows and the impacts that will be involved with such a facility.

Floodplains and Wetlands

Floodplains and wetlands are areas of particular interest in planning. These areas represent potential flood hazards to development and human safety, and in addition they are environmentally sensitive to development. There are several definitions for the types of floodplains. The 100-year floodplain is an area that is prone to severe flooding with a 1% chance of happening every year. The Federal Emergency Management Agency (FEMA) delineates these floodplains for inclusion in flood insurance programs.

The largest floodplain areas in Brunswick are located near the Potomac River. FEMA delineated 100-year floodplains include the C&O National Park, the Brunswick Campgrounds, portions of Walnut Street, South Maple Avenue, South Virginia Avenue, South Dayton Avenue, South Georgia Avenue, South Florida, and portions of the CSX property. Structures in or elevated above the flood level include the Wastewater Treatment Facility, Water Intake and Pumping Station, Train Station, some housing and businesses on Walnut Street, South Virginia Avenue, South Maryland Avenue, South Maple Avenue, a CSX maintenance shed, 84 Lumber and the better portion of the CSX rail yard.

A revised Draft Floodplain Mapping Study was completed by FEMA in 2006 for Frederick County. The new draft included more property than in previous drafts and many streams also had grown to encompass more properties in the event of a 100-year flood. Originally these smaller streams were noted as having smaller drainage areas and capacity to carry the large flows without flooding.

The City of Brunswick adopted a Floodplain Ordinance, which is administered by Frederick County. This Ordinance establishes Floodplain zones within the City. It also restricts development in the Floodplain to offset the damages that could occur in the event of a flood. The Ordinance has not been updated since 1994, and needs to be amended depending on new regulations and changes that have occurred since that time.

Non-tidal wetlands are important to maintain a local ecosystem. They control floodwaters, support wildlife, and filter sediments and other chemicals that enter ground and surface water. Federal and State regulations protect these non-tidal wetlands and control disturbances to them. These regulations also define what a non-tidal wetland is: an area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support a

prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

These non-tidal wetlands are located along the Potomac River in Brunswick. One of the small islands along the Potomac River has been identified as a wetland of special state concern because it is a habitat for an endangered plant species. Upland wooded wetlands are also associated with Dutchman's Creek in western Brunswick.

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 Brunswick area.

Agricultural and Forest Lands

There are no parcels zoned agriculture within the City boundary. The City does have a Forest Resource Ordinance (FRO). The City requires compliance with the FRO with any development in the City Limits. The City also makes every effort to plant street trees, trees along streams banks, within the floodplain of the Potomac River and in sensitive areas owned by the City. If forest is being protected as part of a development project the area must be put into an easement for long term protection.

Basin Tributary Strategy Plan

Brunswick is part of the Upper Potomac River Basin. This Basin, along with all tributary basins in the Chesapeake, contributes to and is impacted by nutrient pollution. Nutrient pollution can be divided into two major categories: 1) point sources (pollution that comes from a single, definable location) 2) non-point sources (pollution that cannot be attributed to a clearly identifiable, specific physical location).

In the Upper Potomac watershed, forest and wetlands are the primary land use, and agriculture is the second largest land use. Forest and wetland land uses release fewer nutrients to rivers and the Chesapeake Bay than agriculture land uses that produce large amounts of nitrogen, phosphorus, and sediment. In Maryland approximately 33% of nitrogen loads come from atmospheric sources. However, nitrogen load sources vary from basin to basin and can be attributed to land based loads.

Point sources are the second largest contributor of phosphorus, and a relatively small portion of the nitrogen in the Upper Potomac, but are increasing as the population in the watershed area continues to grow.

Currently the State of Maryland is working through various agencies to help administer the Basin Tributary Strategy Implementation Plan. The Tributary Plan will involve Total Maximum Daily Load information, Water Monitoring, Basin Plans and other Water Quality Standards. With coordination and guidance from State agencies, it is the intent of the City to comply in conjunction with, and as part of, the Frederick County Basin Tributary Strategy Implementation.

Total Maximum Daily Load

Total Maximum Daily Load or TMDL is a value of the maximum amount of a pollutant that a body of water can receive while still remaining within Water Quality Standards. The Federal Clean Water Act provides a systematic framework for managing water resources. The framework is as follows:

- Water Quality Standards
- Water Quality Monitoring strategy for State-wide Water Quality Assessment
- Data Management and Analysis
- Water Quality Reporting
- Intensive Monitoring and Information collection to Support TMDL Development
- TMDL Development
- TMDL Implementation Planning and Execution
- Evaluation of implementation measures and the water quality response to those measures
- Continuous Planning Process

The State of Maryland is developing TMDL's for local water bodies. The TMDL is then utilized to improve impaired waters in areas where pollution may be found. The creation of this TMDL is mandated by Maryland State Law and Federal Law. The effect is to hold the pollutant load constant even through residential and commercial growth areas. This can be accomplished by more stringent wastewater treatment, onsite recycling/reuse, and/or a "trading of pollution", this is where cleaning up a less costly source of pollution to allow for continued growth is selected rather than the more costly removal of point source pollution to remain under the required cap. To comply, the City will have to work with other Jurisdictions, Frederick County, State Agencies, and Federal Agencies. Once a TMDL has been developed, it will have to be updated periodically to provide the most up

to date data on the waterways in Brunswick. Suitability of receiving waters cannot be assessed at this time due to the absence of TMDL for those receiving waters.

Goals, Objectives, and Policies for the Environment and Sensitive Areas

The City should maintain the environment and sensitive areas for the health, safety, and welfare of Brunswick citizens.

Goals:

- Determine the quality of waterways in Brunswick.
- Review Federal, State, and Environmental and Sensitive Area related regulations by City Staff for possible inclusion in City Ordinances, Regulations, and Policies.
- Evaluate the effects between infill development distribution and County Sediment and Erosion Control requirements for possible recommendation of change to the Sediment and Erosion Control Memorandum of Understanding.
- Obtain Developer and State Funding for the determination and placement a new Wastewater Treatment Plant.
- Implement conservation areas to control development in sensitive areas, such as along streams, to protect Environmentally Sensitive Areas.

Objectives:

- Revise the City Flood Plain Ordinance to include relevant data from historical information and mandate restrictions and setbacks accordingly.
- Conduct a Stream Study to determine any harmful effects to water supplies and the environment.
- Enter into a revised Memorandum of Understanding with Frederick County for Flood Plain Administration.
- Enter into a revised Memorandum of Understanding with Frederick County for Sediment and Erosion Control.
- In conjunction with Frederick County, develop a Total Maximum Daily Load Report, as mandated by Basin Tributary Strategy Implementation Plan and Maryland Water Quality Standards.
- Developers to conduct a study to determine the Hydrology of Little Catocin Creek for the future placement of a Wastewater Treatment Plant that will have minimal impact on the surrounding areas.

- Revise Development Requirements to address the Environment and Sensitive Areas.

Policies:

- The City will continue with their relationship with State and Frederick County Agencies and other jurisdictions, to identify processes, requirements and complete necessary background studies to complete a TMDL.
- The City will work with State Agencies and Frederick County to maintain, restore, and protect the water quality in the City.
- The City will work within the framework created by State Agencies for creation of the Basin Tributary Strategy Implementation Plan as part of the Frederick County Plan.
- Comply with State of Maryland Water Quality Standards.
- Coordinate with Frederick County to be included in their Basin Tributary Strategy Implementation Plan.



Land Use

Preface

This section of the plan is essential for determining land use patterns and development trends associated with land use. This information is used to define neighborhoods and their relationship to other land uses. Undeveloped parcels are identified and delineated as areas for future development. In addition future development potential of under-developed parcels is addressed.

The purposes of this chapter are:

1. To describe the land use and development pattern and trends in the City of Brunswick.
2. To describe the existing zoning regulations in Brunswick.
3. To inventory undeveloped parcels and determine their development potential.
4. To evaluate the effectiveness of existing land use regulations.
5. To describe the land use recommendations shown on the Master Plan Map.
6. To set policies and recommendations concerning land use within the City.

Existing Land Use

The City of Brunswick is arranged in a generally compact development style. Developed lots are in most circumstances less than 10,000 square feet or a quarter of an acre, in size. Newer developments consist generally of single-family residential homes, while the older sections of the City are usually a mix of styles including many different types of residential and non-residential uses.

Residential Development: Residential development accounts for the largest land use in the City of Brunswick. Most residential units are detached homes on small lots. Town homes and duplexes also occur frequently in Brunswick, with multifamily structures occurring less frequently.

Neighborhoods in Brunswick are difficult to identify. Downtown is generally defined as the area on Potomac Street in the center section of the City featuring commercial zoning classifications. In the center of the City, land is generally defined by its accompanying street, or position in the City. Examples include the west side of City, including Walnut Street, Dayton Avenue, and West Potomac Street. The east side of the City is harder to delineate, Maple Avenue and Second Avenue are used to help define these areas. Some areas are known by the name of the subdivision where the property is located. Examples include Cannon Hill, Manchester Village and Brunswick Heights. An example of this includes Galyn Manor PUD Development, which is on the northeastern side of

Brunswick. New developments will probably continue in this trend such as Brunswick Crossing Planned Unit Development in the northwestern section of the City.

In 2010 there were approximately 2,330 housing units in the City of Brunswick. Seventy-seven percent (77%), or 1,794 units, were owner occupied. Twenty-three percent (23%) of the units in Brunswick are rentals, and an additional 7.5% of all housing units are vacant. These numbers closely match trends that have occurred for the past 30 years. The vacancy rate is somewhat higher than normal due to the economic downturn which started in 2006.

Commercial Development: Commercial development (retail, service, and office uses) is one of the smallest land uses in Brunswick. These uses are located in multiple areas. The largest concentrations are located on Souder Road and Potomac Street. Souder Road is the home of the Brunswick Shopping Center which draws a large amount of service-oriented employment. The main difference between these two locations is the types and mix of land uses. Souder Road is set up Euclidian style with separate uses, while the downtown areas are Mixed-Use, which is the type of development that is seen in other downtowns, like Frederick's Market Street. Additional commercial uses are found along Petersville Road and at the far western side of Brunswick. The Brunswick Crossing PUD will add an additional 45 acres of mixed commercial/office to serve future growth of the community.

Industrial Uses: The largest industrial use in Brunswick is the railroad. This industry is the foundation of Brunswick, and at one time held most of Brunswick's employment. Now that Brunswick is no longer a break point for the railroad, the Roundhouse is gone, the railroad is a commuter stop and its employment opportunities have significantly decreased. Industrial employment located in the City is limited when compared to other areas of the State.

Public and Semi-Public Uses: Public Uses include schools, public buildings and facilities, churches, cemeteries, and properties owned by non-profit groups such as the American Legion. The largest of these uses are the Frederick County Public School buildings.

Parks, Recreation, and Open Space: Parks, recreation, and open space areas are generally undeveloped, or contain a very small amount of development. The largest park area in Brunswick is the C&O Canal National Historic Park along the Potomac River. Other parks include City Park, The Sports Complex, Wenner Park, Kim Weddle Park, West End Park and numerous other smaller parks. Some parts of the City contain open space to link park lands together. Additional open space and recreation areas are located in subdivisions and are owned by Homeowners Associations. Also, some open space designated areas are in private ownership.

Streets and Roads: Streets and roads include areas of paved roads, right-of-ways, and proposed right-of-ways, and alleys.

Existing Zoning

Zoning is an implementation tool for the Master Plan. It is short-range, and is a timing tool to pace development over the 20-year time span of a Master Plan. Ideally, zoning decisions provide enough land for a particular land use to satisfy the expected demand with enough surpluses so as not to drive up the price of land due to scarcity.

Open Space District: The OS District is intended to preserve natural resources, prevent erosion, pollution, and siltation, and to safeguard the health, safety and welfare of persons and property by limiting development on excessive slopes, flood plains, poorly drained lands, or in other areas where protection against natural dangers to life and property or the lack of such protection would prove costly to members of the community. It is also intended to provide permanent open space for its natural beauty and recreational value. It is not intended to allow public access to private property.

Residential Zoning Districts: There are three types of Residential zoning classifications in Brunswick. These include the RS zoning classification which is residential suburban low density, R-1 which is low density residential, and R-2 which is medium density residential. These districts vary in lot size, width, setback, and type of dwellings and accessory uses permitted. In addition, Planned Unit Developments or Cluster Developments, which may allow higher densities, are encouraged to help provide areas of open space, and developed space that can be utilized more effectively than with less dense districts.

RS District: This district is intended to provide for decreasing densities of development in the outlying areas away from the central Business District. The RS District is intended to provide larger lot sizes in which green space is desired in a large amount of the lot.

R-1 District: This District is intended to provide an attractive pleasant living environment at a sufficient density to maintain an adequate standard of physical maintenance and community service. Compact development is encouraged in this zone.

R-2 District: This district is intended to make the development of land with natural and locational advantages economically feasible by providing for higher densities of residential use. In this district multiple varieties of housing are encouraged. An extension of the R-2 District, R-2MH recognizes the existing mobile homes in the City and allows limited infill of this type of housing.

Commercial Zoning Districts: Commercial zoning is utilized to help locate businesses in areas where negative effects are not burdensome, and that the business will still be economically viable. There are five types of Commercial zoning classifications that Brunswick uses. B-1 is the neighborhood business district, B-2 is the central business district, B-3 the business transitional district, GC is the general commercial zoning classification, and HS the highway service district.

B-1 District: This district is intended to allow residential areas the convenience of having a limited number of frequently used retail and service establishments in close proximity. Trips to satisfy such needs are made principally on foot and therefore this District is intended to encourage the provision of small, safe, attractive, and well located shopping areas for primarily pedestrian use in a manner that will make them compatible with residential uses. Currently there are no properties that are zoned for this use. This classification would be beneficial within Planned Unit Development or Cluster Development Options, or possibly in the Downtown Commercial Core for areas not affected by an Overlay Option.

B-2 District: This district is intended to maintain the unique character and pedestrian scale of the Downtown Commercial Core, and to be the central shopping, service, office, and entertainment center for the community and the surrounding region. Stores and other facilities should be grouped together in an attractive and convenient manner with particular attention being paid to the safety of pedestrian travel and the protection of adjoining residential areas. In addition, this area has to be accessible to vehicles and provide adequate off street parking and loading areas.

B-3 District: The intent of this District is to provide sites for low intensity commercial and employment uses, which would be compatible with residential development. Uses which generate high levels of traffic, are not appropriate. This district should be located as a buffer outside the B-2 District on properties that have historically been used for business purposes, but due to growth within the City, have become part of larger residential neighborhoods.

GC District: This district is intended to provide areas for major retail, service, and other business activities that will serve the general commercial needs of the community at large outside of the Downtown Commercial Core. Special care must be taken in development review to minimize the impacts of high-traffic and other potentially disruptive activities, and to ensure that new commercial development will not be located in areas with slopes in excess of 20%.

HS District: This district is intended to provide for the automobile service and drive-in needs of local and interstate traffic. Service stations, motels, restaurants, and other associated uses will be situated in compact, attractive, and well designed areas strategically located on primary highways, with the ample provision for off-street parking and safe access to and from adjacent thoroughfares. Currently there are no properties that are zoned for this use.

Employment Zoning Districts: There are three types of zoning classifications that provide for employment uses. I-1 is the Light Industrial District, I-2 is the Heavy Industrial District, and OR is the Office/Research District. These districts have many limitations and rules for use. The reason for these restrictions are due to traffic, noise, odor, and other nuisances that can be created by industrial uses, and to acknowledge that office and research employment often does not have many nuisances. The intent of these districts is

to have areas that are acceptable for the community, and to protect the community's advantage in attracting employers.

I-1 District: This district is intended for the location of both heavy commercial and light industrial uses which are basically similar in nature, and too sparse to warrant separate districts. These uses are of such size and character as to deem them inappropriate for other commercial and industrial districts. This district also encourages the development of industrial parks to bring these multiple areas together and limit impact in the rest of the City.

I-2 District: This district is designed to provide areas for high intensity industrial uses that may be objectionable as a consequence of having a high nuisance factor. These uses are likely to have a high degree of noise, dirt, smoke, odor, vibration, visual annoyance, traffic, and other dangerous and obnoxious factors. Although this district recognizes the necessity for accommodating for such uses, it is mindful of the need to minimize the effects of such objectionable factors on adjacent areas.

OR Office Research: The office research district is intended to provide for the development of office, research, and light manufacturing uses in high visibility locations along highways. Development in this district shall be characterized by an absence of nuisances in a clean and aesthetically attractive setting. This district is a mix of light industrial and commercial uses, with the commercial uses supporting the employment uses and is not intended to draw commercial traffic from outside the district.

Other Zoning Districts

Agricultural: The Agricultural District in Brunswick is AG. This zone is designed for land planned for other future uses, but land in this zone is currently beyond the ability for the City to provide urban services. Agricultural uses are permitted in this district. Currently there are no Agricultural Zones in Brunswick

Special Development Districts

The Planned Unit Development (PUD) is designed to provide for a variety of residential and related uses, which are planned and developed as a unit whole. Common land and open space must be an essential and major element of the plan in exchange for flexibility and performance criteria.

The Mixed-Use Development (MXD) is designed to place residential, office research or light industrial, and commercial together in a Mixed-Use pattern. This Overlay district is utilized to provide a more urban environment where in citizens can work, shop, and live in a close proximity. The intent is to provide a base for a neighborhood while providing a pedestrian friendly atmosphere.

Residential Cluster Development utilizes compact high-density development to encompass a smaller footprint. This development style is beneficial in preserving

protected areas while still allowing for growth. This development is primarily seen with a tight grouping of homes with a common area adjacent.

Townhouse Development is different than Residential Clustered Development in that open space is not necessarily preserved. With this housing type compact development is achieved in an orderly fashion.

Planned Industrial/Commercial Development allows for uses which complement each other to be located in general proximity to one another. This allows for maximum efficiency for users of this development and allows for a transition for other types of uses around this area.

Shopping Centers/Retail Centers allow for larger sized development that would not be permitted in the other commercial areas. This designation imposes different requirements to protect the environment and areas surrounding these centers.

Community Design and Development Principles

In 2003 Brunswick adopted Community Design Guidelines and Development Principles. These guidelines and principles are designed to help for community and growth planning. By incorporating these ideas it is possible to create a more sustainable community. In addition, this document helps Brunswick with:

- The development of Mixed-Use growth centers which promote a sense of community;
- Maintaining a pedestrian/cyclist-friendly environment;
- Reducing reliance on the automobile; and
- Maintaining a respect for historic growth patterns of dense, Mixed-Use communities surrounded by farms and open space.

The intent of the Community Design Guidelines and Development Principles as well as this Plan is to help foster development for communities as a whole as opposed to specific structures or lots. Creating Mixed-Use neighborhoods in a compact development fashion is more consistent with Brunswick's historic settlement patterns. One of the core themes of the Community Design Guidelines and Development Principles is that development more or less flows from extremely low density to a downtown, or other core area. This transect allows for different development levels in different areas of the City. Large buildings would not be permissible on the outskirts of the City's boundaries but instead housing on larger lots in a more agricultural fashion. The reverse is true with a large empty lot being in the center of a downtown area.

In addition Community Design Guidelines and Development Principles has sections that contain detailed standards that sustain growth and also make transitions to more Neo-

Traditional urban principles that can foster a better Brunswick for the future. Other concepts from the Community Design Guidelines and Development Principles are the inclusion of Transit Oriented centers and specific centers for residential, commercial, industrial, and downtown areas. These concepts help envision future development to counteract early years of inadequate planning and development regulations.

Priority Funding Areas

Currently the City of Brunswick is designated as a Priority Funding Area (PFA) and is in compliance with the PFA requirements and has the ability to receive funds. The City should continue to be in compliance with this legislation and also complete any additional studies or mandates as required in the future.

Community Legacy Plan

In 2003 the Community Legacy Plan was created for Brunswick. After funding was obtained from the State, the Community Legacy Plan began data collection. The Community Legacy Plan focused on the Downtown Commercial Core, where opportunities were presented to help revitalize the area, and also gave recommendations on existing structures. This plan was seen as a Small Area Plan that envisioned short and long term projects to facilitate the goals set forth in the plan. Funding should be obtained to revisit the Community Legacy Plan's recommendations and incorporate new parameters established as part of the Sustainable Communities Act of 2010.

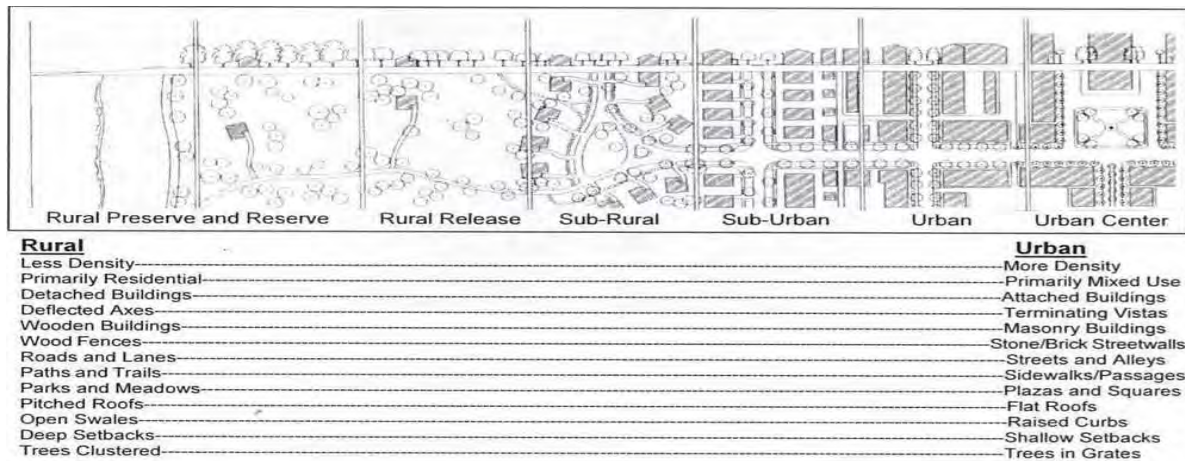
The Community Legacy Plan presented multiple ideas of how to improve Brunswick's image, including the formation of streetscapes to better enhance the Downtown Commercial Core, and also provide for a more enjoyable pedestrian atmosphere. Parking was addressed in this plan and it had suggestions for parking lots around the City. These suggestions included partnerships with private landowners to help encourage private lots for utilization by the public, and also some long-term goals of removing parking lots in areas where buildings would improve character of the City around main access corridors. Signage, transportation, redevelopment, and other areas were also included in the plan.

The Community Legacy Plan overall is narrow in focus and as a result, many of the goals are obtainable and provide for a distinctive character which is desired in the Downtown Commercial Core. The following are Goals of the Community Legacy Plan that this Plan also supports:

- Consider traffic movements around the railroad and 84 Lumber properties.
- Make improvements to the MARC station parking.
- Enhance pedestrian bicycle and vehicular connections between Maple Avenue and the C&O Canal towpath.

- The need to improve, repair, and construct sidewalks along the entire length of Maple Avenue.
- The creation of parking lots for joint uses around the Downtown Commercial Core.
- The development of vacant lots and improvements to existing lots in the Downtown Commercial Core.
- Make improvements to Potomac Street, including intersection bump outs, street trees, themed lighting, and crosswalks

IMAGE 5.1
Rural to Urban Transect



Source: Community Design Guidelines and Development Principles

Land Use Plan Proposals

The recommendations for land use are primarily contained in the Master Plan Map. The Map, outlining the City and surrounding properties, delineates the future annexation limits of the City, designates future land uses for all properties within the City and within the future annexation limits, shows the location of all existing and proposed roads, and designates sites for existing and future community facilities. The following land use categories are shown on the map: Open Space, including parks/recreations and conservation; Residential, including low density, medium density; Commercial, including Downtown, General Commercial and Future Shopping Center symbols; Employment/Industrial, including Office/Research, Light Industrial and General Industrial, and Institutional.

General Proposals: Zoning regulations are used to determine primarily what can go where. The design that is commonly used is based on Euclidean Zoning that segments land areas into categories. This limits what the actual use can be within the property and also creates standards for use such as parking requirements and signage. This plan

recommends that changes occur to the Zoning Ordinance to allow for diversity in zoning classifications and to incorporate form based design into the ordinance.

Another general proposal is that future development along the C&O Canal Scenic Byway (MD Route 464 to Ninth Avenue, Park Avenue to Potomac Street, Maple Avenue to B Street, Virginia Avenue to Potomac Street which turns into MD Route 478) be distinctly compatible with the existing character of the City. Also, the creation of links from neighborhoods to development is needed within the City. These links could then be made into paths allowing for a transportation and recreation and also allow for connections throughout the City to other areas where transportation hubs could be established, and to established areas such as the MARC station.

Open Space: The purpose of the Open Space designation is to designate park and recreation areas, as well as environmentally sensitive areas, which should be protected from development. Existing public parks and recreation areas are designated as Parks and Recreation on the Master Plan Map. Park symbols are used to designate general areas in which future parks should be located. The Conservation designation is used on the plan to delineate other environmentally sensitive areas, which may be privately owned. Sensitive areas include stream valleys, the steep slopes and woodlands associated with streams, floodplains, wetlands and the habitats of threatened and endangered species. Development within these areas should be severely restricted.

Residential: The Residential designations on the Master Plan Map are used to delineate existing and future residential areas, which will accommodate future residential growth. Three types of residential development are shown on the Map. Low Density Residential areas are planned as areas with primarily single-family dwellings at overall densities of two to five units per acre (averaging 3.5 units per acre). Medium Density Residential areas are characterized by a range of housing types including single family, duplex, two family dwellings, townhouses, and multi-family dwellings at overall densities of six to ten units per acre. All residential areas should be planned for public water and sewer service. Medium Density Residential areas should be accessible to Collector or Arterial roads.

Future Growth as outlined on the Master Plan Map shows areas to the eastern side of the current City limits proposed for growth. This area is a deviation from past Plans. Past Plans showed growth occurring in the western side of the City. The eastern side of the City, once developed, has the potential to add additional residents. Table 5.1 explains the population growth that is estimated to occur in Brunswick with the addition of this area.

Table 5.1
Estimated Population Growth for the Area within the Brunswick
Growth Boundary, Excluding Proposed Brunswick Crossing Planned
Unit Development, Proposed Daugherty Tract and the Cooper Tract

Year	2010	2015	2020	2025	2030
Population	5,870	7,602	9,332	9,782	10,259

Commercial: Commercial areas are planned to provide opportunities for the development of retail and service uses as well as other business uses. The Downtown Commercial Core designation on the Master Plan Map delineates the downtown area, which is a Mixed-Use area containing commercial and residential uses. The Downtown Commercial Core must be given special consideration in planning due to its historic nature for the City. The General Commercial designation is used to indicate sites which are appropriate for a full range of commercial activities. Commercial sites should be accessible to a Collector or Arterial road.

Shopping center symbols are also used on the Map to indicate the general location of future retail and service uses. Neighborhood Shopping Centers are intended to serve local needs for convenience goods and services. The site area needed for this type of center ranges from two to five acres in size, and the floor area of the center ranges from 5,000 to 30,000 square feet. Community Shopping Centers are intended to serve larger areas than neighborhood centers and to provide a larger variety of goods and services. The site areas for these centers range from five to twenty acres in size, with floor areas in the range of 30,000 to 800,000 square feet.

Employment and Industrial: Employment and industrial areas are shown on the Plan Map to indicate existing employment and industrial uses and to set aside appropriate areas for future growth. The Office/Research designation is intended to provide locations for the development of office and research park uses. The Light Industrial designation provides sites for industrial parks, limits manufacturing, warehouses, wholesale and distribution, and other business uses. The General Industrial designation is used to indicate sites, which are appropriate for railroad and other heavy industrial uses.

Institutional: The Institutional designation is used to indicate sites which are currently used for public uses, such as schools, public buildings, and utilities. Future sites for institutional uses are designated by symbols to indicate the general location in which the planned facility should be located.

Residential Development Goals, Objectives, and Policies

Goals:

- Strive to remain a unique community.
- Foster the growth of different uses for properties and also retain specific uses and structures, which have symbolic meaning.
- Provide a variety of lot sizes and housing types.
- Comply with the amended Smart Growth Priority Funding Areas Act of 1997.
- Review the existing zoning districts and uses to make recommendations for future potential comprehensive re-zonings.

- Review the residential zoning districts, their respective requirements, and the Planned Unit Development and other special development option requirements to insure that the zoning regulations fulfill the purpose and intent of this Plan.

Objectives:

- Review the Zoning Ordinance and make revisions and further recommendations as deemed appropriate.
- Identify Existing Lots of Record for Development Capacity Analysis and to identify Infill Development potentials.
- Amend the text of the Zoning Ordinance, Subdivision Regulations, and other development regulations to fulfill Goals.

Policies:

- Integrate new residential development with existing development as much as possible.
- Coordinate with Frederick County to plan compatible land uses outside and immediately adjoining the 20-year of Growth Boundary.
- Promote residential designs, which foster the development of neighborhoods, that are visually attractive, and are protected from incompatible uses.
- Encourage the use of cluster development techniques, such as Planned Unit Developments, to allow for the protection of sensitive natural features and the preservation of open space.
- Locate higher density development in close proximity to commercial and employment centers and accessible to major roads and public transportation.
- Provide a variety of housing types within the City to accommodate the needs of households of all types and economic groups.
- Encourage the re-use of historic structures, while maintaining the historic character.
- Utilize assistance from County, State and other agencies to continue successful residential development.

Goal, Objectives, and Polices for the Downtown Commercial Core

Goals:

- Encourage the use of the Downtown Commercial Core.

- Provide infrastructure improvements and maintenance to the Downtown Commercial Core.
- Focus on the issue of parking and make attempts to alleviate this problem.
- Invest in public improvements in the downtown such as sidewalk replacement, and other streetscape improvements as a means of showing a commitment to the Downtown Commercial Core.
- Create additional opportunities for accessory uses.
- Review the existing zoning districts and uses for recommendations with regard to future potential comprehensive re-zonings.

Objectives:

- Continue to seek financial assistance for implementation.
- Amend the Zoning Ordinance to develop an overlay option for the Downtown Commercial Core.

Policies:

- Within the Downtown Commercial Core, commercial uses should be maintained at the street levels. Residential uses should be permitted above the commercial uses.
- Encourage the establishment of new businesses in the Downtown Commercial Core.
- Within the commercial core, commercial and/or residential uses should be permitted at a density of 1 use per 1,000 square feet of floor area. Within the transitional areas, 1 use per 2,000 square feet of floor area should be permitted.
- Maintain the historic integrity of the Downtown Commercial Core and its structures.

Commercial and Employment Development Goals, Objectives and Policies

Goals:

- Provide suitable development for employment and/or industry.
- Review the Mixed Uses and Permitted Uses allowed in Commercial and Employment Developments.
- Review the existing zoning districts and uses for recommendations with regard to future potential comprehensive re-zonings.

- Assess the feasibility for opportunities for Overlay development within the City.

Objectives:

- Amend the Zoning Ordinance text to allow for mixed uses.
- Develop Overlay options for development to benefit and encourage re-development and/or infill development.

Policies:

- Provide an adequate supply of commercial and employment lands through comprehensive zoning and the annexation process to support the economic development in Brunswick.
- Direct commercial and employment development to sites which are accessible to major roads and which are physically suitable for development.
- Plan commercial, industrial, and employment developments so as to minimize the visual and noise impacts that may accompany these areas. Landscaping and buffering will be required as part of the site planning process.
- Encourage new businesses and employers to locate within the City.
- Reserve the most suitable sites for industrial and employment development for future use.



Transportation

Preface

Transportation planning is essential when planning for future growth, development, and infrastructure. Information related to road conditions, traffic volumes, and general usage is used to determine whether road construction or improvements are necessary. Hazardous intersections, roads, and other problem areas must be identified so that measures can be taken to improve these areas. Roads need to be planned in advance of development to insure travel is not hampered and to eliminate any problems on roads that currently exist.

Street System

Brunswick is connected to the County, State, and Interstate highway system, which allows for easy access from multiple directions. U.S. Route 340 is located to the northwest of the City, and provides highway access to Frederick. From Frederick access to U.S. Route 15, I-270, and I-70 is available. U.S. Route 340 also provides access to the south to Charles Town, West Virginia, and northern Virginia. Burkittsville Road/MD Route 17 provides access to Burkittsville, Middletown, Myersville, and also connects with MD Route 464. MD Route 464 extends to the east to Point of Rocks; another access point to U.S. Route 15, and additionally access to MD Route 28. Petersville Road/MD Route 17 provides access to northern Virginia directly from Brunswick by crossing the Potomac River. Additional State highway entrances are outside of the City limits at present time.

The street system in Brunswick is based loosely on a linear grid. Due to the steep slopes that run throughout Brunswick, this grid system is not complete. As a result, many of the streets that run east/west are disconnected.

The main road that runs north/south in Brunswick is Petersville Road (MD Route 17). Burkittsville Road (MD Route 17) runs south from Burkittsville, crossing U.S. Route 340, and continues south through Brunswick, ending once it crosses the Potomac River, at which point the road becomes the Berlin Turnpike. This is an arterial road with adequate shoulders and alignments. Other roads that are oriented north/south direction include Maple Avenue, Second Avenue and Ninth Avenue.

Maple Avenue has adequate width, but the topography on which it was built creates multiple problems with sight distances. Also Maple Avenue does not provide a direct connection south to the Downtown Commercial Core because it ends at East and West B Street.

Second Avenue connects with East A Street to the south and Souder Road to the north. Its vertical alignment, particularly between East B and East F Streets, is excessively steep. Second Avenue is also narrow providing no curbs, gutters, sidewalks, and minimal on street parking.

Ninth Avenue runs from East A Street to an intersection of Souder Road, Point of Rocks Road and Cummings Drive. Both Souder Road and Point of Rocks Road are designated as MD Route 464. Park Avenue provides Ninth Avenue with a direct connection to East Potomac Street.

Those four streets provide the only access north/south throughout the city without having to make multiple street changes to accomplish this travel. No single street connects to the Downtown Commercial Core, with the exception of MD Route 17 as it connects to Maryland Avenue via the traffic circle.

East-west connections throughout the City are extremely limited due to the topography as noted earlier. Only two roads run a majority of the way: Souder Road and Potomac Street. These two streets are arterials that accommodate larger volumes of traffic.

Rail Transportation

Brunswick is served by public rail transportation. The Maryland Commuter Rail (MARC) has three lines with the Brunswick Line serving Berkley and Jefferson counties in West Virginia, Frederick County and Montgomery counties in Maryland and Washington D.C. Four stops are located in Frederick County, two stops in Frederick City, one in Point of Rocks and the other in Brunswick. This line connects to Union Station allowing access to other rail services and bus services, which may be used to travel anywhere in the District and even to other parts of the United States.

Bus Transportation

Bus service in Brunswick is provided by County TransIT service. A shuttle bus makes six stops in Brunswick, Knoxville, and Jefferson, and then returns to the TransIT center. The entire route takes approximately one hour. The route is served twice in the morning and twice in the afternoon.

A proposal has been drafted to provide Brunswick with additional service within the next five years. The reasons for this are based on current rider numbers and the proposed Brunswick Crossing Planned Unit Development. With the additional residents that will be in Brunswick by 2015, it is estimated that service demand will increase exponentially. Also due to the design of Brunswick Crossing Planned Unit Development and the intent of creating a pedestrian friendly community design, additional transit would be logical for this area. It is expected that MARC use will increase and if a bus service were in place to transport residents to and from the MARC station, parking and traffic congestion could be significantly decreased.

Table 6.1
TransIT Rider Figures for Brunswick
From July 2009 to March 2011

Month and Year	Riders
July 09	639
August 09	667
September 09	579
October 09	632
November 09	557
December 09	637
January 10	569
February 10	466
March 10	907
April 10	919
May 10	833
June 10	894
July 10	743
August 10	803
September 10	793
October 10	824
November 10	783
December 10	703
January 11	565
February 11	637
March 11	724
Total Riders FY 10	8,299
Projected Riders FY 11	8,767

Image 6.1
MARC System Map



Source <http://www.mtmaryland.com>

Road Classifications

In the 2004 Master Plan road classifications were delineated according to the Frederick County Master Highway Plan, which was part of the County Comprehensive Plan.

This plan made five road categories: Freeway/Expressway, Major Arterial, Minor Arterial, Collector, and Local.

The classifications of streets were determined by multiple factors including use by local or through traffic, intensity of surrounding land uses and proposed land uses, the streets overall location, and the threshold of volume for the street.

U.S. Route 340 in the Brunswick vicinity was classified as a Freeway/Expressway. This road is limited in access with a constant speed limit of 65 MPH in the Brunswick Region. Additionally, this road provides access to U.S. Route 15, I-270, and I-70 to the northeast of Brunswick. U.S. Route 340 continues southwest to Charles Town and Route 7 in Virginia. This is the only major highway that is near Brunswick.

Arterials provide access to freeways and also provide inter- and intra- County access to other roads, which are not serviced by the Freeways. Major Arterials are defined as a four-lane road with a median. Minor Arterials only require a well-designated two-lane facility in rural areas, and four lanes in more urban areas.

Collector roads carry traffic from the local streets to the arterials, and from there, traffic can move to freeways. Many streets in Brunswick are classified as collector roads. Streets planned for the Brunswick Crossing Planned Unit Development on the Brunswick Street System Map page 129 are of collector status, as is Jefferson Pike and two new roads linking with Souder Road. The remaining streets in the City are local streets, which carry the least amount of traffic and have lower densities.

Transportation Plan Proposals

The proposals that are outlined in this Master Plan focus primarily on the road network which must meet future demand for travel from residents, commuters, and through traffic in the area. This Plan intends to 1) classify existing and planned roads according to their future function, 2) provide guidance to land owners and the general public by giving notice of the appropriate location of new roads and improvements to existing roads and 3) recommend improvements to the existing road network. In addition to traffic proposals, this Plan proposes alternative means of travel to automobile transportation.

The Master Plan road classifications are dependent on long-range land use patterns and development potential, and are not necessarily dependent on anticipated growth. Right-of-Ways and alignments must be reserved regardless of whether one or all of the properties within a growth area are developed in the near future.

Functional Classifications for Roads

The Master Plan proposes a hierarchy of roads to serve Brunswick. These road types are outlined in the Brunswick Design Manual. The function of a street is determined by several factors including, but not limited to, which type of traffic is served: local or through, the type and intensity of proposed land uses, the roads relationship to the overall traffic network, and the volume of traffic that the street is expected to handle. The purpose of this system is to ensure that development of the traffic system is logical and sufficient to serve the needs of those who use it, and to make sure that it complements the Land Use Section of this Plan.

Freeways/Expressways: are the primary and interstate limited access highways, which provide inter-regional connections. U.S. Route 340 is the only Freeway/Expressway in the Brunswick Region.

Arterials: provide primary access to the freeway system and supplement the freeway network in rural areas. Arterials are separated into two subsections Major and Minor Arterials.

Major Arterials: are designed to accommodate high traffic volumes. Design standards require a four-lane road with median.

Minor Arterials: carry less traffic than Major Arterials. Design Standards for Minor Arterials require well-designated two lane facilities. In addition, access from homes is denied on these roads.

Collectors: are the highest order of streets that can be utilized by residential areas. These roads carry large volumes of traffic and direct access from homes should not be permitted.

Local Roads: are streets that transport general residential traffic. They do not carry the same volumes that are recorded on higher-level streets. These roads should be safe for pedestrians. These roads connect to collectors to provide access to other areas of the City and then further to Arterials and further to Expressways/Freeways.

Service Roads: are limited use roads that provide access to non-residential development. The intent of this road is to limit access directly onto a collector or arterial.

Another classification is needed to describe the portion of West Potomac Street from west of Florida Avenue to Maryland Avenue. This section is currently defined as a Minor Arterial but due to several geographic and development patterns this road cannot support this classification. As a result this section should instead be classified to account for this while still complying with the intent of the Minor Arterial designation. A Downtown Business Arterial designation would be used only for the portion of West Potomac Street that has been outlined above. To accomplish this change it is recommended that the

Design Manual be updated immediately to implement this road type and solve many of the problems that are associated with this street's classification.

The City attempts to create a scenario where there is more access onto higher functioning roads. This alleviates any potential traffic problems, while creating better road conditions.

Roads and Intersection Improvements

Parts of the street system in the older sections of Brunswick are narrow in width, lack curbs, gutters, sidewalks, and are often located on extremely steep grades. A large number of intersections pose risks due to the number and angle of streets converging, and steep grades. A large number of these problems are impossible to solve due to the constraints presented by existing development and topography. Slight improvements can be made as development occurs in these areas. This is not entirely possible though, as most lots in the older sections of the City have already been developed to their full potential, making improvements extremely challenging and in some cases impossible.

To begin improving the existing street and sidewalk system in Brunswick, it is necessary to assess all of the streets, intersections, and sidewalks in the City to determine where improvements are needed and prioritize improvements. In the 1998 Frederick County Brunswick Regional Plan, the County identified the need for improving sight distance and installation of sidewalks along Souder Road (MD Route 464). This thoroughfare leads to the Brunswick Shopping Center as well as the Brunswick High School and Middle School. This area would be included with that assessment.

In 1995 the University of Maryland Transportation Studies Center performed a survey on behalf of the City through a grant that was obtained through the Maryland Office of Planning, and the Department of Transportation's local Transportation Planning Assistance Program. The survey inventoried the existing street pavement conditions, widths, curbs, gutters, sidewalks, and parking. The result was a street survey report with maps that summarized the findings of the survey and made recommendations regarding the priorities for making improvements. A schedule for improvements was also developed at that time.

The City should conduct a similar survey to determine the new problems that the City is facing. Over the past fifteen years many things have changed in Brunswick, with new growth and a larger population, infrastructure is being used more frequently. As a result, the tendency to become overburdened at a faster rate is possible. With an influx of residents utilizing more parking and traveling on roads more than in 1995, a study of similar magnitude should be conducted to reassign or reinforce priorities.

Property owners should take it upon themselves to repair portions of public property such as sidewalks and driveway aprons that become damaged, as required by the City Code of Ordinances. At a minimum, areas where this is true should be reported to help ensure that a problem will not develop into an even larger problem. Failure to do so may end up costing much more in the future.

Areas related to the Community Legacy Plan that deal with Transportation should be implemented. Through implementation of transportation priorities in the Legacy Plan the City will be able to correct problems and create a more appealing pedestrian and cyclist friendly environment. Funding should be obtained to revisit the Legacy Plan's recommendations and incorporate new parameters established as part of the Sustainable Communities Act of 2010.

Also, currently Souder Road runs east/west along the northern section of the City. The City will continue to work with the state to develop a sidewalk network along Souder Rd. Additionally Maryland State Highway Administration has plans to analyze pedestrian connectivity along MD Rte 17 leading into the downtown and Souder Road west of the shopping center.

Alternative Transportation

Alternative transportation is necessary to accommodate growth that is economically and environmentally friendly. With alternative transportation options, the City of Brunswick will be able to create an environment that is less dependent on automobiles (except high occupancy vehicles) and more pedestrian and cyclist-friendly. Through the action of creating bike paths and trails, pedestrian rest areas, crosswalks, bike racks, bike lockers, bus shelters, and pull-offs, this can be accomplished. In addition coordination with Frederick County TransIT and MARC will allow for more opportunities for mass transit to other areas in the County and surrounding Region. By incorporating all designs together, a neo-urban approach to current City transportation can be developed which will allow use by those who cannot drive or are not capable of providing their own transportation.

Additionally, incentives for car-pooling should be studied and outlined by the City. The majority of Brunswick's residents do not work solely in Brunswick according to the survey listed in the Appendix of this Plan. At the same time, almost 70% of respondents to the survey noted that they drove themselves to work in a privately owned vehicle. The City should coordinate efforts with Frederick County to help identify car-pool opportunities for Brunswick residents. By giving citizens more commuting options, Brunswick can market that ability and at the same time help the environment and benefit citizens with lower commuting costs.

Maryland State Highway Administration provides park and ride lots to accommodate commuting within the state. Eight lots are located in Frederick County with one being located adjacent to Brunswick and The Village of Rosemont. This lot has 46 spaces and allows for all day everyday parking. This lot is not currently serviced by a bus route.

This parking lot should be expanded for additional parking. This expansion would allow for more car-pooling, and can additionally be used as a parking area for bus transit into the City and to the MARC station. This is similar to the Washington Metro, which uses parking lots at some of its stations. These lots are designed to allow commuters to park

and ride to other locations. Considering the size of the MARC parking lot and other parking sources currently available in the Downtown Commercial Core, an express service from this lot to the MARC would be beneficial in supplying parking for the downtown while not actually utilizing land in this area.

Bicycle use in the City is currently only available on Local Roads. Due to traffic patterns and safety concerns, Collector and higher classified roads are, by necessity, not conducive to bicycle transportation due to the lack of exclusive bicycle lanes. However, with a park and path system applied throughout the City it will be possible to provide access around the City by bicycle without ever being on these higher classified roads.

A Bike Path system will be incorporated into Brunswick Crossing. In the 2004 Plan, a Bike Path was placed onto the Master Plan Map and explained in the text with the intention of providing a pathway that would lead from the Brunswick Swimming Pool/Little League Field to the Train Station and from the Train Station to the C&O Canal Towpath to points east and west. This Path, in addition to the proposed Brunswick Crossing Planned Unit Development Path System, is shown on the Brunswick Street System Map in the appendix on Page 129 and on the Brunswick Master Plan Map in the appendix on Page 127. These paths could link up to paths proposed in the Frederick County Bikeways and Trails Plan (1999). This Plan has a proposed natural surface trail for hikers, walkers, and equestrians, which follows Catoctin Creek from the Potomac River up to Myersville where it would follow Middle Creek to the Catoctin Trail. This Plan also shows the On-Street Bikeways in Brunswick along Souder Road, Point of Rocks Road, and Petersville Road.

To facilitate a Bike Path, it would be necessary to also include rest stops and locations to stow/park bicycles. This would be beneficial at the Train Station and possibly other historic locations in the City limits. The monies used to construct these facilities would be solicited from grant sources.

Transportation Goals, Objectives and Policies

Goals:

- Review the street system to allow for recommendations to improve circulation and safety within the City.
- Evaluate alternative forms of transportation.
- Provide adequate buffering and/or landscaping along Arterial roads to minimize noise and visual impacts on adjoining development as new development occurs.
- Improve accessibility and circulation in the Downtown Commercial Core.
- Evaluate Parking for the Downtown Commercial Core.

Objectives:

- Amend the Design Manual to accommodate changes to road systems within the City limits.
- Coordinate with other municipalities and the County to find alternative forms of transportation.
- Use the Capital Improvements Program to establish a routine Inspection and Maintenance Schedule for Streets and Alleys.
- Conduct a Parking Garage Study to determine the ability for the City to provide parking in the Downtown Commercial Core. This study will also look at other parking related issues in the City, and primarily focus on alleviating any problems that may exist.
- Undertake a traffic study to assess the condition of roads and prioritize improvements that are needed. Also the downtown should be studied for the parking needs that are now occurring and will continue with future growth.
- Undertake a study of the Downtown Commercial Core to improve its accessibility and circulation pattern. Included in the study will be an assessment of street intersections as to their need for improvements.
- Create alternative transportation areas, such as bike paths or trails to accommodate transportation that is more environmentally friendly.
- Coordinate with County for inclusion of Bus Shuttle System into the Frederick County Transportation Development Plan.

Policies:

- Coordinate transportation planning with the County and State when County and State roads are involved.
- Refer to SHA's Scenic Byway Design Guidelines whenever any type of road improvement occurs along the C&O Canal Scenic Byway.
- Work with developers to establish a Bus Shuttle System.
- Work with Federal, State, and County agencies for grant opportunities to expand and facilitate additional features for a Bike Path System in Brunswick.



Municipal Growth

Preface

The purpose of the Municipal Growth Element (MGE) is to coordinate the City of Brunswick's growth patterns with future needs and resource preservation. The element is organized around the following components: Past Growth Patterns, Population Projections and Future Land Needs, Public Services and Infrastructure Demand, Resource Lands, Future Vision and Financing Mechanisms. This element was prepared to serve as the City's Growth Element as mandated through House Bill 1141 by the Maryland State Legislature in 2006. This element is required to be submitted to the Maryland Department's of Planning and Environment for review.

Past Growth Pattern

The City of Brunswick adopted its first Master Plan in 1967. The first Plan made recommendations for future land use, transportation, community, facilities, and capital improvements in and around Brunswick. Included was a section on economic development strategies and downtown revitalization. Implementation for the plan was made possible through a Zoning Map, Zoning Ordinance and Subdivision Regulations, which were adopted shortly after the plan. The land use and zoning consisted of a mix of residential, commercial, industrial and open space. This distribution has varied over the years but the mix has remained consistent. Historic Berlin consisted of approximately 96 lots on 45 acres as compared to today where there are over 2000 lots on over 2400 acres.

Brunswick Historic Development

Present day Brunswick was originally part of a 3,100 acre land grant given to John Hawkins by King George III in 1753. After that time, Brunswick got its beginnings as a trading post for travel on the Potomac River toward the District of Columbia and the Atlantic Coast during the late eighteenth century. Having many names from its inception Brunswick was called Berlin in 1780. In 1832 it was renamed Barry and it remained Barry until 1890 when the name Brunswick was given.

The original town was situated between the tracks of the B&O Railroad and the C&O Canal. In 1834 both the B&O Railroad and the C&O Canal came to the town. In 1907 the B&O Railroad Yards were completed. This yard was the largest and busiest such railroad yard in the world. With the completion of the B&O Railroad System, Brunswick was transformed into a prosperous town with large-scale industry. A town that had only housed hundreds jumped to over 3,000.

During the early part of the twentieth century Brunswick boomed. Population increased as a result of the railroad and its positive impact on the town. Brunswick continued this growth until after World War II.

After World War II things began to change in Brunswick. Rail usage after the War had begun to slow, and newer forms of transportation were beginning to surpass the rail. Also a revolution had begun in the railroad industry, with more engines being switched to

diesel. As a result of the newer diesel engines not as many workers were required to maintain the rail system and unemployment began to rise in Brunswick with almost a twenty year period of decline.

In addition, commercial and residential areas began to decline. Supporting businesses left Brunswick and the commercial section suffered as a result. Vacancy rates in homes began to increase and Brunswick was looking similar to other areas of the country that were going through the same decline.

During the 1970's things began to change in Brunswick. Maryland Rail Commuter Service (MARC) trains were beginning to become more standardized and with them came the opportunity for commuters to live in Brunswick and work in Montgomery County, Washington D.C., and other areas. Brunswick had become a bedroom community for people wishing to escape the expense associated with the areas in which they worked. This increase in population did not have much of an effect on the town as a whole. The new citizens to Brunswick did not necessarily work in Brunswick and as a result Industrial and Commercial areas did not see the expansion that the Residential areas did. This change was also seen in other areas of Frederick County, with more people commuting to work in other counties. To meet the new population demands new developments occurred at this time including: Manchester Village, Woodside Station, and Brunswick Heights.

Throughout the 1990's Brunswick continued to grow. More developments were planned for anticipated growth. Lower residential home prices also fed this growth, as Frederick City continued to expand economically. As a result more commuters came to Brunswick, and more people were driving into Brunswick to ride the MARC. The addition of MARC stations in Frederick gave commuters in the County more options, but the need to drive to Brunswick from outside of the City continued as commuters from outside the County increased.

Population Projections

The 2010 U.S. Census reported that the population of Brunswick was approximately 5,870. In the 2010 data set there were approximately 2,330 total housing units with approximately 175 units, or 7.5%, being vacant. Excluding data from the 2000 census, Brunswick's population has increased steadily since 1960. There has been an increase of over 2,329 residents in the City over the past 50 years; and with projected, development that number will continue to increase.

The number of people per household has been mostly steady for the past 20 years. Prior to 1990 the average household consisted of 2.99 persons per household in 1980, from almost 3.27 in 1960. This decrease indicates that over that period of time, more single person households, and households with fewer children, were being created in Brunswick. This trend does not appear to have continued as an increase in single person households has not occurred with roughly similar amounts being reported for 1990, 2000,

and 2010. The City’s current population is estimated at 5,870 per 2010 Census Report. The City projects a population of 10,259 in 2030, which is an increase of approximately 4,389 people. Ninety percent (90%) of the growth comes from the proposed 1,505 lots approved in Brunswick Crossing. The housing mix of this development should average 2.7 persons per household generating an estimated population of 4,064. Averaging 2.6 persons per household for an additional 125 dwelling units throughout the remaining City will generate an estimated population of 325 people for a total of approximately 1,630 new households. The need for additional housing units geared toward single person households does not appear to be great, but should be planned in accordance with additional development. Although the growth boundary has the potential for a much higher dwelling unit yield and population growth, the above projections are the rate in which the City would like to achieve given the current economy and potential environmental impacts. The 20 year growth boundary illustrates the desired configuration of the City to meet future growth potential. This was done in part because of property owners requests to be in the growth area but also to show the potential connectivity to the regional County Park and possible alternate road connections. The City recognizes the development of that area will most likely take longer than 20 years to complete and will be controlled by the City’s willingness to annex additional properties when services could be provided or developed.

**Table 7.1
Master Plan Residential Potential**

	a	b	c	d	e	f
	Existing (1)	Pipeline Development	Vacant Land	Annex. Area	Total Develop. Potential b+c+d	Total a+e
Acres	455	514	347	454	1,315	1,770
Dwelling Units	2330	1505	846	2,664	5,015	7,345
Population (2)	5,870	4064 (3)	2200 (4)	6,926 (5)	13,170	19,060

- (1) As of December 2010
- (2) Based on household size of 2.70 persons/household for Pipeline Development and 2.6 persons/household for Vacant Land and Annexation Area.
- (3) Approved pipeline development (Brunswick Crossing PUD)
- (4) Daugherty, Cooper and Infill within Municipal Boundary
- (5) 20 year growth area outside Municipal Boundary (beyond 20 year growth not included)

Future Land Needs

The County land use plan designates the City as a Community Growth Area (CGA) where residential, commercial, and employment uses will be concentrated. The City of

Brunswick Master Plan designated the City as a Priority Funding Area (PFA) and the City is in compliance with the PFA requirements. The Master Plan establishes the current zoning classifications as well as special development districts to accommodate growth within the City's boundaries (Brunswick Master Plan Map & Existing Land Use Map). The intent of the land use plan is to direct development to designated areas while protecting the City's green infrastructure, natural resources and character. The majority of growth in the City will occur as residential use which will require connection to the sanitary sewer system. This is in contrast to the County land use around the City which is primarily agriculture. The City is better equipped to manage and protect our resources with our current codes by eliminating septic systems and managing runoff to protect natural resources while maintaining green corridors. The City currently has approximately ten (10) septic systems within the City limits of Brunswick. The City makes every effort to work with these citizens to encourage them to hook up to the City's water and sewer system, but has no official mechanism to force a hook-up unless a failure occurs. The current City of Brunswick boundary is believed to be adequate to accommodate the projected growth to year 2030 (Brunswick Growth Boundary Map). This section of the plan is essential for determining land use patterns and development trends associated with land use. This information is used to define neighborhoods and their relationship to other land uses. Undeveloped parcels are identified and delineated as areas for future development. In addition, future development potential of under-developed parcels is addressed (Brunswick Master Plan Chapter 5). The City of Brunswick, in conjunction with MDP, has prepared a Development Capacity Analysis which is included with the Master Plan Appendix A5.

Land Use Plan Proposals

The recommendations for land use are primarily contained in the Master Plan Map. The Map, showing the City and surrounding properties, delineates the future annexation limits of the City, designates future land uses for all properties within the City and within the future annexation limits, shows the location of all existing and proposed roads, and designates sites for existing and future community facilities. The following land use categories are shown on the map: Open Space, including parks/recreations and conservation; Residential, including low density and medium density; Commercial, including Downtown, General Commercial and Future Shopping Center symbols; Employment/ Industrial, including Office/Research, Light Industrial and General Industrial, and Institutional.

General Proposals: Zoning regulations are used to determine primarily what can go where. The design that is commonly used is based on Euclidean Zoning that segments land areas into categories. This limits what the actual use can be within the property; it also creates standards for use such as parking requirements and signage. This plan recommends that changes occur to the Zoning Ordinance to allow for diversity in zoning classifications and to incorporate form-based design into the ordinance.

Another general proposal is that future development along the C&O Canal Scenic Byway (MD Route 464 to Ninth Avenue, Park Avenue to Potomac Street, Maple Avenue to B

Street and Virginia Avenue to Potomac Street, which turns into MD Route 478) be distinctly compatible with the existing character of the City. Also, the creation of links from neighborhoods to development is needed within the City. These links could then be made into paths allowing for transportation and recreation and also would allow for connections throughout the City to other areas where transportation hubs could be established, as well as to established areas, such as the MARC station.

Open Space: The purpose of the Open Space designations is to designate park and recreation areas, as well as environmentally sensitive areas, which should be protected from development. Existing public parks and recreation areas are designated as Parks and Recreation on the Master Plan Map. Park symbols are used to designate general areas in which future parks should be located. The Conservation designation is used on the plan to delineate other environmentally sensitive areas, which may be privately owned. Sensitive areas include stream valleys, the steep slopes and woodlands associated with streams, floodplains, wetlands and the habitats of threatened and endangered species. Brunswick has no development plans within these areas and should development be proposed in the open space vicinity, severe restrictions will be imposed to protect natural resources.

Residential: The Residential designations on the Master Plan Map are used to delineate existing and future residential areas that will accommodate future residential growth. Two types of residential development are shown on the Map. Low Density Residential areas are planned as areas with primarily single-family dwellings at overall densities of two to five units per acre but must maintain 3.5 units per acre average. Medium Density Residential areas are characterized by a range of housing types, including single family dwellings, townhouses, duplex, two family dwellings and multi-family dwellings at an overall density of six to ten units per acre. All residential areas should be planned for public water and sewer service. Medium Density Residential areas should be accessible to Collector or Arterial roads.

Commercial: Commercial areas are planned to provide opportunities for the development of retail and service uses as well as other business uses. The Downtown Commercial Core designation on the Master Plan Map delineates the downtown area, which is a Mixed-Use area containing commercial and residential uses. The Downtown Commercial Core must be given special consideration in planning due to its historic nature for the City. The General Commercial designation is used to indicate sites which are appropriate for a full range of commercial activities. Commercial sites should be accessible to a Collector or Arterial road.

Shopping center symbols are also used on the Map to indicate the general location of future retail and service uses. Neighborhood Shopping Centers are intended to serve local needs for convenience goods and services. The site area needed for this type of center ranges from two to five acres in size, and the floor area of the center ranges from 5,000 to 30,000 square feet. Community Shopping Centers are intended to serve larger areas than neighborhood centers and to provide a larger variety of goods and services. The site areas for these centers range from five to twenty acres in size, with floor areas in the range of 30,000 to 800,000 square feet.

Employment and Industrial: Employment and industrial areas are shown on the Plan Map to indicate existing employment and industrial uses and to set aside appropriate areas for future growth. The Office/Research designation is intended to provide locations for the development of office and research park uses. The Light Industrial designation provides sites for industrial parks, limited manufacturing, warehouses, wholesale and distribution, and other business uses. The General Industrial designation is used to indicate sites that are appropriate for railroad and other heavy industrial uses.

Institutional: The Institutional designation is used to indicate sites which are currently used for public uses, such as schools, public buildings, and utilities. Future sites for institutional uses are designated by symbols to indicate the general location in which the planned facility should be located.

The Land Use Map delineates three main areas of future growth: the northwest area of the growth boundary has properties to annex with a general commercial land use designation, the eastern and western portion of the growth boundary has existing properties and areas to annex with a residential land use designation and the northern area of the growth boundary has existing properties with office research/general commercial land use designation. The above land use designation will provide the needed land to accommodate the residential growth that is expected over the next 20 years and beyond as well as the general commercial and employment designation to provide working and shopping opportunities within the growing community. The Land Use Map also shows two additional areas on the eastern side of town which are properties that are not in the current growth boundary for the next 20 years but are identified as properties that the City would designate as a residential land use beyond the 20 year planning horizon in future master plans from 2030 into the future.

Community Facilities, Public Services, Infrastructure and Financing

Community Facilities are the most basic infrastructure needs that are provided by the City and other organizations. This Plan provides an analysis of existing facilities and projects the need for future facilities. The City government provides water and sewer service, police protection, a system of parks and other recreational opportunities, and contracts trash collection. County Government provides schools, libraries, TransIT services, landfill, public health service, emergency management, and senior citizen services. Fire and ambulance services are provided by independent organizations that are assisted by the City and the County. Community Facilities are addressed in Chapter 10 and Water, Sewer and Stormwater are discussed in Chapter 8 of the City of Brunswick Master Plan. The County will opened the new 15,000 square foot library in Brunswick, spring of 2011 and the Brunswick Volunteer Fire Department should open their new Fire Building and Social Hall in 2012.

The City has prepared a Water Resource Element for adoption to become part of the Master Plan which addresses the water, sewer and stormwater management needs to accommodate future growth. In April 2009 the City adopted Ordinance 480 to impose

impact fees on new development to addresses the future cost of police, parks and recreation and municipal facilities development. Impact fees will be used only to provide new expansion as needed to accommodate future growth. The City of Brunswick will meet future financial needs through developer funding, impact fees, taxes, and grants.

The City prepares a tap allocation analysis each year to track the average daily flow to the wastewater treatment plant and compares that to the capacity of the plant and taps allocated to development and potential development within the City Boundary. The analysis allows the City to monitor our critical services, and allow for future development accordingly. The City believes that it can service the approved developments in the pipeline currently but additional development will require the developer to provide contributions to expand the capabilities of the existing plants or build new plants to accommodate additional growth.

The City continues to examine the Water and Sewer enterprise fund to insure that the fund keeps up with the cost to run the systems. The City also continues to look at grant opportunities and the taxes to manage the needs of the community.

Resource Lands

The amount, type, extent, and intensity of development on land are often constrained by the physical characteristics of the land itself. Brunswick is no different in this respect. The physical environment that Brunswick occupies contains the Potomac River, steep slopes in excess of 30 degrees, and other characteristics that make development challenging. In addition to those challenges, wetlands and woodlands are also dotted throughout the City. These areas must be protected as to not damage the ecological processes that they house. The City of Brunswick has significant environmental and natural resources with the Potomac River and the C&O Canal as the southern border. Not only is the Potomac River popular for freshwater fishing, it is also important for the campground area and the boat launching ramps between the C&O Canal and the river. The natural and environmental amenities of Brunswick not only provide eco-tourism for the City, they also provide a quality of life component to the residents. Finally, the Potomac River and tributary stream channels that flow into Brunswick restrict all development in the floodplain due to hazards associated with floods or other natural disasters (See Brunswick Master Plan Chapter 4 and Brunswick Environmental and Sensitive Areas Map for further details).

Future Vision

When developing the goals for Brunswick the past, present, and future were examined. Also fitting in with the regional community concept of Frederick County, Brunswick should be seen as the area of growth in the region. Brunswick is suited for growth more than the rural areas in the County jurisdiction. The following are goals that this Plan addresses:

Goal 1, Management of Future Growth

- Implement a manageable City Growth Policy.
- Evaluate and Recommend Zoning Regulations.
- Commit to infrastructure and Community Facilities needs in the future.
- Direct growth away from natural and environmental resources.

Goal 2, Protection of the Natural Environment

- Promote stewardship of the land as a universal ethic with community responsibility for its management.
- Maintain the high quality of Brunswick's environment, as a unique local and regional resource.
- Focus efforts on the protection and conservation of critical resources in situations where current or proposed land uses have the potential for, or are, causing negative impacts.

Goal 3, Create a Quality Community for all Brunswick Citizens and Businesses

- Promote the safety, health, and wholesomeness of Brunswick, as a necessity to ensure a high quality of life for all residents.
- Promote economic vitality.
- Provide City services in a timely manner to facilitate the needs of residents, business owners, and property owners.

In sections of this Master Plan, Goals, Objectives, and Policies are listed for their corresponding category. The Goals, Objectives, and Policies in those sections work together with Recommendations to support the three overall Goals stated above.



Water Resources

Preface

The purpose of this element is to coordinate the City of Brunswick's land use and water resources planning efforts. The element is organized around the following three components: drinking water; wastewater; and storm water and non-point source pollution. Included within those components are discussions of the watershed resources of the region; the quality and quantity of drinking water supplies with respect to planned growth; the treatment capacity of the wastewater treatment facility and disposal of treated effluent; a review of the County's storm water management and non-point source pollution programs; and recommendations for sound land and water management practices that contribute towards the health and sustainability of our watershed systems and human communities. This water resources element was prepared to serve as the City's Water Resources Element mandated through House Bill 1141 by the Maryland State Legislature in 2006.

Links to the Master Plan

This element utilizes information from chapters 4 Environmental and Sensitive Areas, 5 Land Use, 7 Municipal Growth and 10 Community Facilities of the City's Master Plan. This Water Resources Element covers the jurisdiction of the City of Brunswick, Maryland and satisfies the HB 1141 requirement for the City.

Links to Other Plans

The Water Resources Element is linked to other County-produced plans such as the Water and Sewerage Master Plan and the County's Water Resource Element. The Water and Sewerage 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 (i.e. geology, climate, and hydrology) and provides detail on vulnerabilities and limitations to water and sewer service based on environmental factors.

Coordination with Frederick County

The City of Brunswick has coordinated with the County to provide qualitative and quantitative data on the City's drinking water and wastewater systems. The City has an agreement with Frederick County that storm water management is reviewed and approved by the County for development projects within the City boundaries. Policy statements and implementation strategies specific to the City will be independent of the County's Water Resources Plan and will be addressed within the City's Water Resources Element and Master Plan. The City would recommend that County amend the Water and Sewer Plan to reflect the City plans and revised demand figures.

Land Use Plan Analysis

The County land use plan designates the City as a Community Growth Area (CGA) where residential, commercial, and employment uses will be concentrated. The City of Brunswick Master Plan designated the City as a Priority Funding Area (PFA) and the City is in compliance with the PFA requirements. The Master Plan establishes the current zoning classifications as well as special development districts to accommodate growth within the City's boundaries (Brunswick Master Plan Map & Existing Land Use Map). The intent of the land use plan is to direct development to designated areas while protecting the City's green infrastructure, natural resources and character. The majority of growth in the City will occur as residential use which will require connection to the sanitary sewer system. This is in contrast to the County land use around the City which is primarily agriculture. The City is better equipped to manage and protect our resources with our current codes by eliminating septic systems and managing runoff to protect natural resources while maintaining green corridors. The City's current population is estimated at 5,870 per 2010 Census Data. The City projects a population of 10,259 in 2030, which is an increase of approximately 4,389 people. Averaging 2.6 persons per household this population increase would result in a need for approximately 1,688 new dwelling units and approximately 500 new commercial taps. With the assumption that each new dwelling unit or tap will consume 250 gallons of water per day and 250 gallons per acre for commercial development it is assumed that the future water resource needs of the City to be an additional 450,000 gallons of water to accommodate the projected growth by 2030 equating to a total average daily demand of approximately 1.10 mgd.

Importance of Water Resources Planning

With an additional 1.1 million people expected to reside in the State of Maryland over the next 25 years, population growth and its associated water resources challenges are anticipated in the City of Brunswick. In addition to addressing the competing needs of residential and commercial/industrial development, the City will need to review the land use to ensure delivery of water and sewer service to a larger customer base. Alternative supplies and additional storage may be needed to augment the community systems and wastewater treatment facilities may require upgrades to reduce the concentration of pollutants in their discharge. The conversion of forests and agricultural land for development will impact watershed health and new rooftops, roads, and driveways will increase our total impervious surface area, inhibiting natural recharge of water. The City of Brunswick's location within the Chesapeake Bay watershed offers another major challenge. The City's major water body, the Potomac River, is directly influenced by the City with runoff and wastewater discharge going directly into the Potomac River which flows directly into the Chesapeake Bay. The challenges associated with growth are not new or unique to the City of Brunswick; in fact, communities across the country and region are dealing with many of them and have found solutions. This Water Resources Element takes in to account the diversity of water resources issues, limitations and vulnerabilities that the City of Brunswick is facing and offers recommendations for potential solutions. This is the first attempt to develop a Water Resources Element for the City of Brunswick. Subsequent updates to this Water Resources Element will likely have additional sources of data and technical reports that will expand upon this initial effort.

Frederick County Watersheds

Water in Frederick County flows across two major watersheds, the Catoctin Creek watershed to the west of the Catoctin Mountains and the Monocacy River watershed to the east. Both watersheds lie within the larger Potomac River Basin, which drains to the Chesapeake Bay. 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 the County's total land area. The creek's confluence with the Potomac River is located just east of Brunswick, Maryland. Brunswick lies within the Upper Potomac River Basin, Maryland watershed code 02140301 and Catoctin Creek, Maryland watershed code 02140305. Maryland Department of the Environment (MDE) has listed streams in the Catoctin Creek watershed as impaired for sediments, nutrients, bacteria, and impacts to biological communities. Improvements to the health of the Monocacy River and Catoctin Creek watersheds are 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, governments, and businesses are tackling in the City of Brunswick include:

- Reducing urban and storm water 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;
- Conserving water; and
- Planting trees, shrubs and herbaceous plants native to the area.

Drinking Water Assessment

Healthy watersheds provide a safe and sustainable drinking water supply. With the City of Brunswick drawing the majority of its water supply directly from the Potomac River, water appears abundant. 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 at other times. Summertime demand, in particular, puts pressure on our water resources when supplies are lowest, but demand is high. The drinking water assessment investigates drinking water supply and availability, drinking water demand, major issues related to drinking water, and drinking water policies and projects.

Drinking Water Supply and Availability

Drinking water is obtained from surface water and ground water sources. The two supplies are intimately related; ground water is stored in aquifers and crevices beneath the ground that are recharged by precipitation. In an unconfined aquifer, the most common in Frederick County, ground water moves horizontally before it is discharged into a stream or other surface water bodies, such as a seep, spring, or wetland. In the City of Brunswick, drinking water is obtained from surface water sources the Potomac River and Yourtee Springs. Stream flow directly correlates with the rise and fall of the water table and both are impacted by climatic and drought conditions. Disruptions to the natural hydrologic cycle by land use affects availability of both supplies. The steady increase in the City's population that is expected over the next twenty years poses limitations to the 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 ground water and surface water and presents the limitations of each.

Ground water

The available supply of ground water in the City of Brunswick 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 the County's aquifers and organized them by hydrogeomorphic region. The four regions located in Frederick County are Blue Ridge, Piedmont Crystalline, Piedmont Carbonate, and Mesozoic Lowlands. The City of Brunswick lies within the Piedmont Crystalline region. In addition to geology, climatic conditions impact the County's supply of groundwater. Although water table conditions are the most prevalent, seasonal variation in groundwater is also a limitation to its use as a reliable 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. (*2006 MDE An Evaluation of Water Resources in the Catoctin Creek Watershed, Frederick County, Maryland*). Groundwater limitations are accentuated during the summer months. Mid-June through mid-September is the driest time of the year and groundwater supply declines significantly during the summer quarter.

Surface Water

The most abundant surface water supply available to the City of Brunswick is the Potomac River. The river drains a watershed of 14,679 square miles encompassing parts of West Virginia, Virginia, Maryland, Pennsylvania, and the District of Columbia. The river originates at Fairfax Stone, WV and runs 383 miles to its confluence with the Chesapeake Bay at Point Lookout, MD. It is estimated that the Frederick County land area contributes 419 billion gallons of water per year via runoff to the Potomac River or

1.15 billion gallons per day (Frederick County Water and Sewerage Plan 2008). The City's use of the Potomac River as a drinking water source is considered non-consumptive, meaning that more water is returned to the Potomac River than is withdrawn. According to the Interstate Commission on the Potomac River Basin (ICPRB), the river's highest recorded flow was 275 billion gallons per day (March 1936) and its lowest recorded flow at the same Washington, DC location was 388 million gallons per day (September 1966, ICPRB Facts & Figures). Before water supply withdrawals, the Potomac's average flow is about 7 billion gallons per day. The Potomac River supply is augmented by two back-up water supply reservoirs: Jennings Randolph located on the North Branch of the Potomac in Garrett County, MD and Mineral County, WV and the Little Seneca Lake located on Little Seneca Creek near Boyds in Montgomery County, MD. Releases are made from the reservoirs when low flow conditions are present. Low flow conditions result from low summer rainfall, low groundwater levels, and low precipitation levels over the previous 12 months (October 2008, ICPRB Water Supply Outlook). The Potomac River has a minimum flow-by requirement of 100 mgd (the minimum flow needed to maintain suitable conditions for fish and aquatic communities) and summertime demand ranges between 400 and 700 mgd. Flow on the Potomac would need to drop below 600-700 mgd to trigger a reservoir release. The abundance and consistency of the Potomac River supply has leveraged it to become the County's principal source of public drinking water. Like groundwater levels, surface water flows vary seasonally and daily. There are periods of time when surface water levels become low or may not flow at all. Drought periods emphasize seasonal fluctuations. An additional limitation to developing a public drinking water source using surface water is meeting the flow-by requirements mandated by the State of Maryland. This requirement, which protects the biological integrity of the stream, is based on the 7 day, ten-year low flow. Without a reservoir or adequate storage, streams cannot meet the minimum required flow all of the time (2004, *Advisory Committee on the Management and Protection of the State's Water Resources. Appendix D - Monocacy River Watershed - Pilot Study*).

Surface Water Appropriations

Surface water is appropriated by the Maryland Department of the Environment for twelve-year periods. The City holds a Water Appropriation and Use Permit (WAUP) for the Potomac River. The permitted withdrawals total 1 mgd (daily average) and 1.5 mgd (maximum daily).

Source Water Protection

The quality of drinking water varies by source. Different issues exist for ground and surface water sources. With the exception of groundwater in karst aquifers, which is under the influence of surface water, surface water is more vulnerable to contamination from land use practices. Therefore, water quality concerns like sedimentation, potential spills, and fecal contamination are more prevalent. Ground water quality 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 concerns are listed below:

- Sedimentation
- Human pathogens
- Fecal contamination (Cryptosporidium and Giardia)
- Potential spills
- Fecal coliforms
- Nitrates
- Natural organic matter
- Algae
- Taste and odor compounds
- Gasoline-related compounds

Water quality standards are in place for community systems using ground and surface water. 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. The State of Maryland has prepared Source Water Assessments (SWA) for all public systems in the state. These plans list in detail the vulnerabilities of the supply and offer recommendations for continued protection. Two Source Water Assessments were performed by MDE titled –Potomac River Source Water Assessment for Maryland Plants City of Brunswick” and "Source Water Assessment for City of Brunswick Yourtee Springs". The SWA recommendations have been incorporated into the policies and actions of this element. –The Source Water Assessment for City of Brunswick Yourtee Springs” prepared by MDE in June, 2005 concluded that the City of Brunswick’s Yourtee Spring water supply is not susceptible to contamination by inorganic compounds, volatile organic compounds, synthetic organic compounds, radionuclides or microbiological contaminants. The recharge area above the springs is nearly 100% forested and is the primary reason for the excellent water quality from the spring. Continued preservation of this forested land is critical for maintaining the excellent water quality from this source. The City has indicated to Washington County an interest in increased source water protection through wellhead, springhead or headwater protection ordinances to better protect Yourtee Springs. With our groundwater well located outside of City’s boundary, Washington County regulations and ordinances are needed for adequate source water protection of that part of the City’s water supply system.

Drinking Water Demand

Brunswick Service Area

The City of Brunswick obtains its drinking water supply from the Potomac River and Yourtee Springs in Washington County, MD. Water service extends beyond the City to portions of Knoxville, New Addition, Washington County (Brownsville area) and the Village of Rosemont. In 2005 the City passed Ordinance 430 which established procedures to consider water taps outside the City’s boundary. Currently the Mayor and Council have a policy of no expansion of the water system outside the City’s corporate

limits. The drinking water supply system serves a population of approximately 6,478 people with a current demand of 0.62 mgd. The City has a Potomac River permit for a daily average withdrawal of 1.0 mgd with a maximum daily withdrawal of 1.5 mgd. Yourtee Springs is permitted for 0.35 mgd (daily average) and 0.5 mgd (max day demand). The Yourtee Springs water is chlorinated at the spring house and is piped to the western lower zone of the City. The water does not go through the WTP and meets all MDE standards. The ultimate design capacity of the Water Treatment Plant (WTP) is 1.5 mgd. The development of Brunswick Crossing, which will add 1,818 residential dwelling units and commercial and office uses to the community, will increase the drinking water demand by 0.45 mgd for a total average daily demand of 1.1 mgd and 1.75 mgd maximum daily demand. To handle the additional demands of Brunswick Crossing, a 1 million gallon elevated storage tank has been built and plans for expansion to the WTP have been approved. The planned improvements for the WTP include a third 500,000 gpd Trident Microfloc unit to be installed to increase the plants daily capacity to 1.5 mgd. Additionally, the water treatment plant building will be expanded and a fourth concrete base will be installed to facilitate future plant expansion of a fourth Trident unit. The WTP expansion will start in 2010 and be completed by fall 2011.

The City projects that a future plant expansion of the WTP to a 2 mgd capacity will need to occur between 2020 and 2025. The existing clearwell, decant tank, backwash, waste sludge and recycle pumps are adequate to serve the expanded capacity, however the existing 320 gpm finished water pumps will need to be replaced with three 525 gpm pumps. This will allow the plant to operate two pumps to meet demand and reserve the third for backup. A twelve inch dedicated supply line from the WTP to the City's reservoir was installed in 2009. The existing booster pump capacity shall be increased to accommodate the increased flows. It is anticipated that an additional two 600 gpm pumps will be installed to provide for the increased flow and backup. The City had water storage capacity of 3.25 million gallons with the existing tank and reservoir. The City completed maintenance and new cover installation on the reservoir in 2009 bringing the total storage capacity for the City to 4.25 million gallons. The City estimates that drinking water demand will reach 1.75 mgd by 2030. The planned water service areas are included in the Frederick County Water and Sewerage Plan approved December 2008. To accommodate the projected population, additional appropriations will be required as well as expansions to the water treatment facility. The primary vulnerability of Brunswick's drinking water supply is surface water quality. The City will continue to utilize the Maryland Department of the Environment Source Water Assessment reports to pursue all measures necessary to protect their water sources. The City will also continue to maintain the Water Emergency Response Plan. One of the City's greatest concerns related to their drinking water supply is ensuring that there will be reliable quantities of quality water to supply future growth. The 2030 projections are based on current undeveloped land within the City boundary and would not be sufficient to meet the build-out demand of the current 20 year growth boundary (Growth Boundary Map 2010 Master Plan). Other limitations are related to the capacity of their treatment facility to meet 2030 projections.

Water Conservation

The EPA estimates that an average family of four can use 400 gallons of water every day. While water consumption by individual households in The City of Brunswick is below that 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 retrofits to older homes. Widespread education and outreach efforts on the benefits of water conservation are proven to reduce water use in a community. Conservation is especially important during the summer months when demand is high and supplies are low. Peak season water demand management is in place in the City of Brunswick. Brunswick has implemented the use of tiered billing where rates increase with consumption. Lawn watering restrictions and water conservation public alert systems for use during drought are also utilized. Water conservation measures lower consumer rates and utility bills while placing less pressure on precious resources. The City of Brunswick realizes major benefits from conservation measures when its citizens participate. Rather than seeking additional sources of water, conservation provides an alternate source of drinking water supply to the community.

Wastewater Treatment Assessment

The City of Brunswick wastewater systems will continue to experience pressure from population and employment growth in Brunswick. As growth pressures place demand on facilities and infrastructure, the state and federal government will place more stringent restrictions on the levels of pollutants permitted to enter local waterways via treated effluent. This section of the Water Resource 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, current and projected demand on the City's wastewater systems, and the impact of individual septic systems. The section concludes with a list of 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

The Wastewater Treatment Plant (WWTP) is a point source of pollution in the City of Brunswick. The treated effluent is discharged directly into the Potomac River. Discharge permits for the Potomac River require the use of de-nitrification plants with filters. This requirement protects downstream water users and serves to protect the Chesapeake Bay. In the future, the majority of new or expanded wastewater treatment plants will need to employ filtration and nitrification/de-nitrification to meet strict discharge permits.

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. The State's framework for meeting nutrient reduction goals is described in detail in the Tributary Strategies Statewide Implementation Plan. To date, Maryland has made significant progress through upgrades of major wastewater treatment plants to Biological Nutrient Removal (BNR) and Enhanced Nutrient Removal (ENR) treatment technology. These new technologies reduce the overall pounds per year of nitrogen and phosphorus that are discharged from wastewater treatment plants to tributaries of the Bay. 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 the Maryland Department of the Environment 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 Wastewater Treatment Plants.

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. The Fund is used to upgrade wastewater treatment plants to ENR technology so that they are capable of achieving effluent quality of 3.0 mg/l total nitrogen (TN) and 0.3 mg/l total phosphorus (TP).

Wastewater Treatment Capacity and Demand

Brunswick/Knoxville Service Area

The City of Brunswick provides sewerage service to city residents. The City's Wastewater Treatment Plant (WWTP) is located between the C&O Canal National Historical Park (NHP) towpath and the Potomac River; treated effluent is discharged to the Potomac River. In addition to the WWTP expansion for Brunswick Crossing in January of 2008, the plant also went online as Frederick County's first Enhanced Nitrogen Removal (ENR) treatment facility. The design capacity of the upgraded plant is 1.4 mgd; this is double the plant's previous capacity of 700,000 gallons/day. Nutrient reduction is five-fold with the new technology. The ENR plant is anticipated to generate less than 3.0 mg/L TN and 0.3 mg/L TP. The average inflow to Brunswick's plant was 445,000 gallons/day between 2008 and 2010. This included 100,000 gallons/day reserved for the City/County agreement referred to as the Knoxville/Rosemont agreement established in August of 1991. At present, there are 125 County connections to the City system, leaving approximately 65,000 gallons/day reserved for future County septic system failures. Remaining capacity was 200,000 gallons/day. The Brunswick Crossing development alone is projected to generate 450,000 gallons/day of wastewater flow. This exceeded the available capacity of the treatment plant and required an expansion as part of the property's annexation. Brunswick officials anticipate that demand will reach 1.7 mgd by 2030. Developers will be required to fund wastewater improvements as part of annexation and development. For the Cooper property development to occur, the developer would be required to build a second wastewater treatment plant, which would serve Cooper, Galyn Manor, and the eastern portion of the City's growth area. This

facility is indicated on the City's 2010 Master Plan. A new WWTP will need to comply with the Maryland Tributary Strategy that no new point source discharges can occur without offsetting the new loading. If the new WWTP performs better than the current point source cap which assumes 1.4 MGD at 4 mg/L N the existing WWTP capacity could expand to meet expected demand by 2030. The existing treatment plant is located within the C&O Canal NHP where the opportunity for expansion is restricted. There are approximately 10 existing septic systems located within city limits. The City continues to work with these individuals to bring them into the City's wastewater system. Two residential septic systems were taken offline between 2007 and 2008. A commercial property is also planned for connection to the City's sewer system this year. The City oversees a continuous sewer maintenance program that identifies and eliminates inflow and infiltration (I&I) issues. The City estimates that an average rain event can increase flow by approximately 200,000 gallons over a three day period. For FY 2011, the City has \$250,000 in their capital improvements plan for I&I work.

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 forest and wetland protection maintain or improve watershed health and function. The City's land use plan has an opportunity to mitigate non-point source pollution through concentration of growth, recommendation of best management practices, and protection of natural resources. The MDE Water Management Administration (WMA) adopted a general permit on April 14, 2003. The City of Brunswick is under the NPDES Phase II MS4 permit adopted by WMA. The City has an agreement with Frederick County for review of all new development for stormwater compliance. This section of the Water Resource Element provides an assessment of the County's Stormwater Management Program. 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 ground water as a result of storm events. Stormwater transports sediment, nutrients, fertilizers, bacteria, heat, salt, oil, grease and other contaminants across the land 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 ground water 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 Chesapeake Bay. Since land use conditions affect the amount and extent of non-point source pollution, future development patterns should take into account their potential impact in order to protect the Chesapeake Bay resource. At this time there is no Total Maximum Daily Loads (TMDL) for the receiving waters of this area and no Tier II

waters that would be affected by the lands use plan. The City performed a Nonpoint Source Analysis of the current land use versus build-out of the City Boundary. The land use categories used are consistent with the City's Master Plan and determined water and wastewater demands for this element. (Appendix – City of Brunswick Nutrient Loading Analysis – Summary Results and Graphs)

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 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. The County continues to work with the 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 Stormwater Management Act of 2007. The County updated and adopted the Stormwater Ordinance May 4, 2010. The County will also continue to educate both the 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. The City 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

The 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. The County tracks all restoration projects for the purpose of regulatory compliance and reports on them in its National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System (NPDES MS4) Annual Report. Monitoring results, community outreach efforts, management programs, and overall watershed health and progress are tracked. The Chesapeake Bay Agreement (1983), which established the Chesapeake Bay Program, initiated many of the comprehensive efforts regionally to protect and restore watersheds. With the Chesapeake 2000 agreement (C2K), new goals were set to improve water quality and wildlife habitat

throughout the Bay watershed. Many opportunities exist to educate citizens, business owners and community leaders 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 (or peak demand management) are examples of tools the City can promote to maintain the quality and quantity of the resource and ensure it is available for our diverse needs.

Water Resources Goals, Objectives and Policies

Achieving the City's water resources goals will take a coordinated effort by citizens, local government, businesses, and industry. Each has a role to play in protecting our water resources for future generations.

Goals:

WR-G-01 Maintain a safe and adequate drinking water supply to accommodate the needs of the current population as well as future generations.

WR-G-02 Protect and enhance the quality of the City of Brunswick's surface waters, ground water resources, and sensitive areas, with the goal of exceeding any regulatory requirements in place.

WR-G-03 Invest in water and sewer infrastructure that will provide adequate treatment capacity for projected demand and reduce pollutant loading to the Potomac River and area streams.

WR-G-04 Promote coordinated planning between Regional Counties, City and State agencies responsible for drinking water, wastewater, and storm water management.

WR-G-05 Engage the public in watershed conservation and promote a stewardship ethic.

Objectives:

Drinking Water (DW) Objectives

DW-O-01 Initiate a comprehensive water conservation education program for citizens and businesses of the City of Brunswick stressing summertime (peak) demand management and an overall household reduction in water use (in gpd).

DW-O-02 Develop a water-resources-based GIS database for staff to review in regard to development plans and proposals.

DW-O-03 Initiate a citywide source water protection effort.

DW-O-04 Continue to work with Washington and Frederick Counties and the Maryland Department of the Environment to identify appropriate protection measures in the

wellhead, springhead, and headwater areas that lie outside of the City boundaries to protect the City's existing water sources.

DW-O-05 Provide continued coordination with Frederick County to collect and share consistent drinking water data.

DW-O-06 Acquire additional water appropriations to accommodate future growth.

DW-O-07 Proceed with Water Treatment Plant expansion to provide future capacity of 2.0 mgd as growth demands.

Wastewater (WW) Objectives

WW-O-01 To reduce I&I and Continue with the City's I&I program funding.

WW-O-02 Work with the Health Department to identify, prioritize and begin retrofitting failing septic systems using the Bay Restoration Fund (flush tax) and other programs to connect septic system properties to the City's wastewater system.

WW-O-03 Continue operations of the Enhanced Nitrogen Removal (ENR) Wastewater Treatment Plant (WWTP) with use of the best technologies available to reduce nitrogen and phosphorus pollution.

WW-O-04 Work with Maryland Department of the Environment (MDE) to determine limitations of the Brunswick WWTP point source cap on maximum discharge to accommodate future growth.

Stormwater (SW) Objectives

SW-O-01 Continue routing stormwater management issues through Frederick County for review and approval to insure compliance with current stormwater management regulations.

SW-O-02 Continue to manage existing infrastructure to insure it is functioning properly.

SW-O-03 Continue tree plantings and buffer restoration efforts wherever possible.

SW-O-04 Utilize and refine the Non-point Source Analysis to encourage low impact development and protect the City's natural resources.

Policies:

Drinking Water (DW) Policies

DW-P-01 Diversify sources of public drinking water and explore alternatives in order to meet future demand.

DW-P-02 Demand management strategies and conservation measures (water pricing, recycling, and reuse) should be employed to maximize use of existing resources.

DW-P-03 New development should be staged according to the availability and adequacy of drinking water service.

DW-P-04 Encourage and support research on and monitoring of local ground water conditions, aquifer recharge, watersheds and streams.

Wastewater (WW) Policies

WW-P-01 New development should to be staged according to the availability and adequacy of drinking water and wastewater service.

WW-P-02 Reduce the few remaining septic system properties in the City.

WW-P-03 Establish and promote residential, commercial and industrial water conservation measures in order to reduce inflow to the wastewater treatment facility.

WW-P-04 Reduce inflow and infiltration (I&I) into the wastewater collection system.

WW-P-05 Coordinate with Frederick County and MDE to evaluate solutions that ensure future wastewater capacity and adequate management planning.

WW-P-06 Reduce point source pollution that results from wastewater disposal.

Stormwater (SW) Policies

SW-P-01 Encourage innovative technologies for storm water management through coordination with Frederick County.

SW-P-02 The protection of ground and surface water quality shall be a factor in the approval of residential and non-residential development.

SW-P-03 Minimize impervious cover within residential and non-residential development in order to reduce storm water runoff.

Implementation

In addition to applying water resource-related policy recommendations and executing objective items, implementation of the City's Water Resources Element occurs through its Capital Improvements Program.

Capital Improvement Program

There are forty-two (42) projects identified in the City of Brunswick Capital Improvements Program, Fiscal Years 2009 – 2013 related to water resources. There are

thirty three (33) water and sewer projects and nine (9) related to stormwater management restoration projects.

Water & Sewer projects relate to replacement of lines, plant improvements, meter replacements and inflow & infiltration and the stormwater management restoration projects include stormdrain, curb, bridge and culvert improvements.

Table 8.1
Appendix City of Brunswick Nutrient Loading Analysis - Summary Results

Land Use and Septic Systems

(See Scenario Descriptions Below)

	2007 LU, 2007 BMPs (Acres)	2007 LU, Trib Strat BMPs (Acres)	Scenario 1 Trib Strat BMPs (Acres)	Scenario 2 Trib Strat BMPs (Acres)	Scenario 3 Trib Strat BMPs (Acres)	Scenario 4 Trib Strat BMPs (Acres)
Development	0	682	1,307	0	0	0
Agriculture	0	0	0	0	0	0
Forest	0	534	604	0	0	0
Water	0	237	237	0	0	0
Other	0	922	227	0	0	0
Total Area	0	2,375	2,375	0	0	0
Residential Septic (EDUs)	0	12	2	0	0	0
Non-Residential Septic (EDUs)	0	1	0	0	0	0

Total Nitrogen Loading

	2007 LU, 2007 BMPs (Lbs/Yr)	2007 LU, Trib Strat BMPs (Lbs/Yr)	Scenario 1 Trib Strat BMPs (Lbs/Yr)	Scenario 2 Trib Strat BMPs (Lbs/Yr)	Scenario 3 Trib Strat BMPs (Lbs/Yr)	Scenario 4 Trib Strat BMPs (Lbs/Yr)
Development NPS	0	4,739	9,275	0	0	0
Agriculture NPS	0	0	0	0	0	0
Forest NPS	0	1,075	1,216	0	0	0
Other Terrestrial NPS	0	6,788	1,633	0	0	0
Total Terrestrial Load	0	12,603	12,124	0	0	0
Residential Septic (EDUs)	0	124	20	0	0	0
Non-Residential Septic (EDUs)	0	9	0	0	0	0
Total Septic Load	0	133	20	0	0	0
Total NPS Nitrogen Load	0	12,736	12,144	0	0	0
Total PS Load	0	5,114	17,047	0	0	0
Total Nitrogen Load (NPS+PS)	0	17,850	29,191	0	0	0

Total Phosphorus Loading

	2007 LU, 2007 BMPs (Lbs/Yr)	2007 LU, Trib Strat BMPs (Lbs/Yr)	Scenario 1 Trib Strat BMPs (Lbs/Yr)	Scenario 2 Trib Strat BMPs (Lbs/Yr)	Scenario 3 Trib Strat BMPs (Lbs/Yr)	Trib Strat BMPs (Lbs/Yr)
Development NPS	0	406	817	0	0	0
Agriculture NPS	0	0	0	0	0	0
Forest NPS	0	12	13	0	0	0
Other Terrestrial NPS	0	626	146	0	0	0
Total Terrestrial Load	0	1,044	977	0	0	0
Total PS Load	0	384	1,279	0	0	0
Total Phosphorus Load (NPS+PS)	0	1,428	2,256	0	0	0

Impervious Cover and Open Space

	2007 LU, 2007 BMPs	2007 LU, Trib Strat BMPs	Scenario 1 Trib Strat BMPs	Scenario 2 Trib Strat BMPs	Scenario 3 Trib Strat BMPs	Scenario 4 Trib Strat BMPs
Total Impervious Cover	0	363	420	0	0	0
Open Space Agriculture	0	0	0	0	0	0
Forest	0	534	604	0	0	0

Other land uses include Institutional, Open Urban, Water, and Pasture

Scenario Description	Scenario List
Year 2007 with 2007 Level of BMP Implementation	2007 LU, 2007 BMPs
Year 2007 with TS BMP Implementation	2007 LU, Trib Strat BMPs
Buildout of 2009 City Boundary	Scenario 1
Scenario 2 Description	Scenario 2
Scenario 3 Description	Scenario 3
Scenario 4 Description	Scenario 4

2007 w/ Trib Strategy BMPs* does NOT include septic denitrification. Local jurisdictions may include the information if available



Community Facilities

Preface

Community Facilities are the most basic infrastructure needs that are provided by the City and other organizations. This Plan analyzes existing facilities and projects needs for future facilities. The City government provides water and sewer service, police protection, a system of parks and other recreational opportunities, and contracts trash collection. County Government provides schools, libraries, TransIT services, landfill, public health service, emergency management, and senior citizen services. Fire and ambulance services are provided by independent organizations that are assisted by the City and the County.

Schools

Schools serving the City of Brunswick include Brunswick Elementary, Brunswick Middle, and Brunswick High Schools. The Elementary School is located at 400 Central Avenue. The Middle School is located at 301 Cummings Drive, and Brunswick High School is located at 101 Cummings Drive.

Brunswick Elementary School was opened in 1952. It was renovated in 1979 and its capacity (not including portables) is 611. Currently 539 students are enrolled, allowing a capacity rate of 88% or 12% under capacity. The Frederick County Capital Improvements Plan had scheduled another Brunswick-area elementary school for 2013, but this project has since been removed from the County CIP. Additional land adjoining the current school site is to be transferred to the Frederick County Board of Education for the construction of a two building campus. Future expansion will be in the eastern portion of the City, where land has been transferred to the Frederick County Board of Education for an elementary school. That site will be supplemented through future dedication from annexations or additional area parcels, for construction on the site.

Brunswick Middle School opened in 1985, and renovations were completed in September 2006. The school capacity (not including portables) is 884. Currently 492 students are enrolled resulting in 56% capacity.

Brunswick High School opened in 1965, with renovations in 1979 and 1993. Currently the capacity for the school (not including portables) is at 893. Currently there are 772 students enrolled at Brunswick High School which makes capacity 86%. The Frederick County Capital Improvements Program had a 300-seat renovation scheduled 2011 but the current CIP does not include any renovation or expansion at this time. In order to meet the capacity needs of expected growth, the City must continue to actively support the timely provision of school construction to be placed back into the County CIP.

With the completion of the second Brunswick-area Elementary School, short-term goals for the Brunswick Region would have been completed. In the long term, additional capacity will be accomplished with renovation. In order to meet the capacity needs of expected growth, the City must continue to actively support the timely provision of school construction to be placed back into the County CIP.

**Table 10.1
Brunswick Public Schools and Enrolment Projections***

	Capacity*	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
B.E.S.	611	499	504	506	539	559	584	573	598	623	650	677
Percent of capacity		82%	82%	83%	88%	91%	95%	98%	102%	106%	111%	115%
B.M.S.	884	573	544	543	492	522	552	584	616	651	682	694
Percent of capacity		65%	62%	61%	56%	59%	62%	66%	69%	73%	79%	80%
B.H.S.	893	809	818	807	772	774	784	789	793	790	787	784
Percent of capacity		91%	92%	90%	86%	87%	87%	88%	89%	88%	88%	87%

Source: Frederick County Public Schools

*Data Based on APFO test conducted on October 24, 2006 and FCPS data

Library

The Brunswick Library is part of Frederick County Public Libraries, which is operated out of C. Burr Artz Public Library. The Brunswick library was established in 1963, in two rooms of the Old West End School. In 1989 the Library moved to current location on north Maple Avenue. The previous 20 year old library was 2,500 square feet and was open 55 hours a week. Due to its small size and limited resources, the building was razed in 2009 by Frederick County and a new LEED Certified regional library facility comprising 15,000 square feet is proposed on the existing site. The Grand Opening for the new library occurred April, 2011. The expansion of the Library meets the City's growth needs.

Solid Waste Management

The City of Brunswick contracts with private companies for its trash collection. The Reich's Ford Landfill is currently utilized for waste drop-off. The City of Brunswick at one time operated its own landfill but was closed in the early 1980's. Currently the City is broken down into 4 sectors and trash is picked up weekly in these sectors.

The City currently maintains an active rubble fill that is permitted and inspected by Frederick County and the State and requires permit renewal every two years. This facility is not open to the public and is for the use of the City of Brunswick exclusively.

Water Service

Public water service is provided by the City of Brunswick. Two current sources for the water are the Potomac River and Yourtee Springs. The Potomac River is the primary source of water in Brunswick and the treatment facility was constructed in 1968. The City's concrete reservoir has a capacity of 3 million gallons, and the water storage tank has a capacity of 250,000 gallons. A second water storage tank with a capacity of 1 million gallons and a backup generator for the pumping station has been installed. An expansion of the Water Treatment Plant to add a pre-sedimentation basin will begin in 2011.

The 2007 Plan discussed four areas of improvement that would be needed to meet demand that would occur in the future:

- Cleaning and lining the 8-inch main between the Water Treatment Plant and the reservoir and the booster pumping station. This line was replaced with a new 12-inch dedicated line from the plant to the reservoir in 2008.
- A new 500,000 gallon water storage tank to be located to the west of the current City boundary. A new 1 million gallon tank was constructed in 2008 at the current reservoir and storage tank site.

- Upgrading the capacity of the existing booster pumping station to 1 million gallons per day. The booster pumping station is scheduled to be upgraded in summer of 2011.
- Expansion of the Water Treatment Plant to its planned capacity of 1.5 million gallons per day. The Water Treatment Plant expansion is scheduled for summer of 2011.

The current improvements to the Water Treatment Plant and the additional water storage will address the 2007 Plan needs as well as growth demands for the pipeline development. The City owns springs in Washington County known as Yourtee Springs. The City is permitted to withdraw 350,000 gallons on a daily basis per year, and 500,000 gallons per day for maximum use. The only treatment that is done to water gathered from this source is chlorination at the site and, at present, the spring water from Yourtee needs no other treatment. Through a federal grant awarded in 2008, the Yourtee Spring site was secured with new fencing as part of the protection of Critical Infrastructure associated with Homeland Security.

The City also owns springs in Virginia that once conveyed water under the Potomac River to the Water Treatment Plant. The transmission main was broken several years ago halting water from being transported across the Potomac. Given current capacity and future needs of the City, this source could be evaluated at a later time to gauge its necessity. Staff continues to work to improve the water quality of these springs. However, a cost analysis of these sites should be completed to determine if the continued use of these springs would be viable.

Table 10.2
Brunswick Water Plant Flow Data Daily Averages

All Data in Millions of Gallons Daily

Date	Raw Water	Finished Water	Backwash Water	% Total Flow
4/09	0.503	0.412	0.027	5.2
5/09	0.539	0.437	0.037	6.4
6/09	0.544	0.405	0.045	8.3
7/09	0.536	0.407	0.039	7.2
8/09	0.477	0.394	0.015	3.1
9/09	0.481	0.400	0.017	3.2
10/09	0.469	0.371	0.021	4.5
11/09	0.465	0.376	0.023	4.9
12/09	0.534	0.418	0.030	5.9
1/10	0.584	0.464	0.039	6.7
2/10	0.612	0.501	0.028	4.3
3/10	0.640	0.518	0.038	6.2
4/10	0.624	0.508	0.030	4.8
5/10	0.746	0.654	0.028	4.3
6/10	0.587	0.488	0.019	3.1

7/10	0.588	0.485	0.019	3.3
8/10	0.468	0.421	0.010	2.2
9/10	0.553	0.496	0.013	2.3
10/10	0.411	0.360	0.013	2.8
11/10	0.474	0.399	0.020	4.2
12/10	0.476	0.387	0.025	5.5

One of the goals associated with water service in the City is the need to increase the pressure of water and provide for consistency of that water pressure. This goal was met, to a great extent, when the additional tower and refurbished lines went into service. It is expected that this level of service will continue despite the increase in population that is expected with the Brunswick Crossing development.

In the long-term future for the vision of this Plan, additional Water Treatment Facilities will be needed. A symbol has been included onto the Community Facilities Map locating one additional facility in the eastern side of the City. This symbol was placed at this location for a variety of reasons including the general topography of the area facilitates gravity flow and could be delivered to the population at a lower cost.

Water Supply Capacity Management Guidance Document

The Water Supply Capacity Management Guidance Document was created to assist local governments 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. Brunswick will be able 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 Office, 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.

The reports that are listed in the Water Capacity Guidance Document must be completed by the City of Brunswick to accommodate for planned growth in the City, and to provide water service to all residents. In addition, the City’s Tap Allocation Policy is updated and provided to the State annually.

Wastewater

Table 10.3
Wastewater Flow Report for July – December 2010*

All data in Millions of Gallons Daily

Month	Total Flow	Gals/Day Avg	Max Flow daily	Min Flow Daily	Rainfall total
January					
February					
March					
April					
May					
June					
July	12.915	0.417	0.558	0.311	2.00
August	12.321	0.397	0.518	0.282	2.50
September	12.794	0.426	0.694	0.308	3.50
October	16.571	0.536	1.662	0.342	4.5
November	14.830	0.494	0.835	0.333	2.4
December	16.420	0.530	1.442	0.347	2.50
Total	85.851	2.800	5.709	1.923	17.40
Average	14.309	0.467	0.952	0.321	2.90

Table 10.4
Wastewater Flow Report for January – March 2011*

All data in Millions of Gallons

Month	Total Flow	Gals/Day Avg	Max Flow daily	Min Flow Daily	Rainfall total
January	13.948	0.450	0.558	0.358	1.4
February	17.779	0.635	1.007	0.448	2.50
March	28.760	0.928	1.960	0.511	5.80
April					
May					
June					
July					

August					
September					
Total	60.487	2.013	3.525	1.317	907
Average	20.162	0.671	1.175	0.439	3.23

*Data is intermittent due to mechanical malfunction in test equipment.

Wastewater is treated by the City of Brunswick. Wastewater service currently serves the City with an agreement for service by the County, for Knoxville, and New Addition. The sewer system is a gravity system, which conveys the sewage to a wastewater pumping station. The Pump Station is located between Third and Fourth Avenues and pumps the sewage to the Wastewater Treatment Plant located adjacent to the Potomac River. This plant operated in 2010 with an average maximum daily flow of approximately 1.175 million gallons, and an average daily flow of .671 million gallons. Currently for 2011 flow has been slightly more than 2010 but one of the reasons is higher rainfall totals for first quarter of 2011.

Currently the sewer system is running slightly less than half capacity. In the 1994 Plan, no expansion was suggested as 700 houses could be added at that time to be within capacity. All of the available capacity had been allocated unless additional taps could be gained by reducing inflow and infiltration. The existing plant had to be expanded by the developers of the Brunswick Crossing Planned Unit Development. This facility has a capacity of 1.4 MGD and will also produce effluent with a lower nutrient content than the previous plant (enhanced nutrient removal). This is one of the state mandated actions which address the Chesapeake Bay restoration goals.

The Brunswick Crossing Planned Unit Development feeds into the sewer via an 8-inch line to the pumping station. Additional development will provide additional solutions to capacity and nutrient limitations.

One of the short-term Goals, necessitated by with the new treatment facility would be to have additional staff to work with the larger plant. In addition, future upgrades to the existing pumps would be necessary to accommodate additional development.

Long-term Goals include an additional Wastewater treatment facility. With the projected growth for the area it will become necessary to continually upgrade the current facility. The problem with this is that eventually the plant will run out of room at its current location which is adjacent to the C&O Park. The possibility of a new site being located on the eastern side of town in the proposed growth boundary will allow for service to residents in that area.

Wastewater Capacity Management Guidance Document

A guidance document has been developed by the Maryland Department of the Environment. This document assists Brunswick to determine plant capacity and to track the remaining available capacity for allocation. The document further emphasizes the need to plan ahead to ensure that growth takes places without overloading sewage facilities. The guide enables Brunswick 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 the 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 all decision-makers with the information needed to make informed decisions about the capacity of their wastewater systems and the ability to accommodate new connections.

The reports that are listed in the Wastewater Capacity Guidance Document must be completed by the City of Brunswick to accommodate for planned growth in the City, and to provide sewer service to all residents. This will also be beneficial for determining the allocation of sewer taps in the City and determining timetable for new development.

Public Works

Public Works is responsible for construction, operation, upkeep, and maintenance of the City's infrastructure (water, sewer, streets, storm drainage, City buildings, public facilities, and supporting programs). Public Works is the City's manpower and labor pool for all departments, events, and special requests. As the City's infrastructure grows and continues to improve, the need for upgrades in various areas from customer service, safety programs to ordinances, manpower, administration, and enforcement will continue to increase and place more demands on manpower resources.

Growth in Brunswick has increased to a level where the Public Works Department is required to meet greater demands for service. The Galyn Manor Annexation occurred in July 2000. Galyn Manor PUD Development construction started in March 2003, with 276 units and the development infrastructure was accepted into the City system in 2010. Brunswick Crossing Planned Unit Development required upgrades have started and the building of 1,505 housing units and 18 commercial buildings will be occurring in the near future. The Daugherty Property has a submission for 294 units and development of current lots of record continues. The City attempts to maintain and expand public works

with planned growth. The current economic climate and budgetary considerations has left Public Works with many challenges in an effort to perform required preventive and corrective maintenance. Proper maintenance and life cycle management will save the City funds in the long run, making proper staffing a crucial component as Public Works strives to meet the new demands.

There are currently 2 public works employees per 1000 population. In order to maintain that ratio an additional 9 public works employees would be needed to serve the projected 2030 population.

Water Infrastructure and Development

Whitman, Requardt and Associates conducted a study between December 1991 and March 1992 and prepared a Water and Sewer Annexation Plan for the City of Brunswick. The purpose of the study was to prepare a water and sewer plan for the proposed Daugherty Tract and the possible future annexation of the Hope, Brylawski and Biser Tracts.

The majority of the City's water distribution system was constructed in the 1930's and consists mainly of 6-inch and 8-inch cast iron water mains. The study described the City's existing distribution system as deficient in its ability to convey sufficient water for fire suppression. This is due to following factors: age of system, inadequate looping of water distribution main lines and small diameter mains in the system. The City's ISO (Insurance Services Offices) Rating is a 6 out of a possible 10.

Currently, the City of Brunswick's water system continues to deteriorate due to age, but staff continues to conduct repairs or perform maintenance. In 2007, the City developed a Valve Maintenance Program. The City currently has a Fire Hydrant Maintenance Program or Preventative Maintenance Schedule. The City has a mixture of hydrants being 4 and 6-inch American Darling, Mueller, Kennedy, Dresser, M&H. The Dresser, M&H and 4-inch American Darling are obsolete and parts are not readily available. Sections of the City have low water pressure and/or volume. The City will continue to address infrastructure as a critical service and commit time and resources to address the issues with our system.

Rosemont Area water continues to be a problem, with old galvanized pipes with low volume resulting in poor water quality and quantity. Rummel, Klepper & Kahl, LLP Consulting Engineers conducted a Rosemont Area Water and Sewer Service Plan. Frederick County, the City of Brunswick, and the Village of Rosemont officials are currently reviewing results of that Plan.

The City has initiated a program to convert the City's residential water meter service to a radio read system, and 5 of 10 routes are complete.

There are currently 0.75 water treatment operators per 1000 population. In order to maintain that ratio an additional 4 operators would be needed to serve the projected 2030 population.

Objective and Policies:

Objective:

- Create a Memorandum of Understanding with the County for service outside of the City.

Policies:

- All new water mains and service should be installed and looped in accordance with the City of Brunswick Design Manual.
- All new fire hydrants shall be 6-inch Mueller or American Darling (or approved equal). A program shall be developed to regularly flush and maintain City fire hydrants.
- The City should adhere to its Valve Maintenance Program and develop a Preventative Maintenance Schedule for the water system.
- Continue to plan and approve yearly Capital Improvement Projects to replace degraded Water Mains.
- Continue to pursue a joint plan with Frederick County to address areas out of City water distribution systems in the Village of Rosemont and Knoxville.
- Continue conversion to water meter radio read system, and fund one complete route each budget year until complete.

Sewer Infrastructure and Development

Whitman, Requardt and Associates conducted a study between December 1991 and March 1992, and prepared a Water and Sewer Annexation Plan for the City of Brunswick. The purpose of the study was to prepare a water and sewer plan for the proposed Daugherty Tract and the possible future annexation of the Hope, Brylawski and Biser Tracts. Additionally, an Infiltration and Inflow (I&I) Study was conducted to alleviate the State's concerns with respect to the existing I&I problem. Since that study was conducted, the Biser Tract, now Galyn Manor, the Hope and Enfield farms, comprising Brunswick Crossing, and the Cooper Tract have been annexed.

The existing system consists of gravity sewers that outfall to a wastewater pumping station located on East Potomac Street and pumped to a Waste Water Treatment Plant, accomplished by two forced main systems, one from Galyn Manor, and one from the west end of the City where Frederick County's force main is discharged into the City's

system. A Sewer maintenance program was established in August of 2005 and will establish a base line for this program.

In 2006, the East Potomac Street sewer project to install a new 12-inch sewer main was completed. I & I (Infiltration and Inflow) projects were performed between 1995-1997 under contract I/I-95-1, in 2004 under project job order 5316.00, and in 2010 under Contract Number 09-7716-GB-024. The latest I & I project was made possible through American Reinvestment and Recovery (ARRA) funding. This project consisted of relining over 11,000 linear feet of sewer line throughout the City.

There is currently 1 wastewater treatment operator per 1000 population. In order to maintain that ratio an additional 4 operators would be needed to serve the projected 2030 population.

Objective and Policies:

Objective:

- Create a Memorandum of Understanding with the County for service outside of the City.

Policies:

- Continue to identify and repair infiltration and inflow problems, as funding is available. Public Works will also perform patch repair to reduce infiltration and inflow.
- Continue and expand the City of Brunswick's sewer maintenance program established in August 2005 to keep pace with planned growth.
- Continue to plan and approve yearly Capital Improvement Projects to replace degraded Sewer mains.

Public Works Facilities and Resources

The City continues to examine the need to expand Public Works to keep pace with planned growth. Proper maintenance and life cycle management will save the City funds in the long-term once programs are in place, staffed and functioning at an effective level.

Policies:

- Additional Facilities will be required in the future as noted on the Community Facilities Map.
- An impact study was conducted to establish proper level of resources, manpower and equipment to adequately maintain and preserve the City's infrastructure, while keeping pace with planned growth.

Solid Waste Management Action Recommendations

The City contracts with a private company for trash pickup. The City of Brunswick's landfill on Thirteenth Avenue was closed in the early 1980s. A mulch and rubble site was established on Thirteen Avenue north of the closed landfill. The mulch site was closed August 2005. The Rubble Fill remains active and is inspected and permitted every two years through Frederick County and the State. This facility is not open to the public and is used exclusively by the City.

In May of 2008, the Mayor & Council of Brunswick approved Mandatory Residential Recycling with Ordinance 481. Individual recycling totes were provided by Frederick County that contain RFID (radio frequency identification device) that may be used for monitoring participation per residence and accountability of the program. Frederick County provides curbside pickup at no charge to the residents. The City also provides drop off recycling for businesses at the Public Works yard on Petersville Road.

Through the City's Yard Waste program, yard waste is collected on the second and fourth weekend of the month at the Public Works yard on Petersville Road at no charge to the residents. The City contracts and pays for bulk trash pickup twice yearly. In addition, tires and batteries are collected at the Public Works yard for a nominal disposal fee to the resident and removal of these materials from the Public Works yard takes place through an authorized waste contractor several times per year.

Goals:

- Continue to work with the County to establish an alternative yard waste disposal site located on the Community Facilities Map. This site will allow Brunswick residents the opportunity for a mulch compost site and additional recycling.

Streets

City of Brunswick streets lack life-cycle management and Public Works lacks equipment to provide the safest roads possible for the future. As Brunswick's population continues to double in size, the City's local streets will feel this impact. This will result in increased residential traffic and continued increases in commercial traffic as the demand for services continues to rise.

Goals and Policies:

Goals:

- Addition of the Street and Alley System Amendments as needed.

Policies:

- Utilize the Capital Improvements Program to assess Public Works needs with regards to streets.

Storm Water Infrastructure and Management

Currently all Stormwater Management (SWM) review, approval, and inspection is delegated to Frederick County, and has been the case for many years. As Frederick County currently addresses SWM within the City, the City has no storm water management preventive maintenance program. All improvement to storm drain outfalls are conducted on an as needed basis. Current large scale developments require a Homeowners Association to maintain SWM structures and facilities.

Policies

- Examine the Capital Improvements Program to assess Public Works needs with regards to storm water infrastructure and management.

Department of Public Works Goals, Objectives, and Policies:

Goals:

- Institute programs that will restore, maintain, and improve the life cycle management of the City's infrastructure and resources.

Objectives:

- Reverse the deteriorating state of the City's infrastructure.
- Restore public services to a level where citizens have a general sense of pride and ownership in the City of Brunswick.

Policies:

- Foster a proactive approach to preventive maintenance and quality corrective maintenance actions to resolve the root cause of deficiencies.

Administration

City Hall is located at 1 West Potomac Street, in Brunswick. This building houses several administrative offices including Accounting, Planning and Zoning, Code Enforcement, and City Administration. City Hall is approximately 5,800 square feet and has a parking lot behind the building where employees and customers park. With additional new hire employees, a short-term recommendation is to increase the number of spaces that the current parking lot holds, and utilize other City office space to house some City departments. Long-term recommendations include the possibility of relocating all offices to a bigger building.

There are currently 1.7 employees in administration (Planning, Engineering, Accounting, Book Keeping, Accounting, Utility Billing and General Administration) per 1000 population. In order to maintain that ratio an additional 7 employees would be needed to serve the projected 2030 population.

Fire & Ambulance Service

The Brunswick Fire and Ambulance Companies are presently located on West Potomac Street. A new 22,600 square foot facility to house operations and a social hall off Volunteer Drive in the Brunswick Crossing planned development is currently under construction. This new facility will allow the fire response times to be more efficient by having equipment in one location. The firemen have a service area of approximately 49 square miles for the fire and ambulance company. There are roughly 70 active volunteers with additional people involved in other fire company activities. Two 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. Frederick County oversees all volunteer fire and ambulance companies.

The Fire Company building was constructed in 1948 the new Fire Company building will house a Class A tanker truck, two Class A pumper trucks, one ladder truck, a brush truck, utility truck, duty truck and a chief's vehicle. The Ambulance Company building houses three ambulances, a squad car, two boats, a utility vehicle and special unit vehicle.

Police

Short-term recommendations include additions in staff to meet the population increase. Accreditation is not included in these goals at this time. Given the size of the Brunswick police force, associated costs, and resource time it takes to become accredited, it should not be considered unless changes occur to the actual accreditation program. The City of Brunswick Police force sets policies using the International Association of Chiefs of Police (IACP) model policies as well as structuring procedures using other accredited agencies guidelines and general orders to determine best practices. Another short-term recommendation that works in tandem with the previous recommendation is the need for additional accommodations to house the police force.

The police force currently has 1.7 officers per 1000 population. In order to maintain this ratio an additional 8 officers would be required to serve the projected 2030 population.

Table 10.5
Police Reports for 2008, 2009, and 2010

Type of Call	2008	2009	2010
Calls for service	13552	12289	14307
Sexual Assaults	8	5	3
Aggravated Assaults	4	2	2
Simple Assaults	61	64	55
Breaking and Entering Commercial	8	11	11
Breaking and Entering Residential	13	34	22

Thefts	202	127	113
Vandalism	171	124	109
Domestic Violence	86	85	88
Auto Thefts	10	11	3
Motor Vehicle Accidents Personal Injury	13	9	0
Motor Vehicle Accidents Property Damage	81	101	106
Adult Arrests	174	121	122
Juvenile Arrests	28	43	25
Parking Citations	785	749	491

Parks and Recreation

Wenner Park currently is more of a playground than a traditional park. This park has equipment and open field space. Recommendations associated with Wenner Park include additional playground equipment and also a possible expansion. West End Park is also highlighted as an area that could accommodate expansion. Also, with future growth in the Brunswick Crossing Planned Unit Development, a trail is being proposed to link that development to West End Park, and a long-term goal is to eventually link that park to the C&O Park through the continuation of that same trail.

City Park is one of four Brunswick Parks with a permanent building on site. This building is utilized by both the school system (for clubs) and by citizens for indoor recreation. This building has the ability to hold 300 people, and was renovated December 2010.

**Table 10.6
Parkland in Brunswick***

<u>Park</u>	<u>Acreage</u>	<u>Location</u>
City Park	11	E. Potomac Street
Family Campground	9	C&O Canal
Kim Weddle Park	4	N. Maple Avenue
Wenner Park	4	Peach Orchard Lane
Swimming Pool	3	Cummings Drive
Second Avenue Park	1	Second Avenue
West End Park	2	Brunswick Street
Sports Complex	13	13 th Avenue
Little League and Softball field	3	Cummings Drive
Square Corner Park	.22	N. Maple Avenue
Rail Road Park	1.27	S. Maryland Avenue
VA Ave Park	1	S. Virginia Avenue
Emory & Elizabeth Frye Field	5	Cummings Drive
Veterans Park	.11	E. A Street
<u>Leased Parks</u>		
Southern Sections of City Park	2	E. Potomac Street

B&O Park	3	E. Potomac Street
Total	55.29	

*An additional 95 acres of the C&O Canal National Park is located along the Potomac River

This renovation includes remodeling the flooring and other cosmetic enhancements that would make this building more attractive. Other recommendations associated with this park include a repaving of the tennis courts.

Kim Weddle Park is divided into two sections. The first section is a basic playground with regular equipment and basketball court. The second section also has an area with equipment for younger children. The addition of a tot lot separates this park from the others offered in the City by incorporating more of a family atmosphere.

Two other facilities that are operated by the Parks and Recreation department are the City Pool and the Family Campground. The bathhouse for the Pool has recently undergone renovations and an expansion is planned for a new splash park. By updating the site, it will better serve the community. The Campground is located next to the Potomac River and surrounded by the C&O Canal National Park. The campground is free to use during the day but a fee is charged for overnight usage.

Other recommendations for Parks and Recreation include an additional site to be developed on Virginia Avenue. Residents on the southwestern side of the City would utilize this site. Other long-term recommendations also include the need for additional staff. As the Park System grows, attendants will be necessary to repair and update the existing park infrastructure.

Multi-use parks are needed in Brunswick, as indicated on the survey. These parks would be capable of accommodating multiple sports and would then be utilized for longer periods throughout the year. A location for parks of this nature will have to be determined. The area of these parks will be larger than with a single use park, but when all uses are placed together, the park will take up a smaller area of land, per use.

A linear Park system is a viable option for Brunswick. This park system would encompass areas on the western side of the City. By linking areas of Brunswick Crossing Planned Unit Development to West End Park, and eventually C&O Canal Park, it will create an area that can be utilized for alternative transportation and create additional recreational resources for the citizens of Brunswick.

In 2010, Frederick County adopted a Comprehensive Plan for 214 acre Othello Regional Park that is in the general vicinity of the City and is of a larger scale that is currently not available in Brunswick. There are no Regional parks nearby, and a park of a larger scale would be able to attract visitors as well as host various types of activities that are currently underserved in this region. This park will be able to accommodate the multiple sports fields that are currently not available in Brunswick.

Based on the 2010 Census the City of Brunswick has approximately 25 acres per 1000 of population. The development of Othello Regional Park in the region will raise that to 35 acres per 1000 using the projected population growth by 2030.

Classifications for Parks

The following is a list of classifications that the City of Brunswick will use for classifying parks within the City and Brunswick Growth Boundary for possible future sites. These are the same classifications used by Frederick County and by utilizing the same classification we will be able to coordinate with any future Regional Parks.

Neighborhood: 1-10 acres, located within residential areas with pedestrian accessibility, primarily obtained through developer dedications.

Community: 20-50 acres, provides active recreation facilities such as ball fields and tennis courts, usually acquired through County and/or State funding sources.

District: 100+ acres, provides a combination of resource protection, active recreation, and passive uses, usually acquired through County and/or State funding sources.

Regional/Resource: Generally under State or Federal ownership, provide resource protection and uses such as camping or hiking.

Special Use: Includes river/creek access points, historic sites, and scenic overlooks.

These areas are included on the Community Facilities Map and the Master Plan Map for proposed parks and existing parklands.

Heart of the Civil War Heritage Area

As part of the Heart of the Civil War Heritage Area (HCWHA) under the Maryland Heritage Areas Authority (MHAA), this update of the Master Plan, when adopted by the Mayor & Council, incorporates by reference those portions of the Heart of the Civil War Heritage Area Management Plan that are applicable to the City of Brunswick as part of the Master Plan. The Management Plan is intended to be a stand-alone document. It is available at City Hall in Brunswick, and is also located online at <http://brunswickmd.gov/PlanningHome.htm> See Appendix 3 for the Executive Summary of the Heart of the Civil War Heritage Area document.

The HCWHA Management Plan, as adopted by participating jurisdictions and approved by MHAA for Certification does not in any way affect, impair or abridge the rights of the property owner. The boundaries of the Heritage Area as depicted in the HCWHA map are for purposes only of the HCWHA program and do not alter, amend or vary any existing local zoning or land use regulations.

Community Facility Plan Goals, Objectives, and Policies

Goals:

- Provide Community Facility service for residents and property owners.
- Expand Community Facilities to meet planned growth in the City.
- Evaluate the Adequate Public Facilities Ordinance for possible amendment recommendation.
- Provide additional Community Facilities with new development opportunities.
- Provide a replacement Mulch Site.
- Expand to a two Wastewater Treatment Plant System.
- Fulfill the requirements of the State with regards to Wastewater and Water Capacity Management Guidance Plans and prepare a City Document.
- Create a Linear Park System in Brunswick.
- Expand park facilities and Recreation equipment.

Objectives:

- Maintain sufficient capacity to accommodate growth from the Brunswick Region in the Brunswick Master Plan.
- Require Developer construction of a new Wastewater Treatment Plant to meet future long-term growth in the City.
- Draft revisions to the City Adequate Public Facilities Ordinance.
- Utilize the Development Process and additional acquisition of land by the City for Park development.
- Expand the Water Treatment facilities to provide adequate service for existing and future growth.
- Provide adequate Emergency Services opportunities.
- Implement Public Works Facilities as noted on the Community Facilities Map.
- Incorporate recommendations from Public Works into future Capital Improvements Programs.

Policies:

- The City will attempt to utilize larger Wastewater Pump Stations in fewer numbers.
- The City will work with County, State, and Federal authorities to provide for additional Community Facilities.
- The City will coordinate with Frederick County Board of Education and Frederick County Commissioners for the Annual Ten Year Facility Plan and the Capital Improvements Program.
- The City will expand the Adequate Public Facilities Ordinance to include Parks and Police.
- The City has adopted an Impact Fee that is imposed on new residential development for Parks & Recreation, Police, and Municipal Services.



Implementation

Preface

The Master Plan serves as the framework around which future land use decisions are based. The Plan's implementation must be directed by Smart Growth principles, growth management tools, Zoning Ordinance and Subdivision Regulations, Design Guidelines, and other ordinances and regulations. The Smart Growth Principles include revitalizing existing communities, producing efficient compact forms of development, facilitating mixtures of community-based land uses, accommodating infill development, creating close knit neighborhoods, encouraging centrally located and pedestrian accessible transportation, and providing a wide range of housing types.

Comprehensive Zoning, and Zoning, Text Amendments

The primary way to implement the Master Plan is through comprehensive rezoning and zoning text amendments. Currently, some zoning classifications exist but are not being utilized anywhere within the City limits. In addition, changes have occurred since the last major rewrite of the Plan suggesting that changes in the Zoning Ordinance may need to be made.

At this time no major changes are recommended for zoning within Brunswick. The only option that is desired would be the use of Overlay Options within the City Boundaries. As the City continues to grow, it will become necessary to create a better identity for Brunswick. By preserving the Downtown Commercial Core, and allowing for additional development in areas that are appropriate, this goal will be accomplished. Additionally, Overlay development may be necessary in other areas of the town as future growth may create pressures on properties to conform to uses, which at present, are not allowable under current zoning regulations.

The Overlay options would be used in the downtown to allow multiple uses on lots. Examples of this would be like those seen in older downtowns where the first floor is retail while the upper floors allow for apartment housing. This could also be used to allow businesses in uses that are currently used for housing. By making these allowances, it will be possible to preserve the character of the downtown while still creating additional employment areas.

Annexation

The Plan includes land use recommendations for areas located outside the City's current boundaries. This Plan proposes that these growth boundaries be re-examined to determine their feasibility, and also to propose possible future annexation. Through the annexation process, a City zoning category will be assigned to the property; the zoning should be consistent with the Plan recommendations. Plan proposals for community facilities to be located and/or serve on the annexed property will also be implemented through the annexation process. As development of annexed properties occurs, the Plan's recommendations for new road alignments and road improvements will also be implemented.

Development Review Process

The Development Review Process is another means by which the Master Plan recommendations will be implemented. Subdivision plats and site plans are reviewed by several agencies, including the Frederick County Division of Planning, the Frederick County Public Works Division, the Frederick County Division of Permitting and Development Review, the County Health Department, the Maryland State Highway Administration, the Soil Conservation Service, City Public Works Department, City Waste Water Department, City Water Department, and City Development Review Planner. The City Engineer also reviews and forwards revisions for subdivision plats and site plans.

The Development Review Process provides for the identification and protection of environmentally sensitive areas, such as floodplains, wetlands, steep slopes, and woodlands. Mitigation measures against any disturbance to these areas can also be required. Developers are also required to comply with Storm Water Management and Erosion and Sediment Control requirements.

Infrastructure improvements are also often required as part of the development process. The extension of water and sewer lines, and the construction of roads, curbs, gutters, and sidewalks may be required. Developers of larger projects are required to contribute to the upgrade of sewage or water treatment facilities and/or make off-site road improvements and/or water and sanitary sewer infrastructure. This is identified in the Adequate Public Facilities Ordinance.

Interjurisdictional Coordination

Implementation of the recommendations of this Plan will require cooperative effort of several levels of government. Coordination is especially important between Frederick County and Brunswick as the County updates their Comprehensive Plan. The Brunswick Master Plan recommendations, particularly the proposed annexation limits, land use, transportation and community facilities recommendations for areas currently outside the City limits, should be incorporated into the County's Comprehensive Plan. Coordination between the City and County is also required in the provision of services and facilities, and in developing zoning, Forest Resource Ordinance, and other regulations, related to areas directly outside of the City limits or that the County provides administrative and enforcement review.

Interjurisdictional coordination between the City of Brunswick and the State of Maryland is also important in implementing the recommendations of this Plan. State environmental regulations apply to areas such as wetlands, air quality, and water quality. Coordination with the State is particularly important in the planning, design, and construction of community facilities, such as water and sewage treatment plans. Coordination with the Maryland State Highway Administration with regard to improvements and alignment of changes to State roads is also necessary.

Priorities for Action

Contained within this Plan are a number of Goals, Objectives, and Policies for further studies and actions, which will serve to implement the Plan. Goals, Objectives, and Policies are stated for the following elements:

Environment and Sensitive Areas

On Page: 28

Land Use

On Page: 41

Transportation

On Page: 51

Municipal Growth

On Page: 59

Water Resources

On Page: 72

Community Facilities

On Page: 92

Appendix

A1

Survey Summary

Background

On April 4th 2006, 1,950 surveys were mailed to the property owners of Brunswick Maryland. The intent of this survey was to gauge citizen and property owner's opinions on questions that the Brunswick Planning Commission had regarding the upcoming Master Plan Update. The Brunswick Planning Staff developed this survey with oversight by the Planning Commission. In 1991, Brunswick had conducted a similar survey also during a Master Plan Update.

Differences in the two surveys

The 1991 Survey was different in two major ways, both in distribution and in actual questions. Employees who were reading water meters distributed the 1991 Survey to 1,810 homes in Brunswick. The 2006 Survey was mailed out to 1,950 property owners, and copies were available in public places throughout the City. The Brunswick Citizen also published a copy of the survey. While it is impossible to determine what was more effective, in 2006 a return of 15.54 % was accomplished as opposed to 9.2% in 1991, and in real numbers this is almost twice as many surveys returned with 167 being returned in 1991, and 303 being returned in 2006.

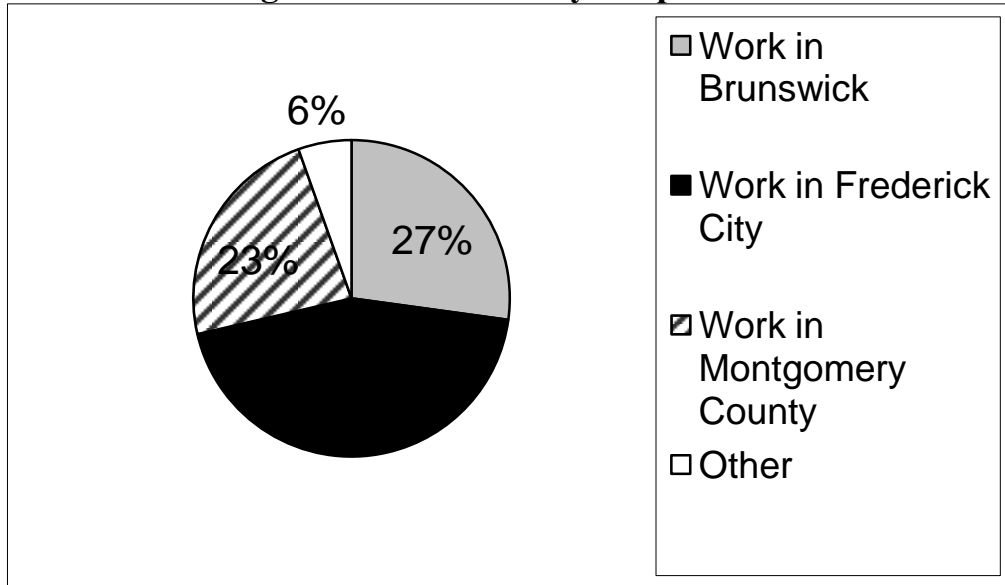
The second change dealt with the types of questions asked in the 2006 survey. With the new survey, 60 questions were asked with 57 being multiple choice. In 1991, only 27 questions were asked and a large majority of the questions were open-ended. By making the newer survey multiple-choice this made results easier to compile. The recent survey also improved the process by limiting the scope of the questions to planning related issues. A place for comments was included at the end of the survey. These will be used as a guide in the implementation section.

Characteristics of the 2006 Survey

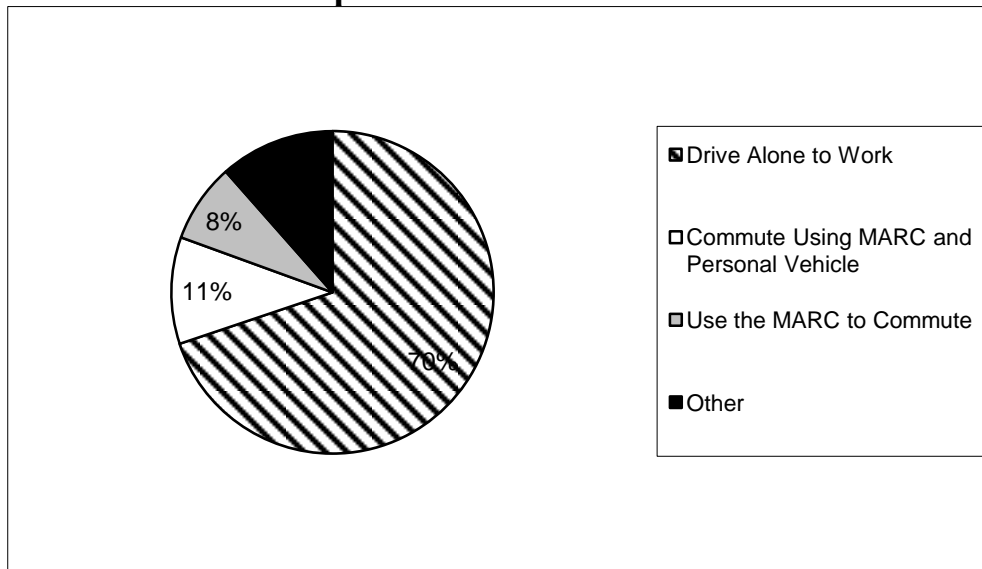
Respondents to the 2006 Survey came from many different backgrounds. Respondents represented both old and new residents/property owners. The largest of these groups were those who had owned/lived in Brunswick for 26+ years with over 35.43%. That was followed by 26.49% having owned/lived in Brunswick for five years or less.

In terms of employment, 44.2% of respondents answered that they worked in the City of Frederick. 27.17% work in Brunswick, and 23.19% work in Montgomery County. Also, when commuting to their jobs, a large majority use their personal vehicles or 69.84% of respondents. 10.71% of respondents used both the MARC train and their personal vehicles while only 7.94% used only the MARC train.

**Chart A1.1
Percentages of Where Survey Respondents Work**



**Chart A1.2
How Respondents Commuted to Work**



General

This section of questions related directly to opinions about Brunswick, both the City and its services. The first question –“How long have you lived/owned property in Brunswick?” was used to find out if both old and new property owners/ citizens were involved with this survey and ultimately the Master Plan Update as a whole. Twenty six percent of respondents have lived/owned property for five or less years; 21.85% have lived/owned property for six to fifteen years; 16.23% have lived/owned property for

sixteen to twenty five years; and 35.43% have lived/owned property for more than twenty-five years. This even distribution of respondents shows that the survey is representative of the whole community, and has been beneficial for the update process as a whole.

Respondents were asked to rate the effectiveness of the City to citizens needs. For this question a ten-point scale was used and respondents graded the city accordingly. The mean for this question was a 6.18 while the mode was 8. An additional question also used the same scale when rating the City of Brunswick as a place to live. The mean of this question was a 6.88 while the mode was 8.

When asked about the past and future of Brunswick respondents generally answered positively. When asked, "Over the last five years, would you say that Brunswick has become a better place to live?", 47.99% of respondents answered yes, while 31.88% answered No. When asked to look ahead over the next five years, "do you think that Brunswick will become a better place to live?", 45.05% answered yes, while only 26.96% answered no.

Question three asked about the possibility of increasing taxes for additional City services. The majority of respondents were opposed with 65.78% answering no. Only 15.95% answered yes and the remaining respondents answered undecided. It should be noted that some comments associated with this question were qualified based on which services the money associated with the tax would be used.

Environmental and Sensitive Areas

Property owners/citizens were asked three questions related to Environmental and Sensitive Areas. All three questions were presented in a Yes/No/Undecided format and generally response was strong for those questions. All three questions were inter-related but focused on different aspects of the environment.

The first question in the series asked, "Do you feel that the current City development regulations adequately consider the impact of the One Hundred-year Floodplain?" Of the three, this question had the least number of respondents, with 282 answering this question. Almost sixty-five percent of respondents were undecided, demonstrating that the question did not either give enough information, or that the respondents were unsure as to the City's development regulations regarding the 100 year floodplain.

The second question in the series asked, "Do you believe the City is taking necessary steps to avoid affecting the Environment?" This question also had the same problems as the previous with almost as many respondents answering yes as undecided at 39.79% and 38.06% respectively. The final question asked "Are you in favor of Passive Recreational use in Environmentally Sensitive Areas?" This question did not have the same results as the previous questions, with 44.76% answering yes and 25.87% answering no.

Land Use

This section dealt primarily with Planning and Zoning questions. The first two questions in this section dealt with growth in Brunswick; the first asking about growth in general, and the second asking about controlled growth. Almost fifty two percent of respondents were in favor of growth in Brunswick with 39.39% not in favor. Furthermore, 77.52% were in favor of controlled growth while only 15.44% were not. In addition, some of the comments associated with these two questions noted that the answers given were dependent on trends and determining which type of growth in certain areas.

Question 13 asked “For which of the following land uses should the City expand its boundaries?”, This question gave three responses possible: 17.16% were for residential only, 32.34% were for commercial only, and 8.25% were for Industrial only. In addition many respondents circled multiple answers: 16.83% were for residential and commercial, 3.3% were for commercial and industrial, and 8.91% were for all three choices. Also 13.2% did not respond to this question. With no response the assumption can be made that they do not favor expanding the boundaries for any growth, this was highlighted in the survey comments.

Question 14 asked, “If the City annexes land for residential use, do you favor Mixed-Use Development/Planned Unit Development?” Fifty three percent were in favor of Mixed-Use/ planned unit development while 22.15% were not in favor.

Questions 15 and 16 dealt specifically with industry. Question 15 asked if Brunswick needs additional industry and if so, what type, and 16 asked about the placement of heavy industry in multiple locations. In response, 61.41% of respondents felt that additional industry was needed. Of the choices, Service Oriented Business was picked most often, followed by light industrial. Also with regards to the placement of heavy industry in multiple locations, an overwhelming majority answered they do not support multiple locations, with 80.94% answering no.

The final question in the Land Use section asked, “Do you favor a special Re-Development/Overlay Area for the downtown core?” Almost forty seven percent answered that yes, they do favor the Re-Development/Overlay Area, and 32.16% answered that they do not.

Transportation

The Transportation section had 15 general questions about the streets, lighting, street signage, parking, and public transportation. Questions were also asked about how respondents commuted to work, where they worked, and how their children traveled to school.

The first three questions in this section dealt with roads. When asked if the streets were properly maintained and paved, 56.66% said they were not and 36.86% said that they were. When asked if they favored the City controlling the primary entrances to the city,

58.7% were in favor, while 20.14% were not. Finally, when asked if the streets in the City were wide enough, 58.19% said they were not and 36.79% said that the streets were wide enough.

When asked about street lighting, 73.75% of the respondents said that all City streets should be lighted.

Two questions focused on street signage. The first question asked if the street name signs were adequate, and the second asked if traffic signals and signs were adequate. Both questions had the majority of respondents answering yes, with 66.56% answering that the street signs were adequate, and 74.26% answering that the traffic signs/signals were adequate.

When asked about sidewalks, a majority of respondents answered that they were not adequate and that they should be provided on all streets. Sixty-six percent of respondents reported that the sidewalks were not adequate, and 75% of respondents answered that sidewalks should be provided on all streets. Comments related to these questions were from multiple perspectives. Some wanted there to be sidewalks on all streets in the City; others wanted more sidewalks to accommodate children walking to schools; others noted the poor condition of some of the sidewalks being hazardous; and finally some noted that the burden of the cost would be too much for homeowners.

Two questions asked about the adequacy and need for additional public transportation in the City. Almost forty-nine percent were undecided on the adequacy of the TransIT service. This may be based on the lack of use the system receives from respondents. Also qualifiers for a no to this question were usually based on bus routes and schedules. Fifty four percent of respondents did, however, want additional public transportation. Many of the concerns noted in comments asked about the addition of taxi services and the need for additional senior citizen transportation alternatives.

Parking questions were also asked in this section. The questions asked if there was enough parking in the City and if there was need for additional parking structures in the Downtown Commercial Core. Sixty-two percent felt that parking was not adequate in the City, and 63.48% answered that yes, additional parking structures were needed in the Downtown Commercial Core. Some of the comments offered regarding these questions noted that with the anticipated growth of Brunswick, it would be necessary for more parking. Alternatively, some said that if there were more commercial options downtown, additional parking would be needed.

The final questions in this set dealt with where respondents went to work and how and, if applicable, their children went to school. The largest groups of respondents listed "other", while large numbers of respondents listed Frederick City, Brunswick and Montgomery County. The majority of people surveyed would use their private vehicle to get to work (69.84%). While a majority of respondents did not have children in school, 66.79% of respondents; the largest group of that sample had children who rode a school bus to

school (39.08% of 87 respondents). Additionally, 28.74% drove their children to school in a private vehicle.

Community Facilities

This section had the most questions in the entire survey, totaling 25. It was broken down into sub-categories including Water, Sewer, Parks and Recreation, Public Works, Police, Ambulance, Fire, Libraries, and Senior Citizens Services. Parks and Recreation was the largest section including questions about park usage and the need for additional services.

For the Water category, three questions were asked detailing service, quality, and actual usage. For service, 64.86% of respondents felt water service was adequate, while 27.03% did not. For quality, 57.82% felt the quality of water in the City was acceptable, while 32.65% did not. However in contrast to these findings, 55.89% use another source of water for drinking purposes while 42.76% do not. Some of the comments associated with this question noted: bad taste, too many chemicals, no fluoride, and low water pressure as qualifiers for their answers.

Only one question was asked regarding Sewer service, asking if it was adequate. Almost seventy one percent of respondents said that yes, it was adequate, and 16.89% said that it was not.

The Parks and Recreation category was the largest and was answered by a large array of park users. When asked about if the service was adequate, 55.14% answered that yes, it was, and 31.51% answered that it was not. With regards to the Swimming Pool specifically, 49.83% of respondents answered that it was adequate. Surprisingly, 25.6% of respondents answered undecided when asked about the Swimming Pool, and 24.57% answered that it was not adequate. Many of the comments associated with the Swimming Pool noted an undesirable sanitary condition in the bathrooms, attendants not being courteous, and a general lack of knowledge about the swimming pool and lessons offered.

Question 39 was unique in that it asked –Which Recreational Facilities were used by you or a member of your household within the last year? Respondents were given the opportunity to circle which service they had used. The answer that came most frequently was City Park. Of the 245 respondents to this question, City Park was circled 170 times allowing it to have a 69.39% usage by Parks and Recreation users. The next largest City operated service was the Swimming Pool receiving 35.59%. C&O Park also had a large response with 53.88% using that park. It should be noted a large number of those who took the survey did not answer this question; 58 people did not respond, accounting for 19.14% of all survey takers. Many noted separately that the lack of police enforcement in park areas allowed for teenagers to hang out in these areas and was troublesome for families wishing to use the park’s facilities.

The next four questions asked about future trends for developing parks. When asked about small park development, 70.27% were in favor for these types of parks, while

10.47% were not. When asked about a stream valley park and path system, 54.61% were in favor, 32.08% were undecided on this issue, many noting that they did not have knowledge of this type of system. When asked if the City should develop parks with multiple uses, 64.09% were in favor with 26.85% undecided. It was also noted on many of the surveys answering undecided, the respondent did not feel they had enough knowledge on the differences associated with the two park use types. When asked about what type of open space the City should develop, 70.3% answered that both passive and active open space was needed; 19.71% answered passive only. Also 37 of the survey takers did not answer or give an answer within the acceptable limits. Reasons given for this was that some respondents did not want additional park land or that the respondent would write that they did not know enough about the differences associated with both types.

Finally when asked if the county was providing adequate park facilities, 44.71% answered that county was not and 32.76% were uncertain about the county park being adequate. Comments suggested some were not aware of this park.

Three questions were asked about public works. Two questions focused on the adequacy of public works while one asked about the need for a compost/yard waste site. The first question asked –“Do you feel that Public Works (street maintenance, water and sewer line maintenance, snow removal, etc.) is adequate?” Fifty three percent answered that yes, they do feel that Public Works is adequate, while 37.84% noted that no, it was not. Comments associated with this question noted problems related to requests by residents that had not been completed. When asked about recycling facilities adequacy, 67.8% answered that it was adequate and 23.05% answered that it was not.

Question 46 asked –“are you in favor of a future Yard Waste/Mulch Compost Site to be planned within the Future Growth Boundaries of the City?” More than eighty-six percent of respondents were in favor of the site; only 6.04% were not, and 7.72% were undecided. This question had a lot of comments from respondents who stated they wanted the site and preferred the older site that had once been in use. Also many stated they felt the new strategy for yard waste and compost was very inadequate.

Two questions were asked regarding the Public Libraries in the City. The first question asked about its adequacy. More than fifty six percent answered that yes, it was adequate; while 24.24% answered that it was not. Comments related to this question stated that the library was too small and many wished it would be renovated to accommodate more material. The other question asked if respondents actually used the library. More than sixty nine percent of respondents answered that yes, they did use the library, while 30.07% did not, 2 were undecided, and 7 did not answer the question.

Four questions were asked about Fire and Ambulance service. Two questions asked about the adequacy of each service. The results for those questions were:

79.32% felt Fire service was adequate, 7.12% responded no, and 13.56% were undecided.

Seventy-five percent felt Ambulance service was adequate, 9.46% responded no, and 15.54% were undecided.

Many comments to these questions were related to never having to use this service, and in some cases having to wait for other companies to respond to calls.

The two other questions regarding Fire and Ambulance services asked about designating future sites for Fire and Ambulance. The results of these questions were: 63.64% were in favor of additional Fire sites, 17.85% were not, and 18.52 were undecided. Sixty-one percent were in favor of additional Ambulance sites, 18.31% were not, and 20.68% were undecided. Comments associated with these questions were generally associated with the need for additional services and the desire for more.

Three questions were asked regarding the Brunswick Police adequacy and also future growth. In terms of adequacy, 56.9% felt that the Police were adequate, 28.28% did not. Question 55 asked –“Do you feel that City Police Service should be expanded with future growth?” Almost eighty-two percent answered yes, while 12.79% answered no. Question 56 asked –“Do you feel that growth should address City Police Services?” Almost eighty-four percent answered yes, while 8.56% answered no. Comments related to this section noted problems with enforcement areas, and others noted salaries and the need for more competitive wages for growth.

The final question in this section asked about the adequacy of the senior citizens services in Brunswick. A little more than fifty percent were undecided on this issue, which may be based on the fact that many respondents are either in a household without senior citizens, or that they are unaware of services that are offered.

Implementation

This section consisted of three questions that asked respondents to ask questions of their own and also provide feedback more detailed than elsewhere in the survey. Comments in this section were not limited to any single department, and as a whole this section had comments on almost all City departments. Major concerns that were repeated in this section related to Police enforcement, Public Works problems, Permitting problems, general attitudes about the City both positive and negative, and suggestions on changing a wide array of aspects within the City. Growth was a major concern with many respondents stating they would like to see Brunswick remain a small town. Also concerns about affordability were evident, and many stated they wished for certain types of commercial uses, like grocery stores.

Summary

When dealing with a survey, the population of participants has to be taken into account. We received 303 surveys, which does not constitute total population. This number does however, give us a solid foundation for interpreting what all citizen and property owners

want for the City of Brunswick. Strong tendencies highlight areas of improvement that the City should consider. These include:

- Planning for a future Yard Waste/Mulch Compost Site;
- Placing parameters for controlled growth;
- Placing restrictions on heavy industry in multiple locations;
- Making arrangements to have more, if not all, streets lighted in the City;
- Repairing and maintaining all sidewalks in the City;
- Construction of more sidewalks especially on highly traveled roadways;
- Creation of a stream valley and park system;
- Planning for expanding Police services with growth;

While the survey provides insight into areas of interest, some of the findings will not be able to be used in the Master Plan. Areas that are beyond the scope of the Plan and will not be included involve certain aspects of enforcement, especially by City Police.

A2

Survey Results

Question 1: How long have you lived/owned property in Brunswick?

0-5	80	26.49% of 302
6-15	66	21.85% of 302
16-25	49	16.23% of 302
26+	107	35.43% of 302
Did not respond	1	00.33% of 303

Question 2: Do you feel the City efficiently serves the needs of the residents, on a 1 to 10 scale?

10:	9	03.03% of 297
9:	10	03.37% of 297
8:	65	21.89% of 297
7:	57	19.19% of 297
6:	55	18.52% of 297
5:	50	16.84% of 297
4:	21	07.07% of 297
3:	19	06.40% of 297
2:	4	01.43% of 297
1:	7	02.36% of 297

Total Mean of all Scores: 6.18

Did not respond: 6 01.98% of 303

Question 3: Would you support raising taxes to provide additional City services?

Yes	48	15.95% of 301
No	198	65.78% of 301
Undecided	55	18.27% of 301

Did not respond 2 00.66% of 303

Question 4: Over the last five years, would you say that Brunswick has become a better place to live?

Yes	143	47.99% of 298
No	95	31.88% of 298
Undecided	60	20.13% of 298

Did not respond 5 01.65% of 303

Question 5: Overall, how do you rate Brunswick as a place to live?

10:	21	07.00% of 300
9:	22	07.33% of 300
8:	88	29.33% of 300
7:	66	22.00% of 300
6:	33	11.00% of 300
5:	39	13.00% of 300
4:	14	04.67% of 300
3:	10	03.33% of 300
2:	4	01.33% of 300
1:	3	01.00% of 300

Total Mean of all Scores: 6.88

Did not respond 3 00.99% of 303

Question 6: Looking ahead over the next five years, do you think that Brunswick will become a better place to live?

Yes	132	45.05% of 293
No	79	26.96% of 293
Undecided	82	27.99% of 293

Did not respond 10 03.30% of 303

Question 7*: How many in your household are in the following age groups? Please indicate number for each group

1 Person		
Under 5	22	07.53% of 292
5-14	27	09.25% of 292
15-19	26	08.90% of 292
20-24	17	05.82% of 292
25-34	27	09.25% of 292
34-44	42	14.38% of 292
45-64	73	25.00% of 292
65-80	50	17.12% of 292
80+	10	03.42% of 292
2 People		
Under 5	11	03.77% of 292
5-14	23	07.88% of 292
15-19	8	02.74% of 292
20-24	4	01.37% of 292
25-34	24	08.22% of 292
34-44	32	10.96% of 292
45-64	66	22.60% of 292
65-80	17	05.82% of 292
80+	2	00.68% of 292
3 people		
5-14	4	01.37% of 292
20-24	1	00.34% of 292
45-64	3	01.03% of 292
4 people		
Under 5	1	00.34% of 292
35-44	2	00.68% of 292
45-64	1	00.34% of 292
Did not respond	11	03.36% of 303

* This question was a problem when recording data. A large number of those who answered the question did not answer it correctly. The problem stemmed from the fact that the respondent would circle one of the age groups but would not include the number per household. To facilitate this question an assumption is made that if there was no number included with the age group then there was only one person in that group. This question may have to be disregarded which will be determined at a later date.

Question 8: Do you feel that the current City Development Regulations adequately consider the impact of the One Hundred-year Floodplain?

Yes	66	23.40% of 282
No	34	12.06% of 282
Undecided	182	64.54% of 282

Did not respond 21 06.93% of 303

Question 9: Do you believe the City is taking necessary steps to avoid affecting the Environment?

Yes	115	39.79% of 289
No	64	22.15% of 289
Undecided	110	38.06% of 289

Did not respond 14 04.62% of 303

Question 10: Are you in favor of Passive Recreational use in Environmentally Sensitive Areas?

Yes	128	44.76% of 286
No	74	25.87% of 286
Undecided	84	29.37% of 286

Did not respond 17 05.61% of 303

Question 11: Do you favor growth in Brunswick?

Yes	153	51.52% of 297
No	117	39.39% of 297
Undecided	27	09.09% of 297

Did not respond 6 01.98% of 303

Question 12: Do you favor controlled growth in the City?

Yes	231	77.52% of 298
No	46	15.44% of 298
Undecided	21	07.05% of 298

Did not respond 5 01.65% of 303

Question 13: For which of the following land uses should the City expand its boundaries?

Residential only	52	17.16% of 303
Commercial only	98	32.34% of 303
Industrial only	25	08.25% of 303
Residential and Commercial	51	16.83% of 303
Commercial and Industrial	10	03.30% of 303
Residential and Industrial	0	00.00% of 303
All Three	27	08.91% of 303
None/did not respond	40	13.20% of 303

Question 14: If the City annexes land for residential use, do you favor Mixed-Use Development/Planned Unit Development?

Yes	153	52.94% of 289
No	64	22.15% of 289
Undecided	72	24.91% of 289

Did not respond 14 04.62% of 303

Question 15: Do you think that the City of Brunswick needs additional industry?

Yes	183	61.41% of 298
No	88	29.53% of 298
Undecided	27	09.06% of 298

Did not respond 5 01.65% of 303

Question 15.1: If so, what type of industry?

Service Oriented Business	61	30.96% of 197
Warehouse	16	08.12% of 197
Light Industrial	27	13.71% of 197
Heavy Industrial	3	01.52% of 197
Service Oriented Business and Warehouse	18	09.14% of 197
Service Oriented Business and Light Industrial	27	13.71% of 197
Service Oriented Business and Heavy Industrial	0	00.00% of 197
Warehouse and Light Industrial	10	05.08% of 197
Warehouse and Heavy Industrial	1	00.51% of 197
Light Industrial and Heavy Industrial	3	01.52% of 197
Service Oriented Business, Warehouse, and Light Industrial	24	12.18% of 197
Service Oriented Business, Warehouse, and Heavy Industrial	0	00.00% of 197
Service Oriented Business, Light Industrial, and Heavy Industrial	0	00.00% of 197
Warehouse, Light Industrial, and Heavy Industrial	1	00.51% of 197
All four	6	03.05% of 197
Did not respond	106	34.98% of 303

Question 16: Are you in favor of locating Heavy Industry in multiple locations, in the City?

Yes	23	07.69% of 299
No	242	80.94% of 299
Undecided	34	11.37% of 299
Did not respond	4	01.32% of 303

Question 17: Do you favor a special Re-Development/Overlay Area for the downtown core?

Yes	132	46.64% of 283
No	60	21.20% of 283
Undecided	91	32.16% of 283
Did not respond	20	01.32% of 303

Question 18: Are the streets in the City adequately paved and maintained?

Yes	108	36.86% of 293
No	166	56.66% of 293
Undecided	19	06.48% of 293
Did not respond	10	03.30% of 303

Question 19: Do you favor the City controlling the primary entrances to the City?

Yes	172	58.70% of 293
No	59	20.14% of 293
Undecided	62	21.16% of 293

Did not respond 10 03.30% of 303

Question 20: Are the streets in the City wide enough?

Yes	110	36.79% of 299
No	174	58.19% of 299
Undecided	15	05.02% of 299

Did not respond 4 01.32% of 303

Question 21: Should all streets be lighted?

Yes	222	73.75% of 301
No	61	20.27% of 301
Undecided	18	05.98% of 301

Did not respond 2 00.67% of 303

Question 22: Are the street name signs in the City adequate?

Yes	201	66.56% of 302
No	82	27.15% of 302
Undecided	19	06.29% of 302

Did not respond 1 00.33% of 303

Question 23: Are the traffic signs/signals adequate?

Yes	225	74.26% of 303
No	62	20.46% of 303
Undecided	16	05.28% of 303

Question 24: Are the sidewalks adequate?

Yes	82	27.24% of 301
No	199	66.11% of 301
Undecided	20	06.64% of 301

Did not respond 2 00.67% of 303

Question 25: Should Sidewalks be provided on all streets, to provide safe pedestrian access throughout the City?

Yes	222	75.00% of 296
No	47	15.88% of 296
Undecided	27	09.12% of 296
Did not respond	7	02.31% of 303

Question 26: Do you feel that the TransIT Service is adequate?

Yes	81	28.03% of 289
No	67	23.18% of 289
Undecided	141	48.79% of 289
Did not respond	14	04.62% of 303

Question 27: Do you favor increased Public Transportation within the City?

Yes	159	54.08% of 294
No	75	25.51% of 294
Undecided	60	20.41% of 294
Did not respond	9	02.97% of 303

Question 28: Do you feel that the Parking in the City is adequate?

Yes	87	29.79% of 292
No	181	61.99% of 292
Undecided	24	08.22% of 292
Did not respond	11	03.63% of 303

Question 29: Do you believe that Additional Parking Facilities are needed in the downtown core area?

Yes	186	63.48% of 293
No	76	25.94% of 293
Undecided	31	10.58% of 293
Did not respond	10	03.30% of 303

Question 30: Please indicate the locations where you and other persons in your household work.

Brunswick	75	27.17% of 276
Frederick City	122	44.20% of 276
Other Frederick County	48	17.39% of 276
Montgomery County	64	23.19% of 276
Washington D.C.	31	11.23% of 276
Northern Virginia	49	17.75% of 276
Washington County	12	04.35% of 276
Other	138	50.00% of 276
Retired*	22	07.97% of 276
Did not respond	27	08.91% of 303

* Retired was not an option on the survey but due to the number of write-ins that said retired it became its own sub category.

Question 31: How do you and other persons in your household travel to work?

Private Vehicle	176	69.84% of 252
MARC	20	07.94% of 252
Walk/Bike	4	01.59% of 252
Car/Van pool	9	03.57% of 252
Private Vehicle and MARC	27	10.71% of 252
Private Vehicle and Walk/Bike	7	02.78% of 252
Private Vehicle and Car/Van pool	7	02.78% of 252
MARC and Car/Van Pool	1	00.40% of 252
Private Vehicle, MARC, and Walk/Bike	1	00.40% of 252
Did not Respond	51	16.83% of 303

Question 32*: How do your children travel to school?

Private Vehicle	25	28.74% of 87
School Bus	34	39.08% of 87
Walk/Bike	12	13.79% of 87
School Bus and Private Vehicle	7	08.05% of 87
School Bus and Walk/Bike	5	05.75% of 87
Private Vehicle and Walk/Bike	1	01.15% of 87
School Bus, Private Vehicle, and Walk/Bike	3	03.45% of 87

Children in School 87 33.21% of 262

No Children in School 175 66.79% of 262

Did not Respond 41 13.53% of 303

* This question is broken down to represent households who have children that go to school. We received 87 surveys which had children enrolled in public school. The results are based on that number. –Did not respond” was left in its own category even though an assumption may have been made that these households do not have children in school. Additionally some of the surveys indicated that they had children being home-schooled and these responses were generally placed into the –Did Not Respond” category, unless the –No Children in School” was circled in which case they placed into that category.

Question 33: Do you feel that Water Service is adequate?

Yes	192	64.86% of 296
No	80	27.03% of 296
Undecided	24	08.11% of 296

Did not respond 7 02.31% of 303

Question 34: Do you feel that the quality of water in Brunswick is acceptable?

Yes	170	57.82% of 294
No	96	32.65% of 294
Undecided	28	09.52% of 294

Did not respond 9 02.97% of 303

Question 35: Do you use another source of water for drinking purposes?

Yes	166	55.89% of 297
No	127	42.76% of 297
Undecided	4	01.35% of 297

Did not respond 6 01.98% of 303

Question 36: Do you feel that Sewer Service is adequate?

Yes	209	70.61% of 296
No	50	16.89% of 296
Undecided	37	12.50% of 296

Did not respond 7 02.31% of 303

Question 37: Do you feel that Parks and Rec. Service is adequate?

Yes	161	55.14% of 292
No	92	31.51% of 292
Undecided	39	13.36% of 292

Did not respond 11 03.63% of 303'

Question 38: Do you feel that the Swimming Pool Facility is adequate?

Yes	146	49.83% of 293
No	72	24.57% of 293
Undecided	75	25.60% of 293

Did not respond 10 03.30% of 303

Question 39: Please circle which Recreational Facilities were used by you or a member of your household within the last year?

City Park	170	69.39% of 245
Swimming Pool	97	39.59% of 245
Campgrounds	54	22.04% of 245
Basketball Courts	32	13.06% of 245
Sportsplex	27	11.02% of 245
Kim Weddle Park	33	13.47% of 245
Ball Fields	32	13.06% of 245
B&O Park	27	11.02% of 245
Skate Park	18	07.35% of 245
Wenner Park	13	05.31% of 245
Railroad Square Park	44	17.96% of 245
Tennis Courts	19	07.76% of 245
C&O Park	132	53.88% of 245
Brunswick Regional Park	26	10.61% of 245

Did not respond 58 19.14% of 303

Question 40: Are you in favor of small park development, such as proposed West End Park or 2nd Avenue Park?

Yes	208	70.27% of 296
No	31	10.47% of 296
Undecided	57	19.26% of 296

Did not respond 7 02.31% of 303

Question 41: Are you in favor of a Stream Valley Park and Path System?

Yes	160	54.61% of 293
No	39	13.31% of 293
Undecided	94	32.08% of 293

Did not respond 10 03.30% of 303

Question 42: Should the City develop parks with Multi-purpose Recreational uses instead of dedicated uses?

Yes	191	64.09% of 298
No	27	09.06% of 298
Undecided	80	26.85% of 298

Did not respond 5 01.65% of 303

Question 43: What type of Open Space do you think the City should establish?

Passive	51	19.17% of 266
Active	28	10.53% of 266
Both	187	70.30% of 266

Did not Respond 37 12.21 of 303

Question 44: Do you think the County is adequately providing Regional Park Facilities for the Brunswick Area?

Yes	66	22.53% of 293
No	131	44.71% of 293
Undecided	96	32.76% of 293

Did not respond 10 03.30% of 303

Question 45: Do you feel that Public Works (street maintenance, water and sewer line maintenance, snow removal, etc.) is adequate?

Yes	157	53.04% of 296
No	112	37.84% of 296
Undecided	27	09.12% of 296

Did not respond 7 02.31% of 303

Question 46: Are you in favor of a future Yard Waste/Mulch Compost Site to be planned within the Future Growth Boundaries of the City?

Yes	257	86.24% of 298
No	18	06.04% of 298
Undecided	23	07.72% of 298

Did not respond 5 01.65% of 303

Question 47: Do you feel that the Recycling Facilities are adequate?

Yes	200	67.80% of 295
No	68	23.05% of 295
Undecided	27	09.15% of 295

Did not respond 8 02.46% of 303

Question 48: Do you feel that the Library is adequate?

Yes	168	56.57% of 297
No	72	24.24% of 297
Undecided	57	19.19% of 297

Did not respond 6 01.98% of 303

Question 49: Do you use the Brunswick Library?

Yes	205	69.26% of 296
No	89	30.07% of 296
Undecided	2	00.68% of 296

Did not respond 7 02.31% of 303

Question 50: Do you feel that the Fire Service is adequate?

Yes	234	79.32% of 295
No	21	07.12% of 295
Undecided	40	13.56% of 295

Did not respond 8 02.46% of 303

Question 51: Are you in favor of additional Fire Department Sites being designated for the future?

Yes	189	63.64% of 297
No	53	17.85% of 297
Undecided	55	18.52% of 297

Did not respond 6 01.98% of 303

Question 52: Do you feel that the Ambulance Service is adequate?

Yes	222	75.00% of 296
No	28	09.46% of 296
Undecided	46	15.54% of 296

Did not respond 7 02.31% of 303

Question 53: Are you in favor of additional Ambulance Service Sites being designated for the future?

Yes	180	61.02% of 295
No	54	18.31% of 295
Undecided	61	20.68% of 295

Did not respond 8 02.46% of 303

Question 54: Do you feel that City Police Service is adequate?

Yes	169	56.90% of 297
No	84	28.28% of 297
Undecided	44	14.81% of 297

Did not respond 6 01.98% of 303

Question 55: Do you feel that City Police Service should be expanded with future growth?

Yes	243	81.82% of 297
No	38	12.79% of 297
Undecided	16	05.39% of 297

Did not respond 6 01.98% of 303

Question 56: Do you feel that growth should address City Police Services?

Yes	244	83.56% of 292
No	25	08.56% of 292
Undecided	23	07.88% of 292

Did not respond 11 03.63% of 303

Question 57: Do you feel that the Senior Citizens Services are adequate?

Yes	74	25.26% of 293
No	72	24.57% of 293
Undecided	147	50.17% of 293

Did not respond 7 03.30% of 303

MASTER PLAN SURVEY NOTES

- 1 In cases where the respondent would write in an answer this was counted as “Did not respond”.
- 2 Questions marked with an asterisk have assumptions associated with them marked below the question.
- 3 Survey Drop-off Receptacles were picked up on April 18th 2006, at approximately 10:00 AM. All surveys that were received in those boxes were counted.
- 4 All mailed surveys were accepted until April 18, 2006. Any surveys that were received after this date were disregarded for the purposes of tabulation.
- 5 A total of 315 surveys had been returned as of May 23, 2006. The additional 12 were received after April 18, 2006, with the comments from those surveys used in addition to comments from all previously returned surveys.
- 6 The value that was used when determining the number to be sent was 1,950 surveys. This is the number of surveys that the City of Brunswick mailed to property owners.
- 7 All comments that were located throughout the survey by respondents were treated as general comments (question 60).
- 8 This summary will be included in the Master Plan Update for 2010.

A3

**Heart of the Civil War Heritage Area
Management Plan**

Maryland Civil War Heritage Area

Executive Summary

The American Civil War is an event that remains fixed as a turning point in history. People are drawn to see Civil War sites and to understand the roots and events of this great conflict. Leaders in tourism, historic preservation, Civil War history, and economic development in three Maryland counties – Washington, Frederick and Carroll – have been collaborating on a regional effort to enhance the visitor experience, encourage more active conservation of scenic landscapes, and preserve more of the region’s historic buildings and sites. Planning for the 150th Anniversary of the Civil War is beginning and preparations will soon escalate. Becoming a designated “certified heritage area” through the Maryland Heritage Areas Program is an opportunity to give the collaboration more structure and attract financial and institutional resources that could significantly benefit the effort. This *Management Plan* serves as a guiding document and an application for certification as a Maryland Heritage Area to be known as the Heart of the Civil War Heritage Area (HCWHA).

The Heritage Area

A heritage area is both a place and a concept. Physically, heritage areas are regions with concentrations of important historic, cultural, natural, and recreational resources. These are places known for their unique culture and identity and are good places to live and visit. As a concept, a heritage area combines resource conservation and education with economic development, typically in the form of heritage tourism. A number of states have heritage area programs to assist local and regional efforts. In Maryland, ten heritage areas have attained formal certification by the Maryland Heritage Areas Authority, which administers the state’s program. The HCWHA will soon become the eleventh.

This *Management Plan* conveys the potential for making the region’s powerful Civil War story more accessible to residents and visitors and in so doing, deepening public support for conservation and preservation while adding economic vitality through heritage tourism. It proposes that those portions of three counties that have strong associations with the events of 1861- 1865 be certified as the Heart of the Civil War Heritage Area under the state’s heritage areas program. Such designation does not convey additional layers of regulation; rather, it brings eligibility for matching grants and incentives for building rehabilitation and participation in tourism marketing programs. It also brings added recognition of the region’s unique historical significance.

Since 1890, dedicated conservationists, historians, and leaders in central Maryland have been working to raise the profile of the region’s extraordinary Civil War heritage and to care for the battlefields and settings where the events that shaped the future of the Union took place. As a result, this region along the border between north and south possesses a degree of landscape integrity that is exceptional among Civil War sites around the country. The visitor who wants to understand what it was like when the armies faced each

other can do so here in a setting that remains largely rural and relatively intact, unlike many other Civil War battlefields where modern development patterns have obscured the experience. Moreover, many of the region's small towns possess a high degree of historical integrity, giving residents and visitors a distinct sense of time and place.

Among the heritage area's top assets are three major battlefields: Antietam, Monocacy, and South Mountain. The region also benefits from its proximity to other premiere Civil War sites. This central location coupled with the presence of prime battlefields means that visitors can easily make this region their base camp, venturing out to Gettysburg, Harpers Ferry, and Manassas, as well as to the attractions of Washington (D.C.) and Baltimore.

Benefits of Participation

Participation in the Maryland Heritage Areas Program brings important benefits to building owners in historic towns, to museums and educational organizations, and to efforts to market the region to visitors or businesses.

The state program encourages concentrating effort to leverage investment. With this in mind, using criteria developed by the Steering Committee and planning team, sections of nine towns are recommended as Target Investment Zones under the state's program. Three of them – Downtown Hagerstown, Middletown, and Taneytown – are recommended for immediate activation,” with the others – Boonsboro, Emmitsburg, Frederick, Sykesville, Westminster, and Williamsport – to be activated when local leaders decide their readiness. In Target Investment Zones, property owners are eligible for matching grants and loans and historic tax credits for rehabilitation of historic and certain non-historic buildings whose uses support heritage tourism.

Making the story come alive is a major goal of the HCWHA. Museums, historic sites, and educational organizations that are participating in the HCWHA's interpretive effort are eligible for matching grants to plan and produce exhibits, publications, special events, and other activities. The Maryland Office of Tourism Development is giving special attention to the Civil War in its marketing and advertising program. The region's three “destination marketing organizations” – tourism offices in Washington, Frederick, and Carroll Counties – are active partners in the heritage area initiative.

To date, elected officials of all three counties have been financial partners in the creation of the HCWHA. Members of the Steering Committee and activists in conservation and tourism have invested untold hours to develop the heritage area. It is anticipated that each of the three counties will continue participating in the partnership as the work gets underway to turn the *Management Plan* into on-the-ground results.

A Broader Story

Many visitors are already coming here from across the country and abroad to experience the military aspects of the Civil War, which make up the primary available story to date.

The National Park Service provides excellent interpretive experiences at Antietam and Monocacy National Battlefields, as well as at the C&O Canal National Historical Park. Two well-marked Maryland Civil War Trails guide visitors around the military sites. The HCWHA's organizers intend that this region will become an essential destination for travelers interested in history. The intent is to make this the best place in the country to understand the decade that was a turning point socially, economically, and politically in the nation's history.

Why will new visitors come here? As dramatic as the battles were, the story that will be told through the heritage area is much larger and more complex. During the 1860s, the impact of the Civil War was total. It was not fought in a far away country. It took place where people lived, farmed, worked, and shared community life – as their descendants do today. Young men left their families to fight for deeply held beliefs. Families coped with the devastation of living in a war zone. Political tensions ran high, and the president's wartime suspension of civil liberties was unique in American history.

Especially in this border region, there was not the black and white clarity of “Blue” and “Gray.” Scholarship by contemporary historians is bringing new understanding of how the war was experienced by average people and of how, in the years following the end of conflict, people struggled to rebuild divided communities and recover. A major focus of the heritage area organization will be to expand understanding beyond the military history and give voice to these human stories of how the residents of the region experienced and recovered from the Civil War.

The interpretive focus will make emotional connections between our lives today and the lives of those who experienced this immense conflict. This focus will significantly expand the appeal of the heritage area beyond a core Civil War audience. The purpose of the HCWHA initiative is to both extend the stay of existing visitors and to reach out to others interested in history by broadening the available experience here.

The Heart of the Civil War Heritage Area

Orchestrating coordinated interpretation and development of themed itineraries and packages of experiences across this large geography will take conscious and constant attention by a staffed regional organization—the Heart of the Civil War Heritage Area (the HCWHA). The HCWHA will lead implementation of the *Management Plan* and must be dedicated to implementing the strategies contained in the *Management Plan* over the decade ahead. It will also carry the responsibility of coordinating and serving as an information clearinghouse for the various initiatives in the region related to heritage tourism and the Civil War.

The broadening of the region's Civil War story will be accomplished through integrated initiatives undertaken by cooperating museums, historic sites, heritage organizations, and educators throughout the three counties. The HCWHA will coordinate creation of an interpretive plan to provide overarching story themes and guidance about development of engaging and popular exhibits, displays, films, walking tours, performances, and special

events. Beyond the value for visitors, interpretive efforts will provide the residents of Washington, Frederick, and Carroll Counties much greater access to the events that shaped their communities and cultures.

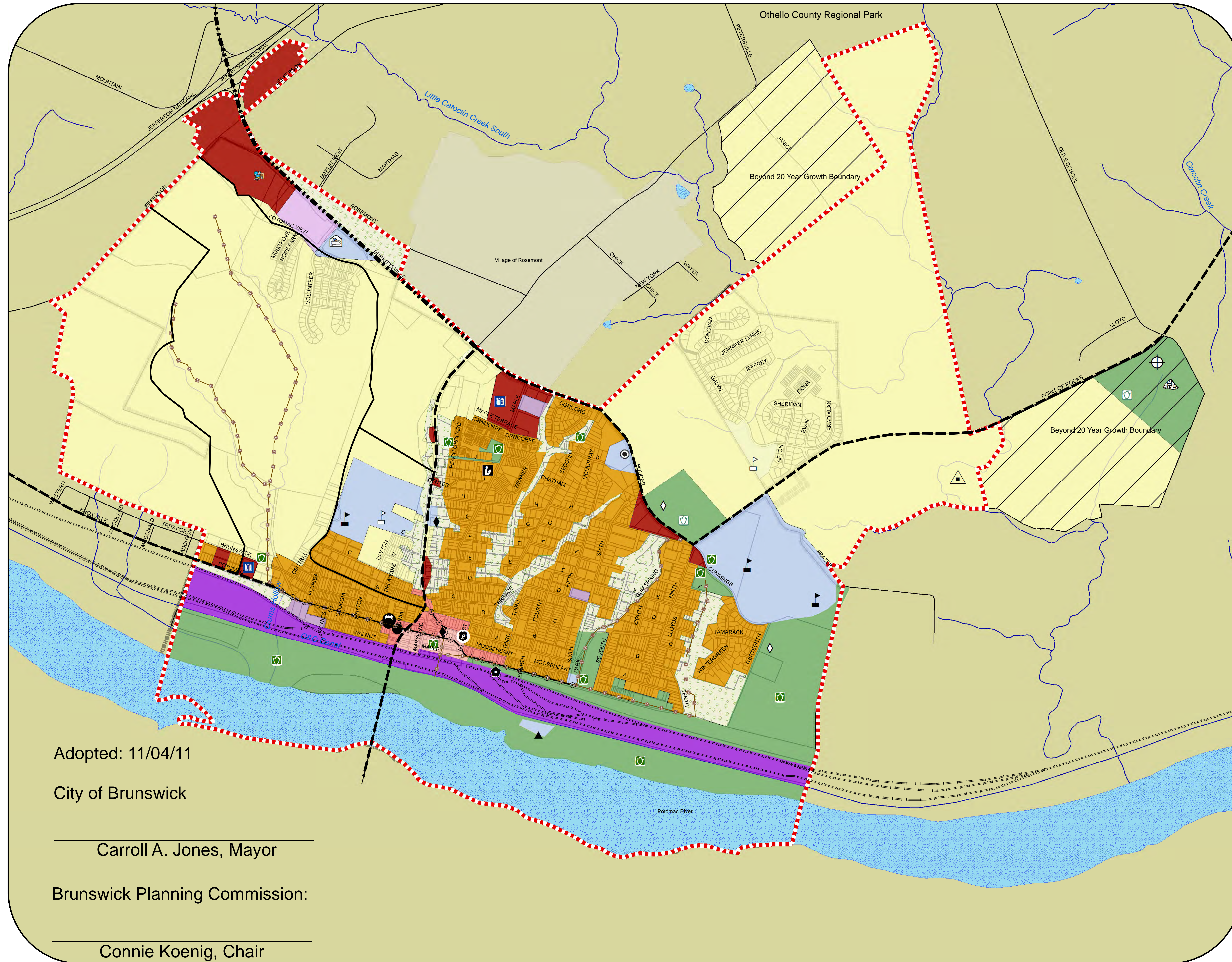
The HCWHA will also actively promote greater appreciation of sacred historic places, scenic landscapes, and historic town centers, encouraging landowners and elected officials to take steps to retain the region's distinct character. This character is an underlying asset in an era in which quality of life decisions increasingly influence business location decisions. Another goal of the HCWHA is to encourage stewardship of historic sites and buildings and efforts to retain the historical character of the towns and countryside as the region prospers. The National Trust for Historic Preservation recently named the "Journey through Hallowed Ground" corridor, which crosses the Frederick County segment of the HCWHA, to the 2005 list of America's Most Endangered Places. This designation acknowledges the corridor as an important but fragile piece of American heritage that is in danger due to growth pressure in the entire Washington region. HCWHA stewardship emphasis will advance appreciation for the area's distinctive historic character of place as a fundamental heritage resource for the region's future – not just as backdrop for heritage tourism, but also as a significant element in quality of life for those who call this place home.

The HCWHA will be a regional Three-county Advisory Board that will tackle major initiatives, such as marketing, the interpretive plan, and other overarching programs. The HCWHA will assist participating heritage organizations with grant applications to enhance their programs and public offerings.

A4

Master Plan Maps

City of Brunswick Master Plan



Land Use and Existing Community Facilities

- Conservation
- Parks and Recreation
- Low Density (2-5 units/acre) with 3.5 unit average
- Medium Density (6-10 units/acre)
- Downtown Commercial Core
- Downtown Transition
- General Commercial
- Office/Research
- Light Industrial
- General Industrial
- Institutional
- Fire/Ambulance Stations
- Government Buildings
- Library
- Parks
- Police Station
- Schools
- Water Storage Facilities
- Water Treatment Plant
- Wastewater Treatment Plant
- Shopping Centers
- City Boundary
- Village of Rosemont
- Potomac River
- Local Roads
- Railroads

Future Community Facilities and Highway Classifications

- 20 Year Growth Boundary
- Beyond 20 Year Growth Boundary
- Future Fire/Ambulance Station
- Future Government Buildings
- Future Mulch Site
- Future Parks
- Future Police Station
- Future Retail and Office Centers
- Future School Site
- Future Wastewater Treatment Plant
- Future Water Treatment Plant & Elevation Tank
- Downtown Business Arterial
- Major Arterial
- Minor Arterial
- Collector
- Bike Path

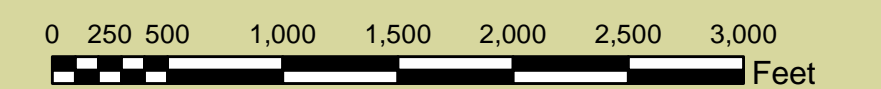
Adopted: 11/04/11

City of Brunswick

Carroll A. Jones, Mayor

Brunswick Planning Commission:

Connie Koenig, Chair










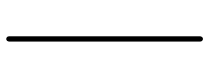

City of Brunswick Planning

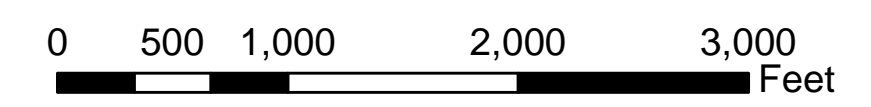
City of Brunswick Environment & Sensitive Areas



April 2011



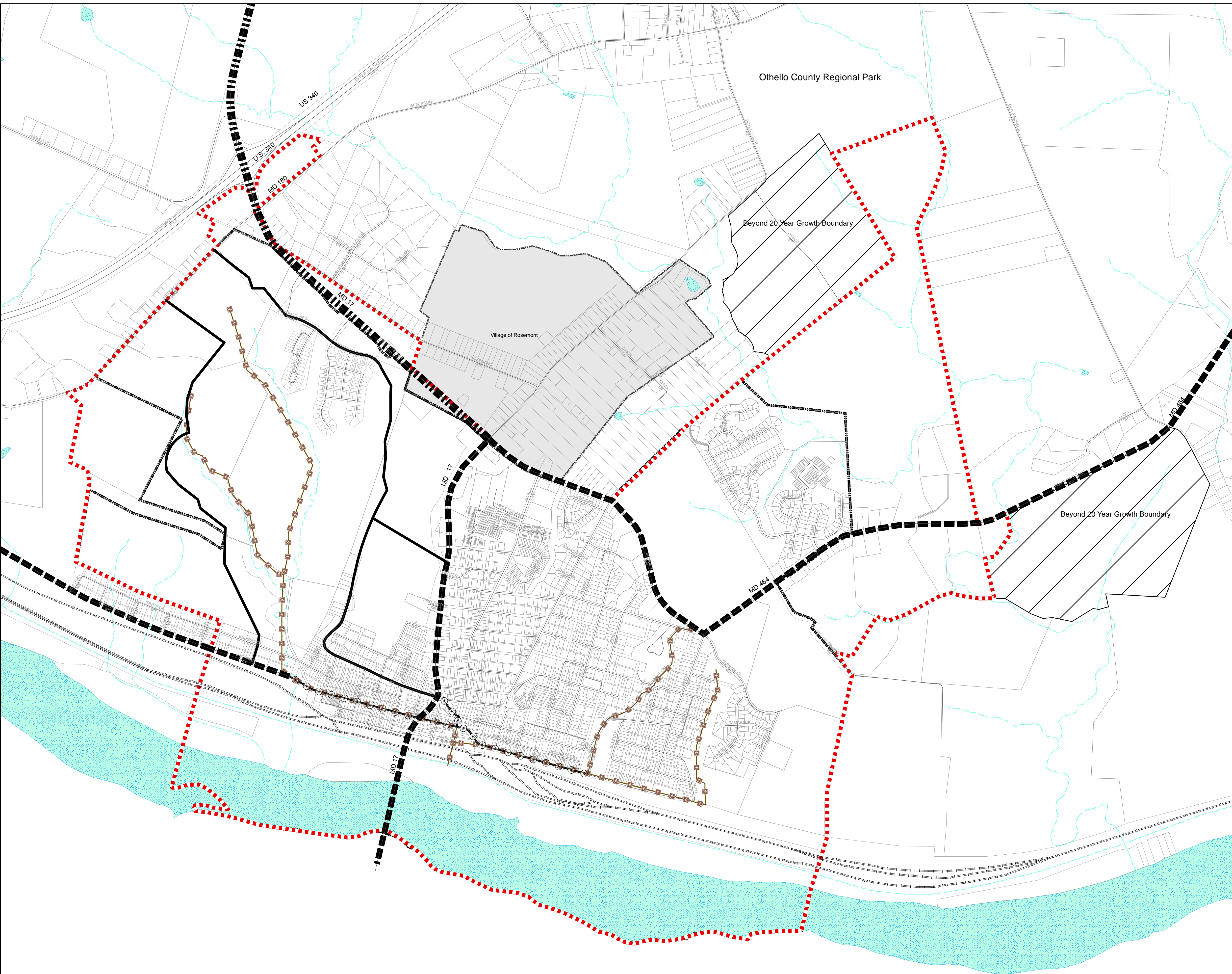
-  20 Year Growth Boundary
-  Beyond 20 Year Growth Boundary
-  FEMA Floodplain
-  Stream Buffer
-  Potomac River
-  Forest Areas
-  Roads
-  City Boundary
-  Village of Rosemont



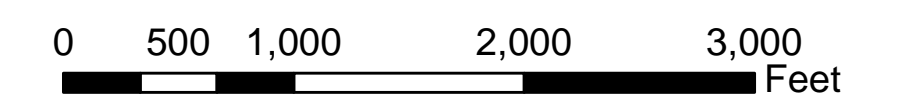
City of Brunswick Street System



April 2011



- ■ ■ ■ Major Arterial
- — — — Minor Arterial
- ○ ○ ○ Downtown Business Arterial
- — — — Collector
- — — — Roads
- · · · · Railroads
- □ □ □ Bike Path
- · · · · 20 Year Growth Boundary
- ▨ ▨ ▨ ▨ Beyond 20 Year Growth Boundary
- — — — City Boundary
- ■ ■ ■ Potomac River
- ■ ■ ■ Village of Rosemont

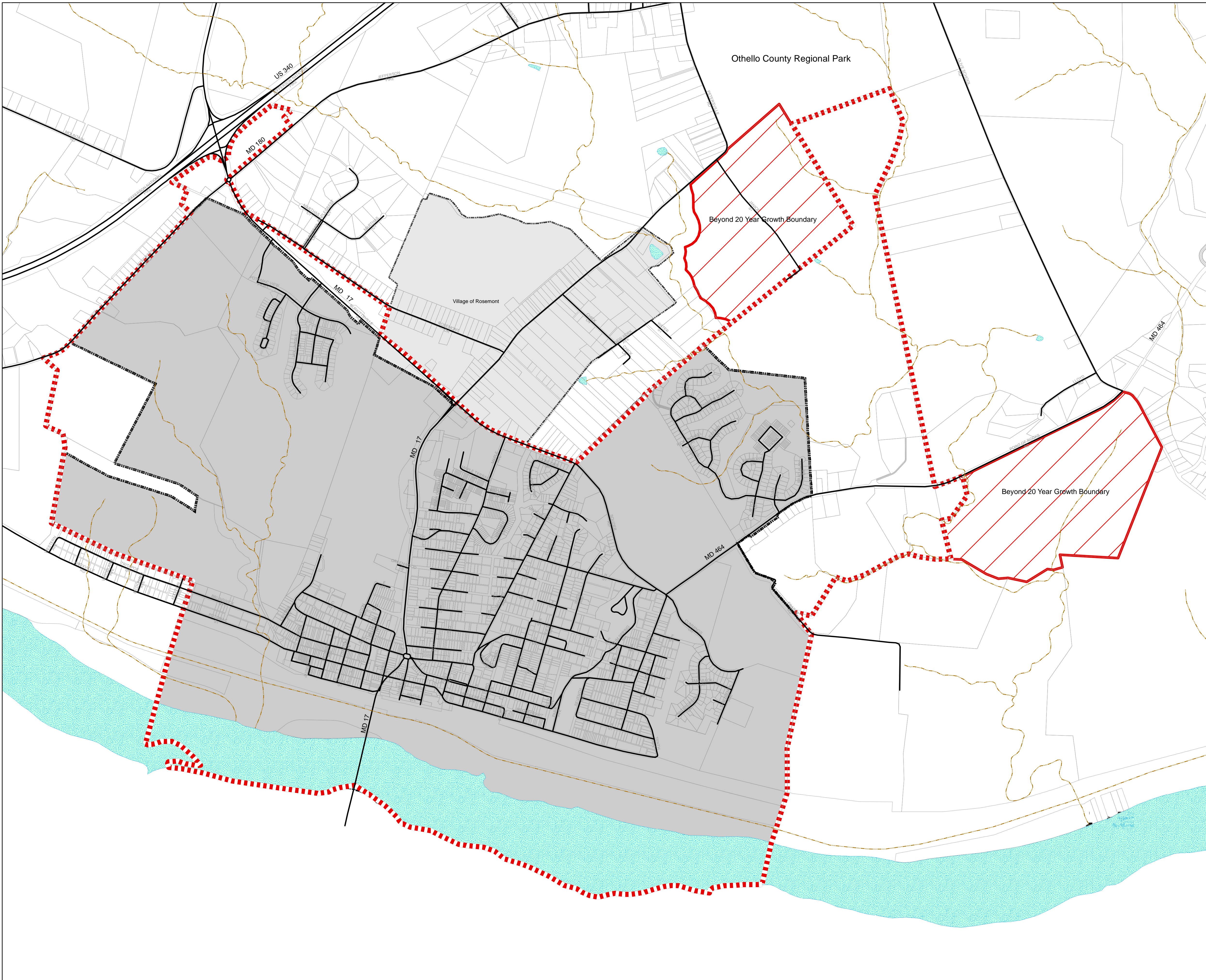


City of Brunswick Growth Boundary



April 2011

-  20 Year Growth Boundary
-  Beyond 20 Year Growth Boundary
-  Roads
-  Potomac River
-  Streams
-  City Boundary
-  Village of Rosemont

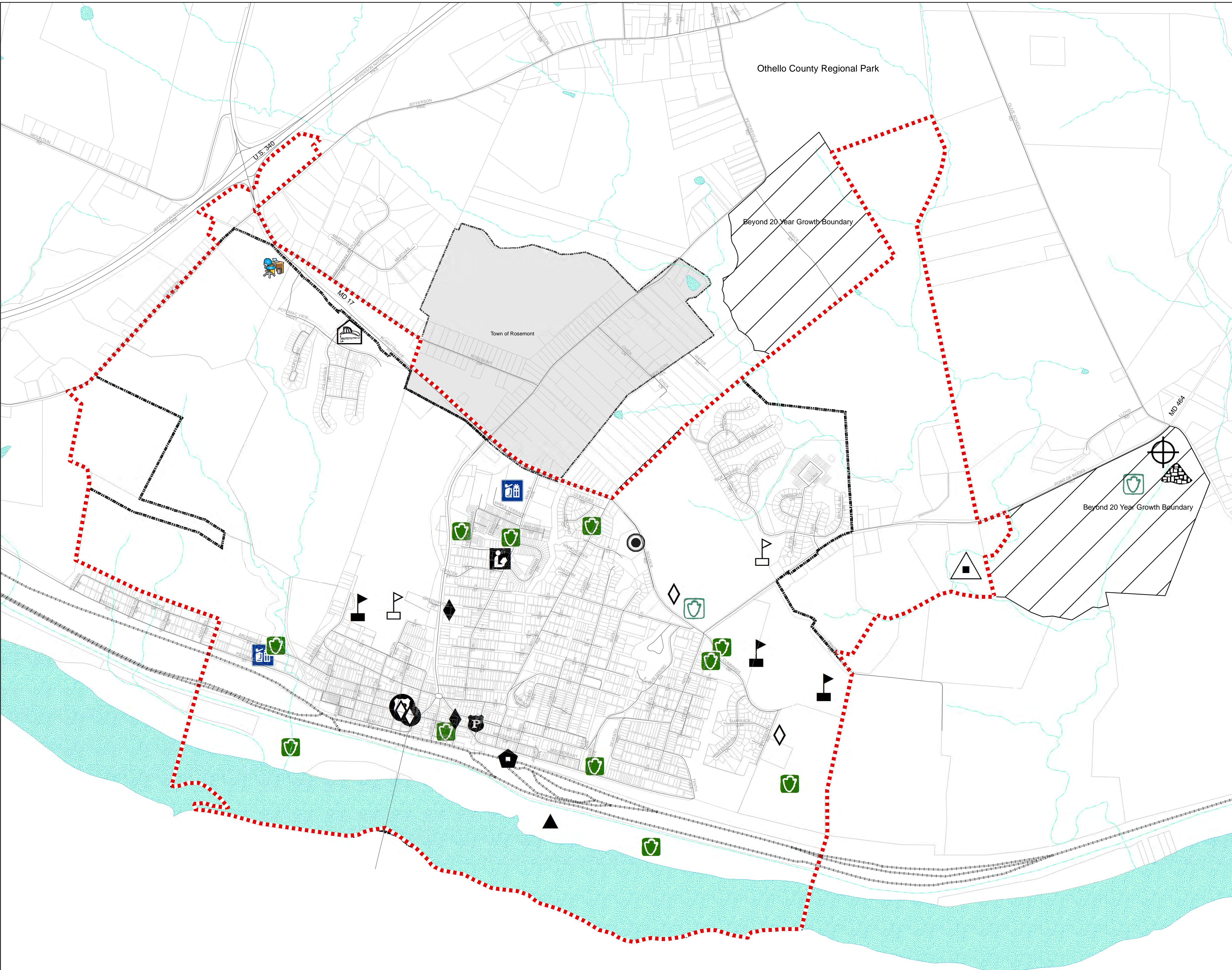


0 500 1,000 2,000 3,000 Feet

City of Brunswick Community Facilities



April 2011



Future Community Facilities

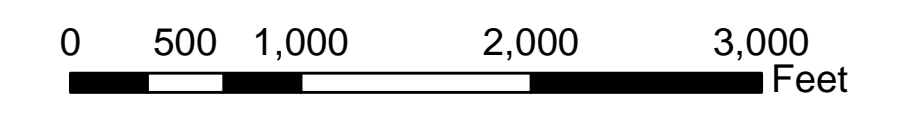
- Future Water Treatment Plant & Elevation Tank
- Future Wastewater Treatment Plant
- Future Parks
- Future Police Station
- Future Fire/Ambulance Station
- Future School Site
- Future Mulch Site
- Future Government Buildings
- Future Retail and Office Centers

Existing Community Facilities

- Water Treatment Plant
- Water Storage Facilities
- Wastewater Treatment Plant
- Parks
- Police Station
- Fire/Ambulance Stations
- Schools
- Library
- Government Buildings
- Shopping Centers

Map Features

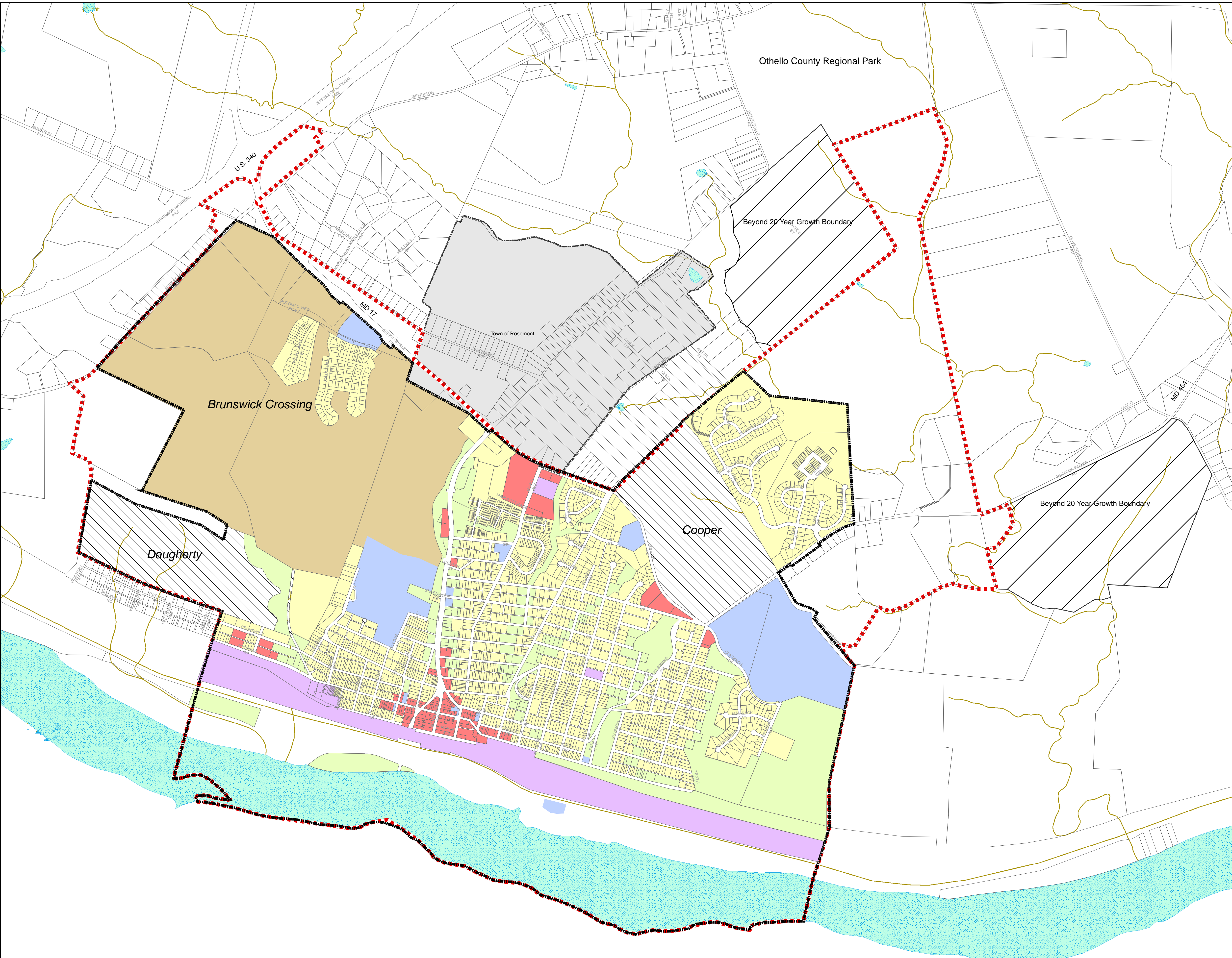
- Potomac River
- Streams
- Roads
- Railroads
- 20 Year Growth Boundary
- Beyond 20 Year Growth Boundary
- City Boundary
- Village of Rosemont



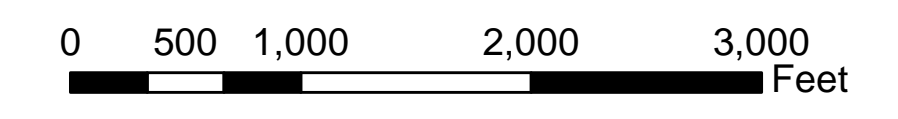
City of Brunswick Existing Land Use







April 2011

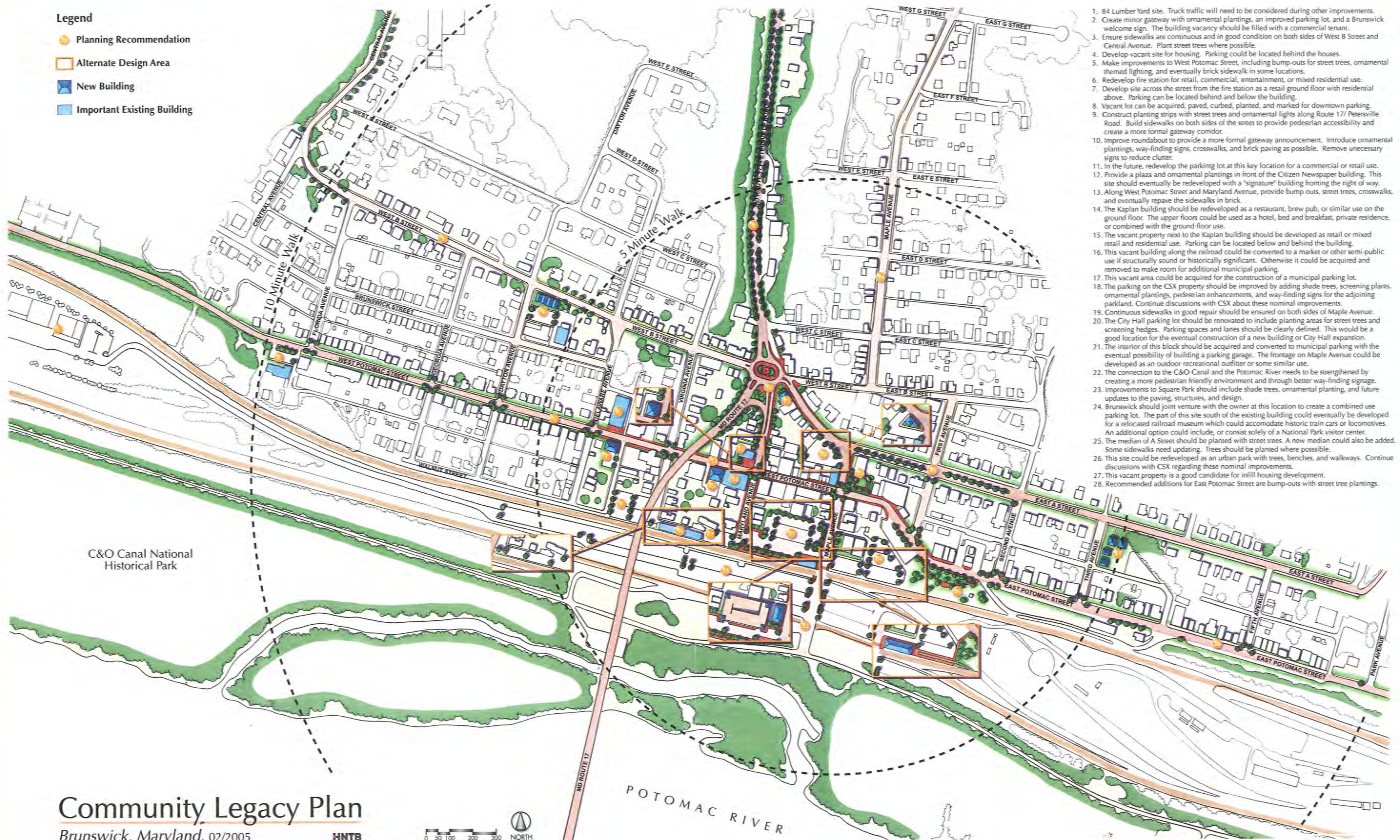


- Undeveloped
- Open Space
- Residential
- Residential Pipeline with APFO Approval (PUD)
- Commercial
- Industrial
- Institutional
- 20 Year Growth Boundary
- City Boundary
- Village of Rosemont
- Roads
- Potomac River
- Streams



Legend

-  Planning Recommendation
-  Alternate Design Area
-  New Building
-  Important Existing Building



1. 84 Lumber Yard site. Truck traffic will need to be considered during other improvements.
2. Create minor gateway with ornamental plantings, an improved parking lot, and a Brunswick welcome sign. The building vacancy should be filled with a commercial tenant.
3. Ensure sidewalks are continuous and in good condition on both sides of West B Street and Central Avenue. Plant street trees where possible.
4. Develop vacant site for housing. Parking could be located behind the houses.
5. Make improvements to West Potomac Street, including bump-outs for street trees, ornamental themed lighting, and eventually brick sidewalk in some locations.
6. Redevelop fire station for retail, commercial, entertainment, or mixed residential use.
7. Develop site across the street from the fire station as a retail ground floor with residential above. Parking can be located behind and below the building.
8. Vacant lot can be acquired, paved, curbed, planted, and marked for downtown parking.
9. Construct planting strips with street trees and ornamental lights along Route 17/Petersville Road. Build sidewalks on both sides of the street to provide pedestrian accessibility and create a more formal gateway corridor.
10. Improve roundabout to provide a more formal gateway announcement. Introduce ornamental plantings, way-finding signs, crosswalks, and brick paving as possible. Remove unnecessary signs to reduce clutter.
11. In the future, redevelop the parking lot at this key location for a commercial or retail use.
12. Provide a plaza and ornamental plantings in front of the Citizen Newspaper building. This site should eventually be redeveloped with a 'signature' building fronting the right of way.
13. Along West Potomac Street and Maryland Avenue, provide bump outs, street trees, crosswalks, and eventually repave the sidewalks in brick.
14. The Kaplan building should be redeveloped as a restaurant, brew pub, or similar use on the ground floor. The upper floors could be used as a hotel, bed and breakfast, private residence, or combined with the ground floor use.
15. The vacant property next to the Kaplan building should be developed as retail or mixed retail and residential use. Parking can be located below and behind the building.
16. This vacant building along the railroad could be converted to a market or other semi-public use if structurally sound or historically significant. Otherwise it could be acquired and removed to make room for additional municipal parking.
17. This vacant area could be acquired for the construction of a municipal parking lot.
18. The parking on the CSX property should be improved by adding shade trees, screening plants, ornamental plantings, pedestrian enhancements, and way-finding signs for the adjoining parkland. Continue discussions with CSX about these nominal improvements.
19. Continuous sidewalks in good repair should be ensured on both sides of Maple Avenue.
20. The City Hall parking lot should be renovated to include planting areas for street trees and screening hedges. Parking spaces and lanes should be clearly defined. This would be a good location for the eventual construction of a new building or City Hall expansion.
21. The interior of this block should be acquired and converted to municipal parking with the eventual possibility of building a parking garage. The frontage on Maple Avenue could be developed as an outdoor recreational outfitter or some similar use.
22. The connection to the C&O Canal and the Potomac River needs to be strengthened by creating a more pedestrian friendly environment and through better way-finding signage.
23. Improvements to Square Park should include shade trees, ornamental planting, and future updates to the paving, structures, and design.
24. Brunswick should joint venture with the owner at this location to create a combined use parking lot. The part of this site south of the existing building could eventually be developed for a relocated railroad museum which could accommodate historic train cars or locomotives. An additional option could include, or consist solely of a National Park visitor center.
25. The median of A Street should be planted with street trees. A new median could also be added. Some sidewalks need updating. Trees should be planted where possible.
26. This site could be redeveloped as an urban park with trees, benches, and walkways. Continue discussions with CSX regarding these nominal improvements.
27. This vacant property is a good candidate for infill housing development.
28. Recommended additions for East Potomac Street are bump-outs with street tree plantings.

Community Legacy Plan

Brunswick, Maryland, 02/2005

HNTB



A5

Development Capacity Analysis

APPENDIX 5

CITY OF BRUNSWICK

DEVELOPMENT CAPACITY ANALYSIS

April 2011



Brunswick Planning Staff:

Bruce R. Dell, Planning and Zoning Administrator
Kimberly Mezzanotte, Development Review Coordinator

In Conjunction with:



Maryland Department of Planning

Development Capacity Introduction and Background

MDP has been working on a development capacity analysis with the City of Brunswick. This has involved collecting, integrating and interpreting data to make it “fit” MDP’s growth simulation model. MDP has run the growth model with default assumptions and current City zoning to obtain preliminary results. MDP has also met with the City of Brunswick planning staff to go over the base set of information and assumptions and discuss the preliminary results of the development capacity analysis. At the meeting, the planning staff felt that the MDP assumptions were realistic and agreed that the preliminary results closely matched with what they know is occurring within the City regarding development. They then asked MDP to perform an additional development capacity analysis for the proposed growth areas around the City. This report summarizes the capacity numbers for inside the City limits and in the proposed growth areas.

Maryland’s local governments committed to performing the Development Capacity Analysis as part of their comprehensive plan updates via the Development Capacity Analysis Local Government MOU (signed by the Maryland Municipal League and Maryland Association of Counties in August, 2004) and the Development Capacity Analysis Executive Order (signed by Governor Ehrlich in August, 2004).

These agreements were commitments to implement the recommendations made by the Development Capacity Task Force, which are outlined in their July 2004 report (the full report is available at: http://www.mdp.state.md.us/develop_cap.htm)

See the report mentioned above for a full description of the analysis’ methodology and its caveats. MDP’s analysis, while not perfect, was endorsed by the Development Capacity Task Force and many local governments. This analysis produces estimates of the number of dwelling units built by build-out based on existing zoning, land use, parcel data, sewer service, and information about un-buildable lands. This analysis does not account for school, road, or sewer capacity. The estimates are focused on the capacity of the land to accommodate future growth.

Trend Data

Based on the Census, in 2010, the City of Brunswick had a population of 5,870. There were 2,330 existing housing units as of 2010. The City of Brunswick is projecting that its population will grow from 5,870 people to close to 10,000 people by 2030. This large growth is mainly attributed to the Brunswick Crossing Planned Unit Development, which will add approximately 4,064 people when completely built.

Capacity Analysis

The Development Capacity Analysis uses the default MDP assumptions of the growth model and the current zoning of the City of Brunswick (see attached Table 1 for assumed

zoning densities) to determine future household capacity. With these assumptions, the analysis shows that there is a total capacity of 2,351 households (or 6,113 people) within the City limits. Much of this capacity (70%) is located within the Brunswick Crossing Planned Unit Development. There is more than enough capacity to meet the 2030 growth projection of an additional 4,130 people within the City of Brunswick.

The capacities for each zoning category within the City of Brunswick are shown in Table 2 below. The R1 and R2 zones contain the most capacity. This is largely due to the presence of Brunswick Crossing Planned Unit Development in these zones, but also because they have the highest allowable densities and are large in area (see Table 2 for acreage of each zone).

The Development Capacity Summary Report (Table 3), which is attached, shows the breakdown of land within Brunswick by various parcel types. It shows that almost the entire City is composed of residential land (1,480 acres out of a total of 1,529 acres or 96%). The table also points out that almost all of capacity (2098 households) comes from only 7 parcels within the City, but that they make up a large area of 777 acres.

When the growth areas are taken into consideration for future development, the potential capacity for Brunswick greatly increases. The proposed growth areas are located primarily to the east of the City and are currently mostly large parcels used for agriculture. When the development capacity analysis was performed for these areas, it was assumed that the zoning would be changed to a PUD zone with a density yield that matches that of the City's R-1 zone at 9.07 units per acre. It was also assumed that sewer would serve all of the growth areas. The Brunswick planning officials plan for the creation of a PUD zone for these areas in order to allow clustering and therefore the preservation of the large amounts of environmentally sensitive land located there. In order to take this into account in the analysis, several steps were taken. First, the percentage of environmentally sensitive areas that the City intends to protect in the growth areas was found (they make up 35.3% of the growth area). The MDP growth model was then run to determine capacity. After capacity numbers were obtained for each parcel in the growth areas, this capacity was reduced by 35.3% to take into consideration the City's intent to limit development in order to protect these lands.

After all the above analysis was performed, MDP's results show that there is a potential capacity of 2,664 households inside the growth areas (this does not include capacity within the City limits). When multiplied by the average household size of 2.6 for Brunswick, this means that there is capacity for approximately 6,926 people to be accommodated within the growth areas.

When the capacity inside Brunswick and in the growth areas is combined, there is a total development capacity for a potential 5,015 households (or 13,039 people).

	Capacity (in households)
In Brunswick	2,351
In Growth Areas	2,664
Total	5,015

Table 1

City of Brunswick Zoning Table

Zoning Ordinance ¹	Description ²	Allowable Density and Notes ³	Generalized Zoning ⁴	Realized Density (average of different housing types) ⁵	Density Yield for areas with Sewer or Planned for Sewer ⁶	Density Yield for areas without Sewer or NOT Planned for Sewer
OS	Open Space	6000 ft ² on lots of record 15,000 ft ² on all others, excluding floodplain and wetlands.	Low Density Residential	4.15 du/acre	3.11 du/acre	0.5 du/acre
A-1	Agriculture		Most Protective			
RS	Residential Suburban		Low Density Residential			
R-1	Low Density Residential	Single Family: 6,000 ft ² Two family du's: 3,300 ft ² Duplex: 2,750 ft ²	Medium Density Residential	10.8 du/acre	8.13 du/acre	0.5 du/acre
R-2	Medium Density Residential	Single Family: 5,000 ft ² Two family du's: 2,750 ft ² Duplex: 2,750 ft ² Townhouses: 3,500 ft ² Multi-family du's: 4,000 ft ²	Medium Density Residential	12.1 du/acre	9.1 du/acre	0.5 du/acre
B-1	Neighborhood Business		Commercial			
B-2	Central Business		Commercial			
B-3	Business Transitional		Commercial			
GC	General Commercial		Commercial			
HS	Highway Service		Commercial			
I-1	Light Industrial		Industrial			
I-2	Heavy Industrial		Industrial			
OR	Office/Research		Industrial			
R-2MH						

¹ Zoning District names as they appear in the Town's zoning ordinance

² Description of the zone (from the zoning map)

³ Taken from the zoning ordinance

⁴ MDP generalized categories for zoning (used statewide)

⁵ Bottom-line allowable density.

⁶ Represents 75% of the realized density field.

Table 2
Capacity by Zoning Category within the City of Brunswick

Zoning	Capacity (in Households)	Acres
B2	0	8
B3	0	10
GC	0	60
I1	0	16
I2	0	99
OS	73	762
R1	2023	1007
R2	234	244
R2MH	0	5
RS	21	215
	2,351	2,426

Table 3
Development Capacity Summary Report

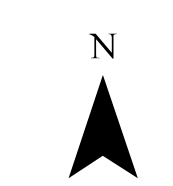
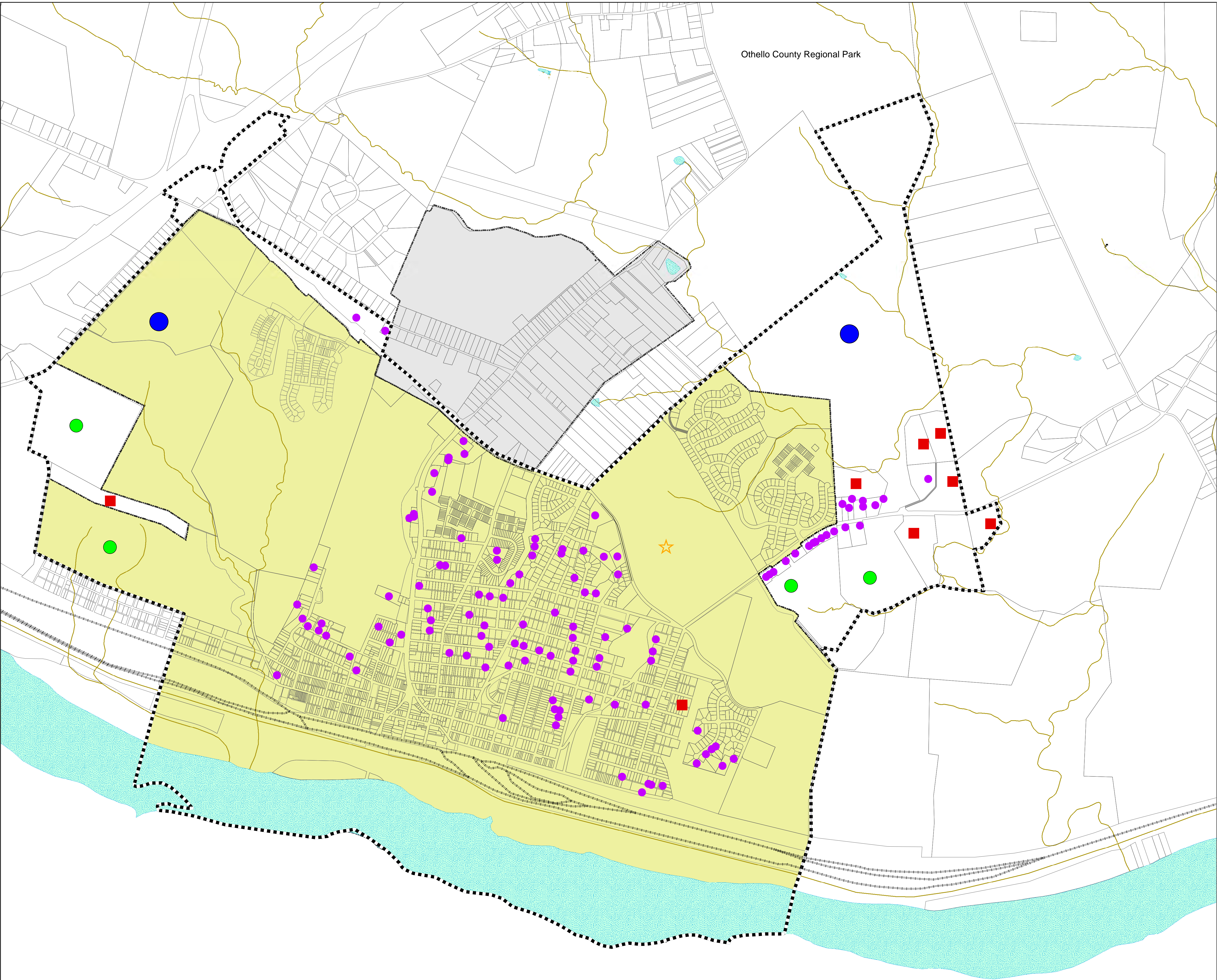
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		1,529 acres	2,357	
	Subtract land zoned for nonresidential use (commercial, industrial)	49 acres	167	
Residentially Zoned Acres		1,480 acres	2,190	
	Subtract tax exempt land (tax exempt code)	247 acres	58	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA lands, etc.)	37 acres	16	
	Subtract other parcels without capacity (built out acres, etc.)	335 acres	1,967	
Acres and Parcels with Capacity	Total capacity	861 acres	149	2,351
Capacity Inside PFA		861 acres	149	2,351
Capacity Outside PFA				
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	40 acres	45	98
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	80 acres	140	214
Acres and Parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	777 acres	8	2,098

City of Brunswick Development Capacity



April 2011

- 0 - 29
- 30 - 146
- 147 - 370
- ★ 500 Maximum
- 501 - 1505
- ⋯⋯⋯ 20 Year Growth Boundary
- ▭ Village of Rosemont
- ▭ City Boundary



1 inch = 792 feet

