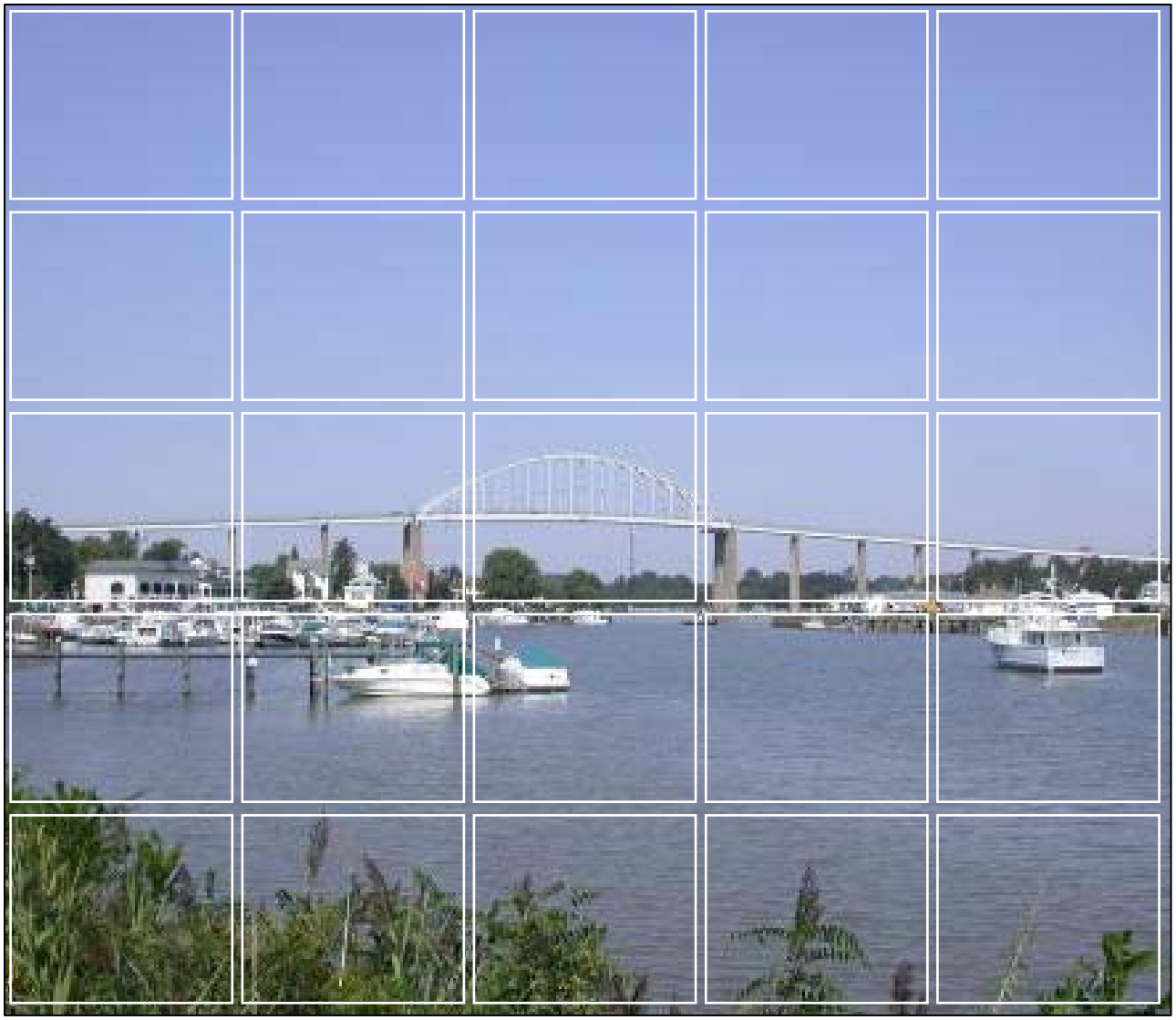

# Cecil County
# Comprehensive Plan

**Adopted by the Board of County Commissioners**
**April 13, 2010**



# Acknowledgements

The Cecil County Planning Commission expresses its appreciation to the many people, agencies and organizations that provided information, ideas and input for this plan.

***Cecil County Commissioners***

Rebecca J. Demmler | Robert J. Hodge | Brian L. Lockhart, President
James T. Mullin | Wayne L. Tome

***Cecil County Planning Commission***

William Mortimer, Chairman

B. Patrick Doordan | Guy Edwards | Joe Janusz
Wyatt K. Wallace | Kennard Wiggins | H. Clay McDowell, Alternate

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Craig Whiteford, Budget Director

***Consultant Assistance***

Environmental Resources Management, Annapolis, Maryland

*Special thanks to Melissa Appler, Jason DuBow and John Leocha at the Maryland Department of Planning, Mike Nixon at the Maryland Department of Transportation, Tony Hofmann of Michael Baker Inc., Brigid Kenney and Janice Outen at the Maryland Department of the Environment, David Nemazie at the University of Maryland's Center for Environmental Science, Daniel Blevins and David Gula at the Wilmington Area Planning Council, Jenel Fronheiser at Cecil College, and Gerrit Knaap of the National Center for Smart Growth Research and Education at the University of Maryland*

# Citizens' Oversight Committee

Diane Lane, Chair, Vice President of Student Services & Institutional Effectiveness, Cecil College

| | | |
|---|---|---|
| Ann Jackson * | Brian Bolender #[3] | Carl Walbeck # |
| Chuck Smyser | Dan Derr | Dan Polite |
| Dan Whitehurst | Diana Broomell | Donna Deckard |
| Donna Tapley | Ed Cairns # | Eileen Butler # |
| Gary Stewart | Henry Shaffer * | Jeff Clewer * |
| John Bennett | John Bunnell | John Denver |
| John Poole[1] | Kennard Wiggins | Linda Snyder |
| Mike Pugh | Owen Thorne * | B. Patrick Doordan |
| Patricia Folk | Paula Gilley # | Phyllis Kilby |
| Randy Hutton[2] | Robert Gell * | Robert Hodge[3] |
| Rupert Rossetti * | Sandra Edwards | Sarah Colenda * |
| Shawn Day | Vaughan Ellerton | Vernon Duckett |
| Vic Priapi | Vicky Strause | Walter Buck |
| | Will Whiteman | |

* Subcommittee chair
\# Subcommittee co-chair
[1] Served through October 2008
[2] Served through April 2009
[3] Served through May 2009

*Citizens' Oversight Committee members contributed countless hours to the Comprehensive Plan project. Their contributions to the Plan were significant and should be recognized.*

**RESOLUTION**
**BOARD OF COUNTY COMMISSIONERS OF CECIL COUNTY**
**2010 CECIL COUNTY COMPREHENSIVE PLAN**

WHEREAS, Article 66B of the Annotated Code of Maryland empowers the County to enact, adopt, amend and execute a Comprehensive Plan; and

WHEREAS, Article 66B of the Annotated Code of Maryland empowers the local legislative body to adopt the Comprehensive Plan; and

WHEREAS, Article 66B of the Annotated Code of Maryland requires a copy of the Comprehensive Plan to be provided to all adjoining jurisdictions and all state and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the Plan; and

WHEREAS, a public hearing on the draft Comprehensive Plan was held by the Planning Commission on 13 January 2010, and

WHEREAS, the Planning Commission approved the 2010 Comprehensive Plan with the Compendium of Changes and recommended that the Board of County Commissioners adopt the Comprehensive Plan with the Compendium of Changes; and

WHEREAS, a public hearing on the Comprehensive Plan was held by the Board of County Commissioners on 16 March 2010; and

WHEREAS, all requirements of Article 66B of the Annotated Code of Maryland in regard to the adoption of the Comprehensive Plan have been met;

NOW, THEREFORE, BE IT ENACTED, by the Board of County Commissioners of Cecil County, State of Maryland, that the 2010 Cecil County Comprehensive Plan is hereby adopted.

DATE:

4/13/10

Brian L. Lockhart, President

ATTEST:

Alfred C. Wein, Jr. – County Administrator

Rebecca J. Demmler, Vice President

Robert J. Hodge, Commissioner

James T. Mullin, Commissioner

Wayne L. Tome, Sr., Commissioner

**RESOLUTION**
**CECIL COUNTY PLANNING COMMISSION**
**2010 CECIL COUNTY COMPREHENSIVE PLAN**

WHEREAS, Article 66B of the Annotated Code of Maryland empowers the County to enact, adopt, amend and execute a Comprehensive Plan; and

WHEREAS, Article 66B empowers the Planning Commission to make and approve a plan which the Commission shall recommend to the local legislative body for adoption; and

WHEREAS, Article 66B requires a copy of the plan to be provided to all adjoining jurisdictions and all state and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the Plan at least 60 days in advance of the public hearing ; and

WHEREAS, a public hearing was held by the Planning Commission on 13 January 2010; and

WHEREAS, all requirements of Article 66B of the Annotated Code of Maryland in regard to the Planning Commission's involvement in the adoption of the Comprehensive Plan have been met;

NOW, THEREFORE, BE IT ENACTED, by the Cecil County Planning Commission, that the Comprehensive Plan is approved with the attached compendium of changes and that the Planning Commission recommends adoption by the Board of County Commissioners of Cecil County.

DATE:

Feb. 16, 2010

William P Mortimer

William Mortimer, Chairman

ATTEST:

Eric S. Sennstrom, AICP
Director – Planning & Zoning

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# Acronyms

| Acronym | Meaning |
|---|---|
| APFO | Adequate Public Facilities Ordinance |
| ATK | Alliant Techsystems |
| BI | Business – Intensive zoning district |
| BAT | Best Available Technology |
| BMPs | Best Management Practices |
| BRAC | Base Reallocation and Closure |
| BTRC | Business Training Resource Center |
| CCDES | Cecil County Department of Emergency Services |
| CCEMS | Cecil County Emergency Medical Services |
| CCPL | Cecil County Public Library |
| CCPS | Cecil County Public Schools |
| C&D | Chesapeake and Delaware Canal |
| COC | Citizen Oversight Committee |
| COG | Council of Governments |
| COMAR | Code of Maryland Regulations |
| CSSC | Chesapeake Science and Security Corridor |
| DBED | Maryland Department of Business and Economic Development |
| DNR | Maryland Department of Natural Resources |
| DPW | Cecil County Department of Public Works |
| EDU | Equivalent Dwelling Unit |
| EMS | Emergency Medical Services |
| ENR | Enhanced Nutrient Removal |
| EOP | Emergency Operations Plan |
| EPA | Environmental Protection Agency |
| ESD | Environmentally Sensitive Design |
| GPD | Gallons per Day |
| LPPRP | Land Preservation Parks and Recreation Plan |
| M1/M2 | Light/Heavy Industrial zoning districts |
| MALPF | Maryland Agricultural Land Preservation Foundation |
| MDA | Maryland Department of Agriculture |
| MDE | Maryland Department of the Environment |
| MDP | Maryland Department of Planning |
| MGD | Millions of Gallons Per Day |
| MGE | Municipal Growth Element |
| MGS | Maryland Geological Survey |
| MHT | Maryland Historical Trust |
| MRA | Maryland Recycling Act |
| MSBDC | Maryland Small Business Development Center Network |
| NAR | Northern Agricultural Residential zoning district |
| NHA | National Heritage Areas |
| OS | Open Space zoning district |
| OSDS | Onsite Sewage Disposal Systems |
| PDR | Purchase of Development Rights |
| PFA | Priority Funding Area |
| PPA | Priority Preservation Area |
| PPE | Personal Protective Equipment |
| PUD | Planned Unit Development |
| RLA | Rural Legacy Areas |
| RTE | Rare, Threatened, and Endangered (species) |

| | |
|---|---|
| SAR | Southern Agricultural Residential zoning district |
| SBDC | Small Business Development Center |
| SCBA | Self Contained Breathing Apparatus |
| SFLA | Strategic Forest Lands Assessment |
| SR | Suburban Residential zoning district |
| SRBC | Susquehanna River Basin Commission |
| STEM | Science, Technology, Engineering and Math (programs) |
| TDR | Transfer of Development Rights |
| TIF | Tax Increment Financing |
| TMDL | Total Maximum Daily Load |
| TN | Total Nitrogen |
| TP | Total Phosphorus |
| USGS | US Geological Survey |
| WILMAPCO | Wilmington Area Planning Council |
| WMA | Wildlife Management Area |
| WRE | Water Resources Element |
| WSSC | Wetlands of Special State Concern |
| WWTP | Wastewater Treatment Plant |

# 1 Introduction

This 2010 Comprehensive Plan (the Plan) serves as the policy guide and framework for future growth and development in Cecil County. The Plan examines land use, water resources (including drinking water, wastewater, and stormwater), transportation, public facilities (including police, emergency services, schools, parks, and libraries), economic development, housing, environmentally sensitive areas, mineral resources, and other natural resources.

The Plan's "horizon" is the year 2030, meaning that the Plan looks at growth and development out over the next 20 years. Amendments to the Plan can be made at any time. However, under state law, the County must review the Plan at least every six years. The next review should begin in 2016 and may result in adjustments or changes to the Plan.

This Comprehensive Plan replaces the current County Comprehensive Plan, which was adopted in 1990 and amended in 2006. Each chapter of the Plan contains goals and objectives, a review of background and trends, a discussion of issues, and recommended policies and actions.

## 1.1 Legal Requirements

This Plan has been prepared pursuant to State enabling legislation and the requirements for Maryland counties contained in Article 66-B of the Annotated Code of Maryland. Article 66-B has been amended several times in recent years to include new requirements for comprehensive plans, including a water resources element, a priority preservation area element and a workforce housing element. This Plan has been prepared to meet these requirements.

In 2009, as part of Smart, Green and Growing Legislation, the General Assembly replaced the State's eight planning visions with 12 new ones. These new visions are the State's land use policy, and local jurisdictions are required to incorporate the visions into their comprehensive plans and implement them through the zoning ordinance and other regulations:

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 the 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 sensitive manner;
6. Transportation: A well-maintained, multimodal transportation system facilitates the safe, convenient, 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, agricultural 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 level to achieve these visions.

## 1.2 The Plan's Relationship with the Towns in Cecil County

Cecil County contains the incorporated towns of Cecilton, Charlestown, Chesapeake City, Elkton, North East, Perryville, Port Deposit and Rising Sun. Under state law, the towns have their own planning authority and adopt their own comprehensive plans. In that sense the County Plan does not apply to the towns. However, interjurisdictional coordination is important, and the County coordinated the development of the Plan with the towns, most of which have been updating their own comprehensive plans concurrent with the County Plan. Once adopted, the County should continue to work closely with the towns on all issues that affect county objectives as set forth in the County Plan. This will help insure the success of the County Plan, particularly in regards to residential and business growth, infrastructure, and transportation. Changes to this plan or to any of the town's plans need to be seriously coordinated between all appropriate parties

## 1.3 Plan Preparation

The Plan was prepared for the Cecil County Board of County Commissioners by the Cecil County Planning Commission. The Planning Commission was assisted by staff from the Cecil County Office of Planning and Zoning and several other County departments and agencies. The Maryland Departments of Planning (MDP), Transportation (MDOT), Natural Resources (DNR), and the Environment (MDE) each provided technical assistance and contributed data used in the Plan. Staff from the Wilmington Area Planning Council (WILMAPCO) and the National Center for Smart Growth Research and Education at the University of Maryland also contributed to the process.

To assist the Planning Commission, the Board of County Commissioners appointed a 41-member Citizens' Oversight Committee (COC), representing varied elements of the County's general population, to work with the Office of Planning and Zoning. The Board of County Commissioners charged the COC with the responsibilities to select a consulting firm to help develop and draft the Plan, provide ongoing feedback to staff and the consultant to ensure that the views and perspectives of Cecil County's citizens were represented in the Plan, and to submit a recommended plan to the Planning Commission. Individual COC

**The COC was made up of 41 representatives.**

members are listed on the inside cover of this document.

Between December 2007 and October 2009, the COC met as a full committee and in seven subcommittees (Agriculture Preservation and Minerals, Economic Development, Housing, Land Use, Public Services, Infrastructure and Transportation, and Water Resources) at dozens of meetings, developing goals and objectives and contributing to, discussing and refining the Plan's policies and action items. The COC sponsored two forums early in the process to discuss regional and local issues with representatives of adjacent jurisdictions and the towns. The subcommittees gathered information and met with representatives of County, state and regional agencies to understand the planning issues facing the County. The COC also hosted a countywide public forum in July 2009 on a Concept Plan containing the Comprehensive Plan's major recommendations. In all, COC members contributed countless hours to the project. Their contributions to this Plan were significant and should be recognized.

Minutes of COC meetings and plan-related materials are included as an appendix to the Comprehensive Plan.

## 1.4 Note on Plan Content, Recommendations and Appendix

The Comprehensive Plan contains goals, objectives, policies and action items that the County will consider as it works to implement the plan. In this context, these terms are defined as follows:

- *Goals* define a set of broad desired outcomes that the County wants to achieve through this plan;
- *Objectives* are more specific desired outcomes and/or ways to measure them;
- *Policies* describe the County's position on planning issues. Policies help guide the County's decision makers on how to achieve the Plan's goals and objectives; and
- *Action items* are the specific steps that should be undertaken to implement the goals, objectives, and policies.

Because the distinction between goals and objectives can be subtle, they have been combined in each plan chapter. Policies and actions also are combined.

The Comprehensive Plan is not law in the same sense, for example, as the zoning ordinance. The Comprehensive Plan is adopted by resolution and not by ordinance, and, as stated above, it is a policy *guide*. Nevertheless, the Plan does carry significant weight. The basic objective of the Zoning Ordinance, for example is to implement the Comprehensive Plan. A number of related plans and programs such as the Master Water and Sewer Plan, and the Land Preservation, Parks, and Recreation Plan must be consistent with the Comprehensive Plan.

A large volume of data and information was used to prepare this Plan. To keep the Plan to a manageable length and size, the main text contains the key points, data, maps, figures, conclusions, policies and recommendations.

Supporting documents, reports, data and memoranda are in the appendix to this plan which is available in electronic format from the Cecil County Office of Planning and Zoning, which also has paper copies.

# 2 Background and Challenges

## 2.1 Planning Context

A comprehensive plan is a major undertaking and one of the chief powers exercised by local government involving a top-to-bottom review of land use and development policies. When communities are stable, a comprehensive plan may reflect the status quo. However, during periods of rapid change, a comprehensive plan can "define" a county's future and set a course for generations to come. Cecil County is facing change, and the 2010 Comprehensive Plan, arguably, will be the fundamentally defining plan for Cecil County.

Cecil County is on the cusp of significant change. After years of relatively slow growth, the County is projected to grow by almost 50 percent –more than 51,000 residents – between 2010 and 2030. This would be the fastest growth rate among Maryland counties and is a rapid rate of change for a county still predominantly rural and known for its rural character.

Part of the reason is economic; Cecil County is on the edge of the growing Philadelphia, Wilmington and Baltimore metropolitan regions. The amount of land available for development in these areas is shrinking, increasing development pressure in "edge" areas like Cecil County. At the same time, Cecil County has a significant supply of developable land and benefits from a transportation system that provides access from the County to jobs throughout central Maryland, Delaware, southeastern Pennsylvania and Washington D.C., as well as to jobs in the County for commuters from other jurisdictions.

Other sources of change are expected to affect the County. The Department of Defense's Base Realignment and Closure (BRAC) program is expected to bring approximately 8,200 jobs to the Aberdeen Proving Ground in Harford County resulting in almost 28,000 direct, indirect and induced jobs on and within 40 miles of the base. Cecil County's 2007 BRAC Action Plan estimated that five percent of these jobs were likely to locate in the County resulting in additional household and population growth. The study estimated that Cecil County would get about 12 percent of the projected population growth – or more than 5,000 residents – associated with BRAC. This growth alone will have impacts on transportation, workforce development, land use/infrastructure, and education.

Economic development efforts cannot be limited to the spinoffs of BRAC. The County must pay careful attention to job creation so it does not become a bedroom community for other counties. Cecil County's ratio of jobs to households has been lower than its neighbors, and residential growth must be balanced with expansions of employment and commercial development to sustain the County's economic health and support the maintenance and expansion of public infrastructure. Moderately-priced housing is needed for a balanced community, but tends not to "pay for itself," in terms of yielding sufficient tax revenue to pay for the service demands it creates, especially for schools, roads, and parks. Economic development, therefore, is central to the County's fiscal health.

Infrastructure, primarily water and sewer, has been an issue in the County for many years. Fragmented infrastructure service has slowed the pace of development in the county's designated growth areas, and has, in part, accelerated development into the county's northern and southern rural areas. The County is facing limitations on discharges from wastewater treatment plants due to nutrient caps associated with the Chesapeake Bay restoration efforts. Within the horizon of this Plan, the County will need to implement its planned and potential public water system improvements and continue to upgrade and expand its wastewater treatment plants.

The next few years will be critical for the County's agricultural industry and the County's agricultural land preservation goals. The amount of farmland in Cecil County has been relatively stable since the 1980s, with some fluctuations according to the Census of Agriculture, but smaller farms are becoming more numerous. Development in rural areas threatens the future viability of the County's agricultural areas. The County's efforts to

preserve rural areas must be bolstered and enhanced to ensure the long-term viability of agriculture and agribusiness.

## 2.2 Location, Regional Setting, Government

Cecil County is located at the northeastern corner of Maryland and is bordered to the north by Chester and Lancaster Counties in Pennsylvania, to the east by New Castle County, Delaware, to the south by the Sassafras River and Kent County, to the west by the Susquehanna River and Harford County, and to the southwest by the Chesapeake Bay (Map 2-1).

From a regional planning perspective Cecil County's growth area is part of a linear growth area along the I-95 and US 40 corridors in Delaware and Harford County. To Cecil County's north, south, and west are rural lands in Chester and Lancaster Counties, PA, Kent County, MD and Harford County. Both Chester and Lancaster Counties have been experiencing suburban growth from the Philadelphia metropolitan area. To Cecil County's east, northern New Castle County is planned for mostly urban and suburban development. (Map 2-2)

Cecil County contains approximately 350 square miles of land and 70 square miles of water, including a portion of the Chesapeake Bay. As of 2010, the County has a population density of approximately 300 people per square mile with an average household size of 2.7.

Cecil County has a commissioner form of government; a five-member Board of County Commissioners is the County's legislative body. Cecil County has eight incorporated towns; Cecilton, Charlestown, Chesapeake City, Elkton, North East, Perryville, Port Deposit, and Rising Sun. Elkton serves as the county seat. All the towns except Charlestown have an elected mayor and commissioners. The Charlestown commissioners select a president.

## 2.3 History

Cecil County's earliest inhabitants were the Toghwoghs, Minquas, Shawnase and the Susquehannock American Indian tribes. The first European visitors arrived in 1608 as part of John Smith's expedition, which explored much of the Chesapeake Bay (Chesapeake Bay Gateways Network 2007). A small settlement and trading post was founded on the Susquehanna River in 1633 by Englishman William Clayborne. Cecil County itself was founded in 1674 and was named for Cecilius Calvert, the second Lord Baltimore and founder of the Maryland colony.

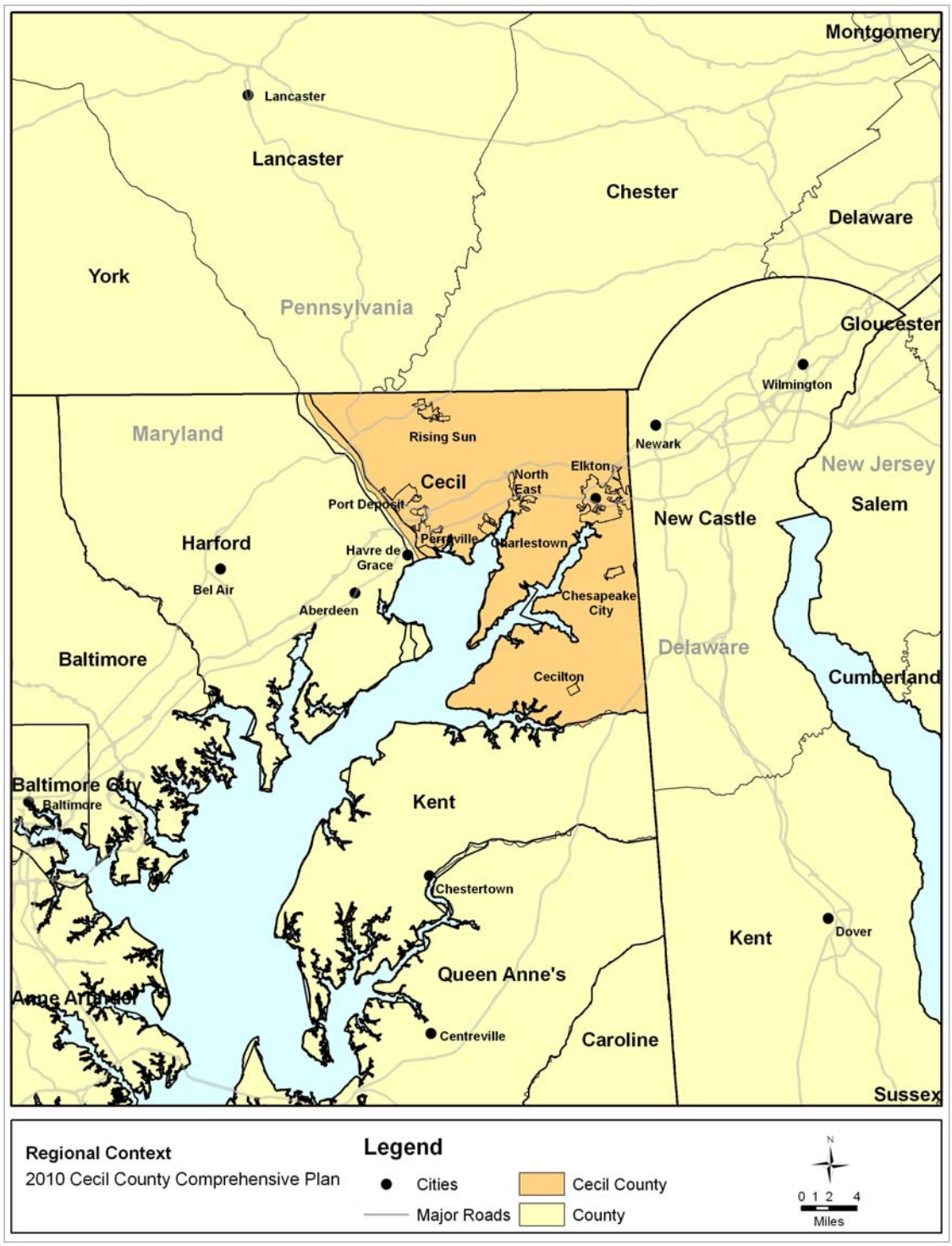
Cecil's early development was based on exports of skins, tobacco, and other agricultural products, and the county was historically made up of plantations, farms, mills, towns and ports. The main route up from Baltimore to Philadelphia in the 1800s, known as the Post Road, ran through Cecil County. As a result, the County was a frequent stop for colonial-era travelers such as George Washington and Thomas Jefferson, who stopped at places like Rodgers Tavern in Perryville on their way to and from Philadelphia.

**The mid-18th century Rodgers Tavern in Perryville.**

Commerce was further improved by construction of the Chesapeake and Delaware (C&D) Canal, connecting the Chesapeake Bay and the Delaware River.

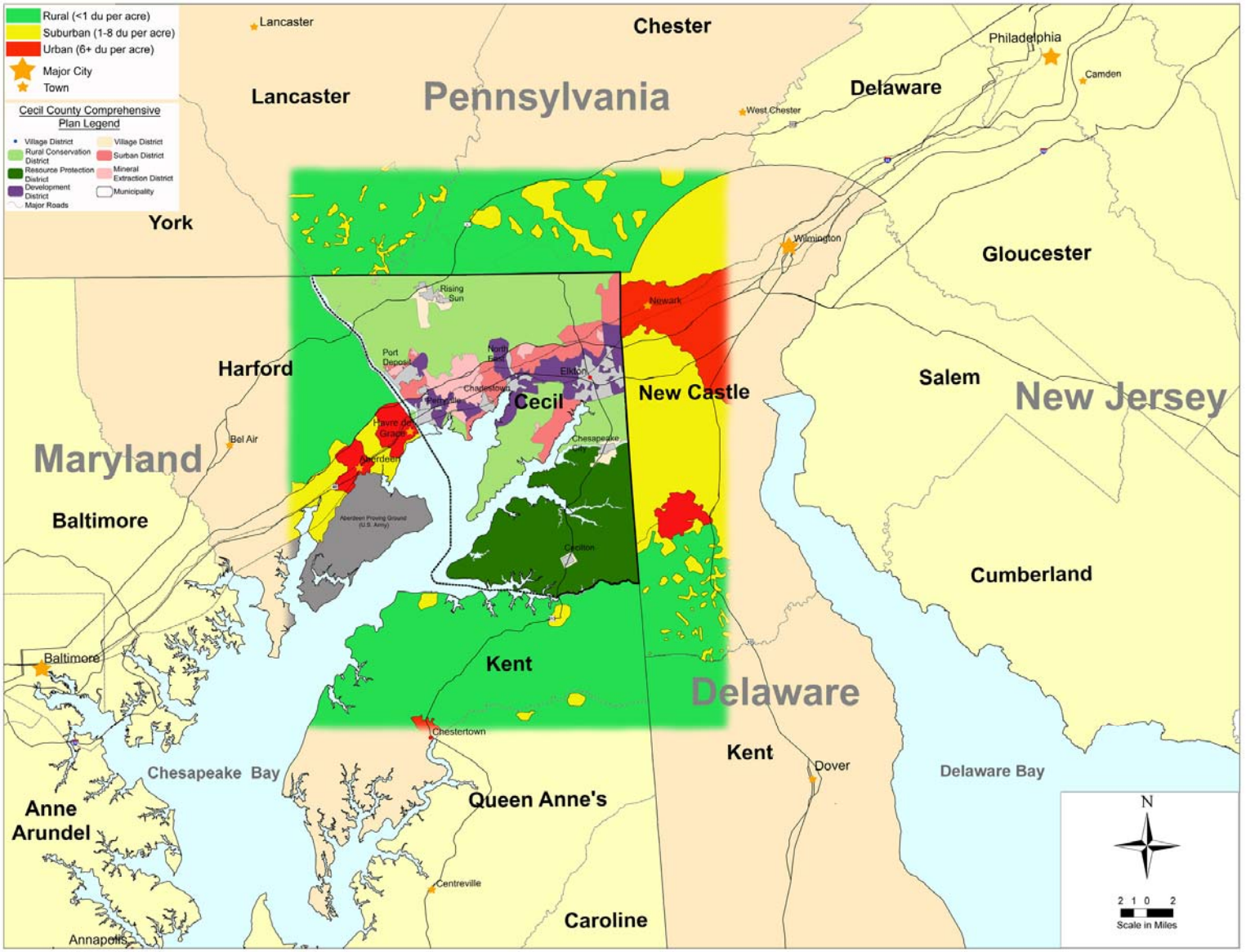
The canal was completed in 1829. Today's canal is a modern, electronically controlled commercial waterway, carrying approximately 8,000 commercial vessels per year, including approximately 40 percent of all ship traffic in and out of the Port of Baltimore[1].

**Map 2.1: Regional Context**




[1] US Army Corps of Engineers, personal communication.

## Map 2.2: Regional Planning Context




The purpose of this map is to provide the regional context for planning within Cecil County. The Cecil County section of the map shows the land use map from the County's 1990 Comprehensive Plan. Around Cecil County the map shows generalized future land use from the comprehensive plans for Harford, Kent and Queen Anne's County in Maryland, New Castle and Kent Counties in Delaware, and Chester, Lancaster and York Counties in Pennsylvania. Each County's land use map categories were translated into three general categories: rural (less than one dwelling unit per acre), suburban (one to eight dwelling units per acre), and urban (six or more dwelling units per acre). The map also shows major cities, towns and transportation facilities.

## 2.4 Planning History

Cecil County's first comprehensive plan, "*The Master Development Plan,*" was adopted in August 1962. The plan process began in 1959 when the County appointed an interim Planning Commission and its first planning director. Subsequent plans, both called the "*Comprehensive Plan*," were adopted in December 1974 and December 1990. The County has amended the 1990 plan several times, most recently in 2006. This 2010 Plan is the first completely new plan since 1990.

### *2.4.1 Zoning and Subdivision*

The County adopted its first zoning ordinance to regulate land use in June 1962 as *The Master Development Plan* was being finalized. In 1976, the County adopted its first subdivision ordinance to regulate the subdivision and development of land. In 1979, the County completed a comprehensive rezoning[2] and did so again in 1993 following the adoption of the 1990 Plan.

The eight incorporated towns in Cecil County have their own planning authority and adopt their own comprehensive plans, zoning, and subdivision regulations.

## 2.5 Related Plans and Documents

The Comprehensive Plan influences and is influenced by companion plans and documents that serve to implement the Plan:

- Cecil County Zoning Ordinance
- Cecil County Subdivision Regulations
- Master Sewer and Water Plan (updated 2008). This plan guides the development of water supply and sewerage systems and facilities by implementing the County's growth and development policies.
- Hazard Mitigation Plan (2006)
- County Solid Waste Management Plan (2008)
- Capital Budget and Capital Improvement Program. The annual Capital Budget and Improvement Program relates the goals and objectives of the Comprehensive Plan to implementation. It states which capital projects will be undertaken over the next five years and how they will be funded. The Comprehensive Plan, in turn, is important to the capital budgeting process because it outlines the location of future growth and identifies needed capital projects.

A number of other plans and studies have been conducted that the County uses to varying degrees in its comprehensive planning program.

- Cecil County Public Schools Educational Facilities Master Plan (annual)
- Urban Growth Boundary Plan (2000)
- Cecil County Water Resources Study (2004)
- Surface Water Supply Study for Cecil County Designated Growth Area (2006)
- Recommended Strategies for Cecil County relative to Maryland's Chesapeake Bay Tributary Strategy Statewide Implementation Plan (2007)
- Land Conservation, Restoration and Management for Water Quality Benefits in Cecil County, MD (2007)
- Cecil County Economic Development Strategic Plan (2007)
- Cecil County Growth Study (2007)
- BRAC Action Plan (2007)
- Road Improvement Strategic Plan (2007)
- Cecil County Green Infrastructure Plan (2008)

[2] A rezoning of all or a substantial portion of a jurisdiction.

### 2.5.1 Plans Incorporated by Reference

In addition to the plans above, two others are particularly important, because they were adopted specifically to be adjuncts to the County's comprehensive planning program.

- The Lower Susquehanna Heritage Greenway promotes heritage tourism and greenway development in Harford and Cecil counties. Approximately one-third of the entire 45,532 Greenway is located in Cecil County between Conowingo dam and Perryville. The Lower Susquehanna Heritage Greenway management plan was incorporated into the County's Comprehensive Plan in 2001.
- The Land Preservation Parks and Recreation Plan, 2005 (LPPRP) focuses on three types of resources: parks and recreation, agricultural lands, and natural resource lands. It describes these resources, evaluates how effective current programs and funding sources are in improving, protecting and conserving them, and recommends where changes are needed to overcome shortcomings, close gaps, and achieve goals.

The LPPRP and the Lower Susquehanna Heritage Greenway Management Plan are appended by reference onto this 2010 Comprehensive Plan.

## 2.6 Cecil County's Future

While the Comprehensive Plan looks out 20 years to the year 2030, the implications of the Plan's policies and action items will be felt for much longer. Looking to the future, the County must address several key growth and development issues:

- How to attract most new growth to Growth Areas. Achieving this longstanding County goal has lagged in the past largely because of a lack of water and sewer infrastructure.
- How to maintain a viable agricultural industry, achieve the County's agricultural and natural resource land preservation goals, and maintain the rural character that defines so much of the County.
- How to expand the number and quality of jobs and economic development opportunities.
- How to provide and pay for the public services and facilities needed to support future growth; including schools, roads, transit, parks, police, fire and emergency services, health care, libraries, water and sewer, storm water, and solid waste.

Given the change anticipated in the County, the COC looked at population, household and employment projections to 2030, as well as a longer-term view of the County at build-out. Build-out, in this context, is a future point in time, perhaps in 60 to 80 years, when all (or substantially all) of developable land in the County will be developed.

Examining build-out conditions enabled the COC to consider whether the current path of planning and zoning in the County is sustainable. It also provided insight into future transportation, water resource and infrastructure needs. Identifying future transportation corridors is especially important because development can block potential road rights-of-way, and thus require expensive property acquisition and retrofits if future roads must be cut through existing development.

Considering the implications of build-out on water resources enabled to COC to examine future needs for drinking water sources and approaches to wastewater disposal that may require long-term planning and land-intensive technologies such as treated wastewater land application or tertiary treatment wetlands. More detail on the process of evaluating build-out is presented below.

### 2.6.1 Existing and Projected Population, Households, Housing Units and Jobs

As of 2010, Cecil County's population, including municipalities, is estimated at approximately 103,800, an eight percent increase over the County's population of 96,195 in 2005 (Table 2.1). This number is projected to increase to approximately 154,900 by 2030, or 49 percent.

The Plan projects that approximately 80 percent of the County's population growth (40,937 of 51,126 persons) between 2010 and 2030 will occur in growth areas, with the remaining 20 percent divided between North Rural (18 percent) and South Rural (2 percent) areas. Population in the growth areas would increase by 63 percent between 2010 and 2030.

As of 2010, Cecil County has approximately 40,600 housing units. This number would increase to approximately 62,400 by 2030. The number of households in the County also would increase, from approximately 38,300 in 2010 to 59,100 in 2030. The number of housing units is larger than the number of households because Cecil County has an approximately nine percent housing unit vacancy rate[3]. The rates of growth and geographic breakdown of the change are similar to the rates of population change.

**Table 2.1: Comprehensive Plan Projections**

| Population | 2005 | 2010 | 2020 | 2030 | Change 2010-2030 Number | Change 2010-2030 Percent | Percent of Countywide Change |
|---|---|---|---|---|---|---|---|
| Growth Areas | 59,477 | 65,420 | 85,507 | 106,357 | 40,937 | 63% | 80% |
| North Rural | 32,190 | 33,750 | 39,241 | 43,067 | 9,317 | 28% | 18% |
| South Rural | 4,528 | 4,658 | 5,248 | 5,530 | 872 | 19% | 2% |
| **TOTAL** | **96,195** | **103,828** | **129,996** | **154,954** | **51,126** | **49%** | **100%** |
| **Households** | **2005** | **2010** | **2020** | **2030** | **Change 2010-2030 Number** | **Change 2010-2030 Percent** | **Percent of Countywide Change** |
| Growth Areas | 21,737 | 24,324 | 32,491 | 40,767 | 16,443 | 68% | 79% |
| North Rural | 11,354 | 12,109 | 14,435 | 16,019 | 3,910 | 32% | 19% |
| South Rural | 1,802 | 1,885 | 2,176 | 2,314 | 429 | 23% | 2% |
| **TOTAL** | **34,893** | **38,318** | **49,102** | **59,100** | **20,782** | **54%** | **100%** |
| **Housing Units** | **2005** | **2010** | **2020** | **2030** | **Change 2010-2030 Number** | **Change 2010-2030 Percent** | **Percent of Countywide Change** |
| Growth Areas | 23,041 | 25,783 | 34,440 | 43,213 | 17,430 | 68% | 79% |
| North Rural | 12,035 | 12,836 | 15,301 | 16,980 | 4,145 | 32% | 19% |
| South Rural | 1,910 | 1,998 | 2,307 | 2,453 | 455 | 23% | 2% |
| **TOTAL** | **36,987** | **40,617** | **52,048** | **62,646** | **22,029** | **54%** | **100%** |
| **Employment** | **2005** | **2010** | **2020** | **2030** | **Change 2010-2030 Number** | **Change 2010-2030 Percent** | **Percent of Countywide Change** |
| Growth Areas | 31,170 | 33,898 | 46,372 | 50,503 | 16,605 | 49% | 85% |
| North Rural | 6,117 | 6,609 | 8,572 | 9,250 | 2,641 | 40% | 14% |
| South Rural | 1,213 | 1,293 | 1,511 | 1,547 | 254 | 20% | 1% |
| **TOTAL** | **38,500** | **41,800** | **56,455** | **61,300** | **19,500** | **47%** | **100%** |

Table 2.1 contains the Comprehensive Plan's population, housing, and employment projections. The projections are broken out by growth areas and rural areas. Growth areas include the County's eight incorporated towns, as well as areas designated as growth areas on the Future Land Use Map – see Land Use Chapter). Rural areas are further designated 'north' and 'south' based on their location relative to the Chesapeake and Delaware Canal.

*Sources: ERM; Maryland Department of Planning, WILMAPCO, Cecil County*

The number of jobs in Cecil County also is expected to increase, from an estimated 41,800 in 2005 to 61,300 in 2030, a 47 percent increase. Of these jobs, 85 percent would be located in growth areas and 15 percent in rural areas, mostly in the North Rural (14 percent) area.

Tables 2.2 and 2.3 break down the population and household projections by towns. They show that the towns make up approximately 27 percent of the County's total and projected change in population.

[3] Higher than Maryland's average because of vacation units.

**Table 2.2: Town and County, Population and Households, 2005, 2010 and 2030**

| | | | | Change 2010-2030 | |
|---|---|---|---|---|---|
| | 2005 | 2010 | 2030 | Number | Percent |
| **Population** | | | | | |
| Incorporated Towns | 25,765 | 27,814 | 41,513 | 13,699 | 27% |
| Rest of County | 70,430 | 76,014 | 113,441 | 37,427 | 73% |
| **Total** | **96,195** | **103,828** | **154,954** | **51,126** | **100%** |
| **Households** | | | | | |
| Incorporated Towns | 9,897 | 10,874 | 16,815 | 5,941 | 29% |
| Rest of County | 24,996 | 27,444 | 42,285 | 14,841 | 71% |
| **Total** | **34,893** | **38,318** | **59,100** | **20,782** | **100%** |

*Sources: Maryland Department of Planning, ERM*

**Table 2.3: Town and County Population and Housing, 2000, 2010, and 2030**

| | *2000 Census* | | *2010* | | *2030* | |
|---|---|---|---|---|---|---|
| **Geography** | **Population** | **Housing units** | **Population** | **Housing units** | **Population** | **Housing units** |
| **Towns** | **23,020** | **9,674** | **27,814** | **11,844** | **41,513** | **18,316** |
| Cecilton | 474 | 202 | 573 | 261 | 854 | 404 |
| Charlestown | 1,019 | 415 | 1,231 | 553 | 1,838 | 857 |
| Chesapeake City | 787 | 365 | 951 | 455 | 1,419 | 705 |
| Elkton | 11,894 | 4,731 | 14,371 | 5,831 | 21,449 | 9,007 |
| North East | 2,747 | 1,262 | 3,319 | 1,496 | 4,954 | 2,316 |
| Perryville | 3,672 | 1,548 | 4,437 | 1,851 | 6,622 | 2,864 |
| Port Deposit | 676 | 416 | 816 | 493 | 1,219 | 763 |
| Rising Sun | 1,751 | 735 | 2,116 | 904 | 3,158 | 1,400 |
| **Unincorporated Area of County** | **62,931** | **24,787** | **76,014** | **28,773** | **113,441** | **44,330** |
| **Total County** | **85,951** | **34,461** | **103,828** | **40,617** | **154,954** | **62,646** |

*Sources: US Census; Maryland Department of Planning, ERM*

Note: 2030 projections for the Towns are for population and housing units within 2008 boundaries.

### *2.6.2 Commercial and Industrial Uses*

As of 2010 there are an estimated 41,800 part-time and full-time jobs in Cecil County (MDP 2009). Of these jobs, the County estimates that approximately 14,000 were employed by the County's 44 largest employers (those with at least 50 employees).

Major employers in the County include W. L. Gore & Associates, the Cecil County Public Schools, Perry Point V.A. Medical Center, Union Hospital/Affinity Health Systems, ATK Alliant Techsystems, Cecil County, Terumo Medical Corp., IKEA Maryland, Cecil College and Wal-Mart.

Cecil County estimates that non-residential building square footage in 2009 was approximately 12.1 million square feet. Of this, 77 percent was industrial space and 19 percent was retail. Only two percent of the County's existing inventory of non-residential space was occupied by office uses, a very low percentage for a jurisdiction of Cecil County's size.

**Table 2.4: Non-Residential Development, 2009**

| | Existing (2009) | |
|---|---|---|
| | Square Feet | Percent |
| Industrial | 9,304,451 | 77% |
| Retail | 2,264,614 | 19% |
| Flex | 292,044 | 2% |
| Office | 287,614 | 2% |
| **Total** | **12,148,723** | **100%** |

*Sources: Cecil County Office of Economic Development, CoStar*

### *2.6.3 Addressing the County's Long-Term Future: Build-out Analysis*

During the planning process, the COC discussed at length how much growth the County wanted and could support at build-out, when all or nearly all of the developable land in the county has been developed. This question is important because the County needs to and would benefit by taking action in the short term on some issues that have long-term consequences, such as reserving land for road rights-of-way and planning for long-term water and sewer infrastructure needs. Some of these policies need to be put in place during the life of this Plan, even though the facilities may not be needed until after 2030.

To address Cecil County's long-term future, the COC worked extensively with County staff and consultants to review and evaluate the consequences of build-out. This process involved examining the County's existing land use plan and zoning map, calculating and reviewing the development capacity of the County's developable land, defining plan goals, developing and refining a Future Land Use Concept that addressed these goals, and examining the potential impacts of build-out with special emphasis on water resources and transportation. Materials developed for the build-out analysis are provided in the Comprehensive Plan Appendix.

While the build-out discussion proved difficult, as build out is perhaps 60 to 80 years away, the COC ultimately approved a land use map and associated development densities that set the County on a path toward a potential build out of approximately 83,600 more housing units than existed in 2005, an approximately 27 percent increase compared to the potential under the 1990 Comprehensive Plan as implemented through the zoning ordinance (Table 2.5). The total number of units at build-out (122,622) would equate to a population of approximately 300,000.

**Table 2.5: Housing Units at Build-out**

| | | Additional Housing Unit Capacity | | | | |
|---|---|---|---|---|---|---|
| **Column** | **1** | **2** | **3** | **4** | **5** | **1+5** |
| **Plan/Concept** | **Existing (2005)** | **County (excluding MEA[1])** | **Towns** | **MEA** | **Total Add'l** | **Total Units at Build-out** |
| **1990 Comprehensive Plan and Zoning** | 39,046 | 54,798 | 5,228 | 5,000 | 65,026 | 104,072 |
| **Future Land Use Concept (2010 Comprehensive Plan)** | 39,046 | 70,199 | 8,377 | 5,000 | 83,576 | 122,622 |

[1] MEA is the Mineral Extraction Area

# 3 Land Use

This chapter describes the proposed land use plan for Cecil County. It lists land use goals and objectives, discusses land use and development trends since the 1990 Comprehensive Plan and provides detailed information about existing and proposed land uses in the County.

## 3.1 Goals and objectives

The County's land use goals and objectives are to:

- Incentivize development within Growth Areas and discourage development outside Growth Areas[1].
- Encourage maximum growth and high density development in the Growth Corridor.
- Achieve a balance of residential development and employment opportunities.
- Attract high density, mixed use development at appropriate locations in the Growth Corridor.
- Concentrate high density development in areas where adequate public facilities will be provided.
- Provide land in appropriate locations for growth and expansion of economic development opportunities.
- Encourage modest, controlled development adjacent to towns outside the Growth Corridor.
- Encourage the conservation of agricultural and forested lands; encourage sustainable agribusiness and other natural resource based industries.
- Maintain the equity value of agricultural land.
- Maintain the rural character of the County.
- Integrate land use and transportation planning to create attractive concentrations, or nodes, of development that can be served by transit.
- Protect private property rights.

## 3.2 Land Use and Development Trends

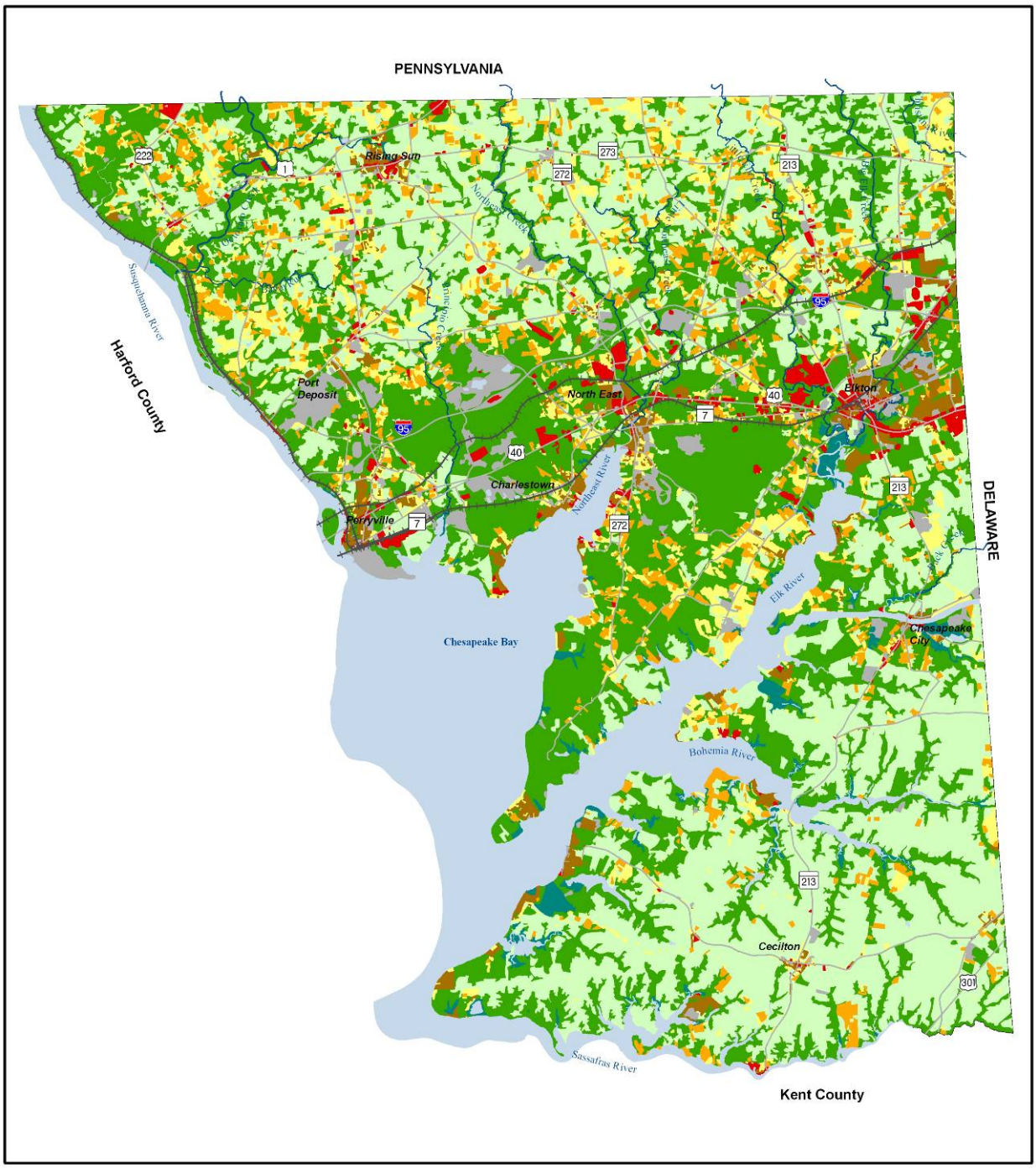
This section discusses land use and development trends as background to the proposed land use plan.

### *3.2.1 Existing Land Use*

Existing land use as of 2007 is shown on Map 3.1. Cecil County has abundant resource lands. As of 2007, approximately 76 percent of the County's land area was in resource lands; agriculture, forest and wetlands, while 24 percent was developed (see Table 3.1). However, between 1973 and 2007, approximately 36,600 acres of resource lands, or 16 percent of the County's total land area, were developed, mostly as low density residential uses.

[1] These terms are defined below in this Chapter (Section 3.4).

## Map 3.1: Existing Land Use




*Source: Maryland Dept. of Planning 2007 Land Use Land Cover dataset*

**Table 3.1: Cecil County Land Use/Land Cover**

| | *1973* | | *2007* | | *Change, 1973-2007* | |
|---|---|---|---|---|---|---|
| **Land Use** | **Acres** | **Percent** | **Acres** | **Percent** | **Acres** | **Percent** |
| ***Development Lands*** | ***16,334*** | ***7%*** | ***53,193*** | ***24%*** | ***36,859*** | ***225%*** |
| Low Density Residential | 8,768 | 4% | 20,116 | 9% | 11,348 | 129% |
| Medium/High Density Residential | 1,531 | 1% | 6,441 | 3% | 4,910 | 321% |
| Commercial/Industrial | 1,655 | 1% | 4,812 | 2% | 3,157 | 191% |
| Rural Residential[1] | n/a | n/a | 13,844 | 6% | n/a | n/a |
| Other Categories[1, 2] | 4,380 | 2% | 7,980 | 4% | 3,600 | 82% |
| ***Resource Lands***[3] | ***206,325*** | ***93%*** | ***169,748*** | ***76%*** | ***-36,577*** | ***-18%*** |
| Agriculture | 112,729 | 50% | 85,248 | 38% | -27,481 | -24% |
| Forest | 91,259 | 41% | 81,547 | 37% | -9,712 | -11% |
| Wetlands | 2,337 | 2% | 2,953 | 1% | 616 | 26% |
| **Total**[4] | **222,659** | **100%** | **222,941** | **100%** | | |

Notes:
Residential densities are defined as follows: rural = 0.05-0.2 du/acre; low = 0.2-2 du/acre; medium/high = 2-8+ du/acre
[1] Rural Residential and Transportation categories were not included in MDP's 1973 Land Use/Land Cover dataset. .
[2] Institutional, Extractive, Open Urban, Beaches, Bare rock, Bare Ground, Transportation
[3] Excludes Water
[4] Change in overall land area is likely due to changes in MDP's mapping techniques and shifts in shoreline.

*Sources: Maryland Dept. of Planning 1973, 2007 Land Use Land Cover datasets*

## Protected Lands

Approximately 36,400 acres in Cecil County are protected agricultural and forest lands. Of this total approximately 23,000 acres, or 10 percent of the County's land area, are protected through purchased or donated protective easements established through agricultural or other preservation programs (see Chapter 7, Sensitive Areas, Section 7.2.6).

More detail on protected lands is available in the County's 2005 Land Preservation Parks and Recreation Plan.

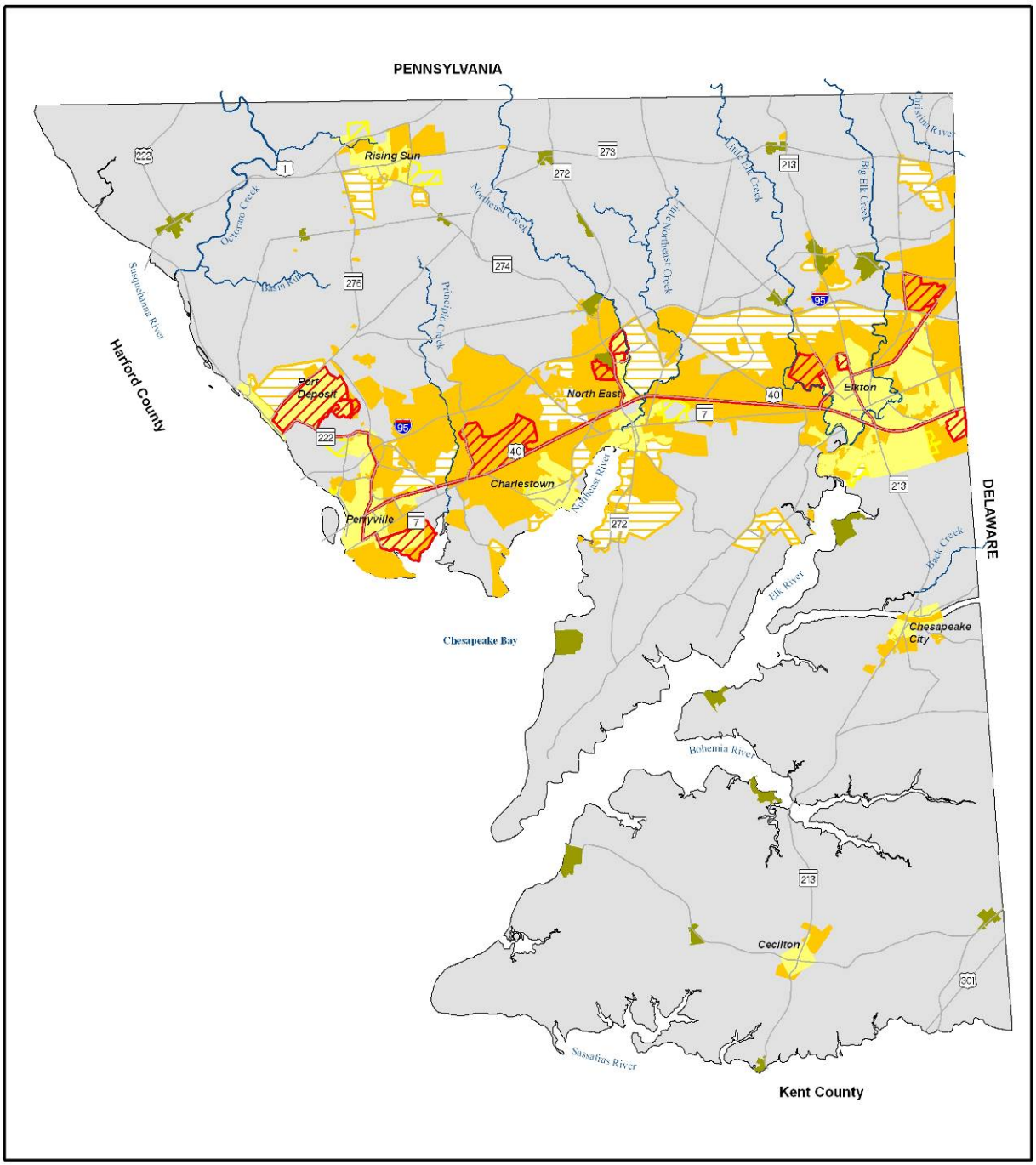
## Priority Funding Areas

Priority Funding Areas are communities and areas where the County wants to direct state investment. PFAs were established in the Smart Growth Priority Funding Areas Act of 1997. The County's PFAs are shown on Map 3.2.

Enterprise Zones are areas where tax incentives are offered for job creation and the establishment of new businesses. Cecil County has nine Enterprise Zones (see Map 3.2):

- Chesapeake Corporate Center, Elkton
- Broadlands/Gore Business Park, north of Elkton
- Triumph Industrial Park, Elkton
- North East Commerce Center, North East
- Peninsula Industrial Park, west of North East
- Principio Business Park, Perryville
- Perryville Industrial Park
- Vantage Point, Elkton
- Bainbridge Property, Port Deposit

## Map 3.2: Priority Funding Areas and Enterprise Zones, 2009




Notes: Villages are PFAs; This Comprehensive Plan recommends the deletion of four villages shown on this map since they are now subsumed into the Growth Area (see Section 3.5.3).

### 3.2.2 Growth and Development Since 1990

In 1990, Cecil County had a population of 71,347 of which 17,192, or 24 percent, lived in the eight incorporated towns (see Table 3.2). Between 1990 and 2010, the County's population increased by 32,481, or 46 percent. The towns grew at a faster rate than the unincorporated portions of the County during this period (62 versus 40 percent). Cecil County's rate of growth was more than twice as fast as the 21 percent increase in Maryland during these years.

The number of housing units and households in the County also grew, with housing units outnumbering households because a percentage of dwelling units are vacant at any one time.

**Table 3.2: Population, Housing Units and Households, 1990-2010**

| | | | | *Change 1990-2010* | | |
|---|---|---|---|---|---|---|
| | 1990 | 2000 | 2010 | Number | Share of Growth in Towns/ County | Share of Total Growth |
| **Population** | | | | | | |
| Incorporated Towns | 17,192 | 23,020 | 27,814 | 10,622 | 62% | 33% |
| Rest of County | 54,155 | 62,931 | 76,014 | 21,859 | 40% | 67% |
| **Total** | **71,347** | **85,951** | **103,828** | **32,481** | **46%** | |
| **Housing Units** | | | | | | |
| Incorporated Towns | 7,088 | 9,617 | 11,844 | 4,756 | 67% | 37% |
| Rest of County | 20,568 | 24,844 | 28,773 | 8,205 | 40% | 63% |
| **Total** | **27,656** | **34,461** | **40,617** | **12,961** | **47%** | |
| **Households** | | | | | | |
| Incorporated Towns | 6,583 | 8,829 | 10,874 | 4,291 | 65% | 32% |
| Rest of County | 18,142 | 22,394 | 27,444 | 9,302 | 51% | 68% |
| **Total** | **24,725** | **31,223** | **38,318** | **13,593** | **55%** | |

*Sources: US Census, Maryland Dept. of Planning*

Of the 12,961 housing units built in Cecil County between 1990 and 2010, 37 percent were built in the towns and 63 percent were built in the rest of the County.

#### Recent Development Activity

Although County policy under the 1990 Comprehensive Plan has been to concentrate residential growth in designated growth areas, a significant percentage of residential units have been built outside of these areas (Table 3.3). Between 1997 and 2008, the number of building permits issued for new dwellings was almost evenly split between designated growth and non-growth areas. During this period, the largest number of building permits issued in any land use district was in the Rural Conservation district, with 39 percent of all residential permits for new dwellings, or 2,759 permits. Note that Table 3.3 does not include building permits issued in the towns, which are growth areas. If these are factored in, the split is closer to 60 percent in growth areas versus 40 percent in non-growth areas.

In 2006, the County amended the zoning ordinance (effective 1-1-2007) to reduce residential densities in the Northern and Southern Agricultural Residential zoning districts (NAR and SAR), from one dwelling unit per five acres to one unit per 10 acres in the NAR, and from one dwelling unit per eight acres to one unit per 20 acres in the SAR.[2]

[2] Prior to the amendment, the densities could be increased to one unit per 3 acres in the NAR and one unit per 5 acres in the SAR if 60 percent open space were provided in new subdivisions.

The distribution of future growth was an issue discussed at length during the Comprehensive Plan process, leading to the land use goal to incentivize development within the growth area and discourage development outside of it.

**Table 3.3: Residential Building Permits Issued by Land Use District (New Dwellings Only), 1997-2008**

| Land Use District *(Categories from 1990 Comprehensive Plan)* | Number of Permits | Percent |
|---|---|---|
| **Designated Growth Areas** | **3,588** | **50%** |
| Development | 1,801 | 25% |
| Suburban | 1,318 | 18% |
| Town | 458 | 6% |
| Mineral Extraction | 11 | <1% |
| **Non-Growth Areas** | **3,570** | **50%** |
| Rural Conservation | 2,759 | 39% |
| Resource Protection | 770 | 11% |
| Village | 41 | 1% |
| **Total** | **7,158** | **100%** |

*Source: Cecil County Office of Planning and Zoning, Annual report for the Planning Commission*

Notes:

Data in this table does not include permits in the incorporated towns, except for 2003, when permits were combined with the Town district. If permits in the towns are factored in, the split is closer to 60 percent in growth areas versus 40 percent in non-growth areas.

A copy of the 1990 Comprehensive Plan Map is included in the Plan Appendix.

## Industrial Uses

Between 2005 and 2009, the County attracted nearly $200 million in new and expanded industrial investment, generating almost 4.4 million square feet of building space and approximately 1,850 jobs (Table 3.4). Most of this development was new construction. Employment areas that attracted multiple projects include the Triumph Business Park, North East Commerce Center, North East Business Center, Principio Industrial Park, the Upper Chesapeake Corporate Center and the Town of Elkton.

**Table 3.4: Major Industrial Construction and Expansion, 2005-09**

| Type of Development | Square feet | Jobs | Investment ($millions) |
|---|---|---|---|
| Expansions | 1,414,400 | 529 | $43.95 |
| New Construction | 2,965,000 | 1,335 | $150.74 |
| **Total** | **4,379,400** | **1,864** | **$194.69** |

*Source: Cecil County Office of Economic Development*

# 3.3 Proposed Land Use

The land use plan embodies the County's goals and objectives and meets the County's growth needs by creating land use categories that apply to specific geographic areas of the County. The plan divides the County into 12 land use categories in three groups: growth areas, rural areas and other areas:

| Growth Areas | Rural Areas | Other Areas |
|---|---|---|
| • High | • Resource Protection | • Mineral Extraction |
| • Medium-High | • Rural Conservation | • Village |
| • Medium | | |
| • Low | | |
| • Employment | | |
| • Mixed Use Employment | | |
| • Mixed Use Residential | | |
| • Town | | |

Approximately 71 percent of the County is in rural areas, 24 percent is in growth areas, and 5 percent is in other areas (Table 3.5).

**Table 3.5: Proposed Land Use**

| | Acres | Percent |
|---|---|---|
| **Growth Areas** | **54,331** | **24%** |
| High | 4,084 | 2% |
| Medium High | 3,310 | 1% |
| Medium | 12,281 | 5% |
| Low | 15,125 | 7% |
| Employment | 5,659 | 3% |
| Mixed Use Residential | 655 | 0.3% |
| Mixed Use Employment | 795 | 0.4% |
| Towns | 12,423 | 6% |
| **Rural Areas** | **159,288** | **71%** |
| Rural Conservation | 95,819 | 43% |
| Resource Protection | 63,469 | 28% |
| **Other Areas** | **10,084** | **5%** |
| Mineral Extraction | 8,442 | 4% |
| Village | 1,641 | 1% |
| **Total** | **223,703** | **100%** |

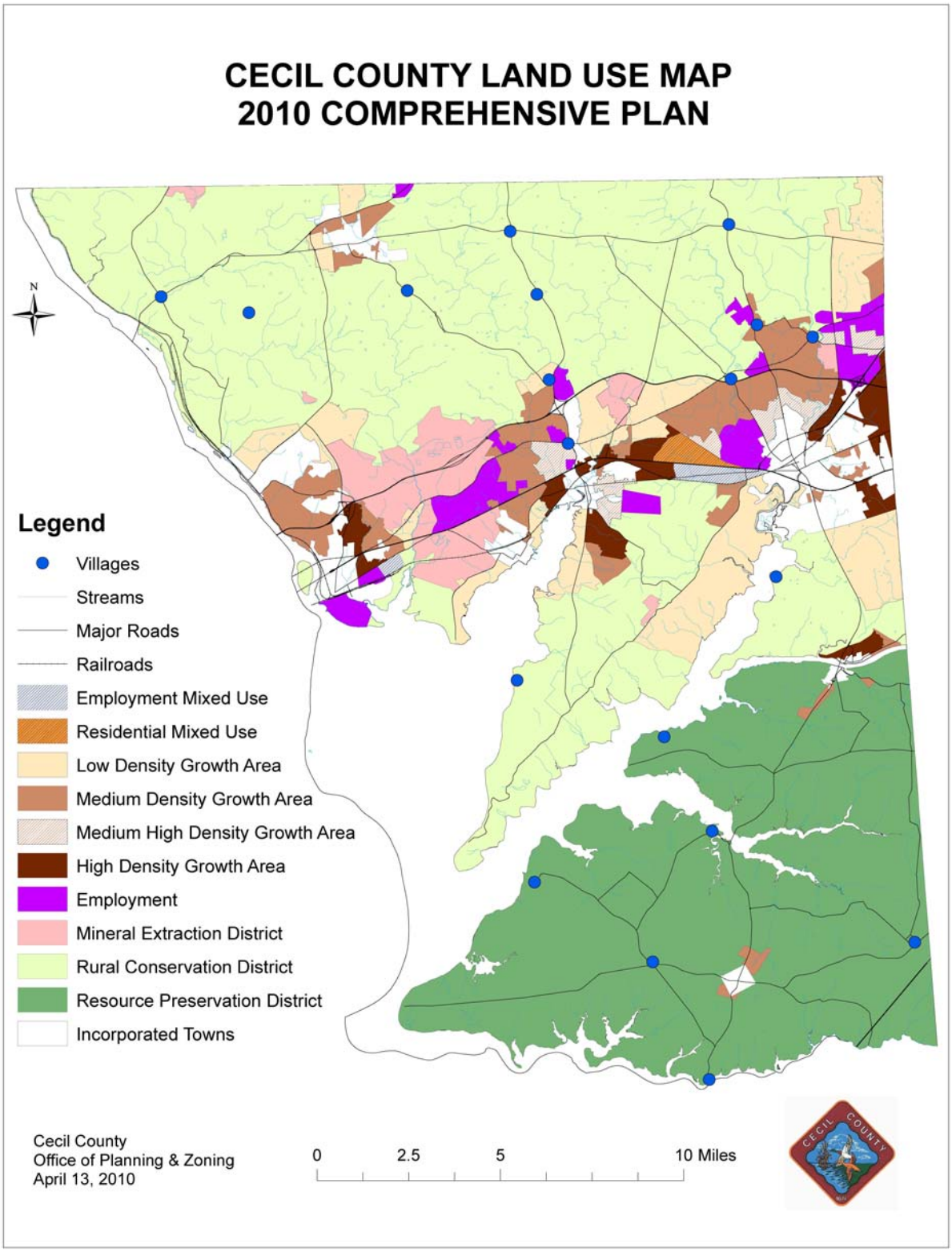
The land use designations are intended to direct growth toward existing population centers and areas adjacent to these centers by setting appropriate densities and coordinating growth with public infrastructure. The four major residential growth categories are differentiated by density: High, Medium-High, Medium, and Low. All these areas ultimately could be served by public sewer, but most Low Growth areas are not anticipated to be served by public sewer or water within the current Master Water and Sewer Plan.

High growth areas are located along major roads and adjacent to towns. Medium-High areas serve as a transition from High growth areas and towns to Medium growth areas. Low growth areas generally are on the edges of the Designated Growth Area, but also separate the Elkton and North East areas. Commercial (retail) areas do not have their own land use category and could be located in any land use district, at intensities consistent with the density designation (see Section 3.5).

Map 3.3 is the Future Land Use Map. The map has several purposes:

- It is a policy map that provides the basis for a more refined classification of land into zoning districts that regulate the use and development of land.
- It serves as a guide to the County's future desires and interests for land development, preservation and conservation.
- It serves as a guide to decision makers regarding public facilities—primarily water and sewer—as well as schools, economic development, transportation, and parks.

**Map 3.3: Future Land Use**



The Future Land Use Map does not apply to the County's eight incorporated towns. The towns have their own planning authority and adopt their own comprehensive plans and land use regulations. The County coordinated the development of the Future Land Use Map with the towns.

### *3.3.1 Changes from the 1990 Land Use Plan Map*

The Future Land Use map is quite different from the 1990 Comprehensive Plan Land Use map as it defines future land uses in the growth areas in a more fine-grained manner. To assist in seeing the differences between the 2010 map and the 1990 map the appendix to this plan contains "side by side" maps.

Each of the growth area designations are new, including Town, which corresponds to the corporate boundaries of the incorporated towns as of the adoption of this plan (the 1990 Plan had a Town District that designated areas outside Rising Sun, Chesapeake City, and Cecilton). The Resource Protection, Rural Conservation and Mineral Extraction Districts carry over from the 1990 Comprehensive Plan.

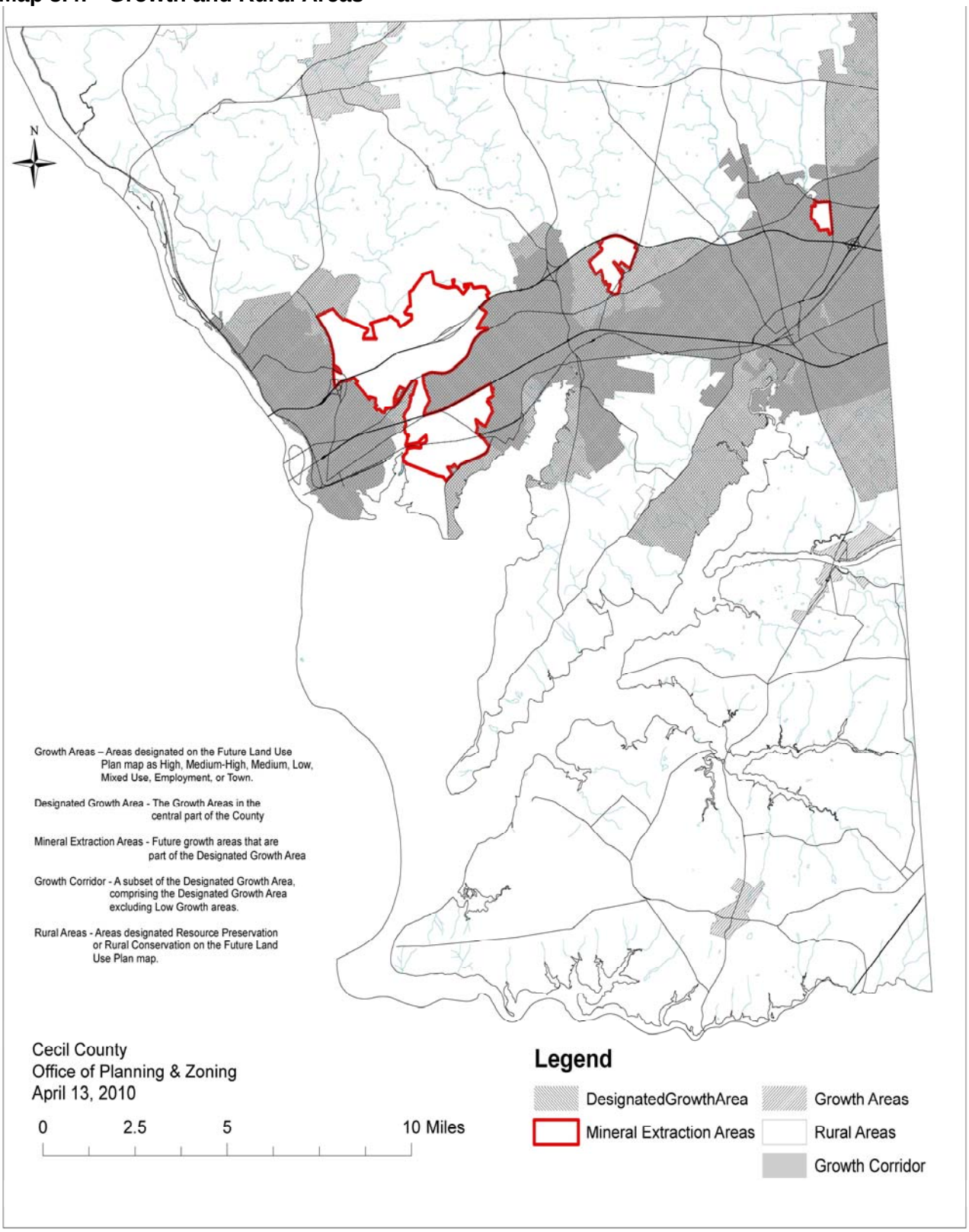
In addition to the changes in the land use categories, the 2010 Comprehensive Plan Future Land Use map includes several changes to the 1990 Comprehensive Plan map:

- Growth area has been added south of Elkton. This area had been identified as Rural Conservation.
- Growth areas have been adjusted around the towns of Rising Sun, Chesapeake City and Cecilton.
- Employment areas have been added as a land use district. Employment areas have been added north of Interstate 95 and north of Elkton. Portions of these areas had been designated as Rural Conservation under the 1990 Plan.
- Mixed use areas are designated along the US 40 corridor west of Elkton.
- The Medium Growth area has been extended along MD 213 (Singerly Road) north of Cherry Hill.

## 3.4 Defining Growth and Rural Areas

An important component of this Comprehensive Plan is establishing growth areas versus rural areas. Over time, a number of terms have been used in Cecil County to describe future growth areas. To clarify the intent of the plan, the Comprehensive Plan uses the following terms, defined as follows, and shown on Map 3.4.

## Map 3.4: Growth and Rural Areas



### Designated Growth Area

Designated Growth Areas comprise all areas where the County wishes to encourage and attract growth and development. The Designated Growth Areas are centered in the central part of the County, but also include the associated growth areas around the towns of Cecilton, Chesapeake City, and Rising Sun.

Designated Growth Areas are indicated on the Future Land Use Map as High, Medium-High, Medium, Low, Mixed Use, Employment, and Town. They are currently served by public water and sewer or could be served in the future.

Mineral Extraction Areas shown on Map 3.4 are future growth areas that are part of the Designated Growth Area.

### Growth Corridor

The Growth Corridor is a subset of the Designated Growth Area, comprising the Designated Growth Area excluding the Low Growth areas.

### Rural Areas

Rural Areas comprise the Resource Preservation and Rural Conservation land use districts.

## 3.5 Land Use Categories

### *3.5.1 Growth Areas*

The primary intent of this plan is to concentrate development in growth areas. This will allow the County to efficiently plan for and implement public infrastructure and deflect future growth away from rural areas, thereby protecting the County's rural character and supporting agriculture and agribusiness.

The intent for the growth areas is to allow for the development and redevelopment of residential, commercial and business uses at densities and intensities consistent with each growth designation: High, Medium-High, Medium and Low. In addition, growth areas include two mixed-use designations: Mixed Use Residential and Mixed Use Employment (at densities and intensities consistent with the Medium-High and High growth areas), as well as Employment areas and the incorporated towns (Town).

Growth areas are the lands most suitable for future development based on the County's existing built environment and land use pattern, as well as its future land use, economic development, and resource protection goals. They are primarily located along the I-95 and US 40 corridors but also include the incorporated towns of Cecilton, Chesapeake City and Rising Sun and their respective growth areas. Each growth area is served by or planned for service by public sewer and water facilities and transportation networks, including roads and, in several cases, rail and transit.

By concentrating development in growth areas, the Plan seeks to reduce development pressure in rural areas. This needs to be accomplished by allowing landowners in Rural areas to transfer their development rights to growth areas, especially to the High and Medium-High areas, and by providing infrastructure and incentives and encouraging design that will enable growth areas to develop with a character that makes them attractive places to live, work and play.

By concentrating residential, industrial and commercial growth in the Growth Corridor, the County can reduce the cost of providing public infrastructure – by making it more efficient – and limit impacts to the environment.

By locating employment opportunities and commercial areas close to residential areas, the County can help to reduce the number of vehicle trips and average trip length. By reducing

vehicle trips, the County can help to reduce the traffic impacts of development, as well as the cost to build, improve, and maintain roads and other transportation infrastructure.

In addition to the Mixed-Use districts, mixed-use development achieved through the Planned Unit Development process is encouraged at appropriate locations along major roads and intersections in growth areas. In particular, opportunities for mixed-use development exist near the I-95 interchanges with MD 279 (near Elkton), MD 272 (in North East) and MD 222 (near Perryville and Port Deposit). As these areas develop, they should be connected and served by transit. Mixed-use can be vertical as well. Where properly zoned, residential uses may be permitted on upper floors of structures with ground-floor commercial or business uses.

Residential development needs to be balanced with opportunities for economic development and the expansion of the County's job base. By encouraging more employment growth, the County can help to provide job opportunities for residents, reduce the need for commuting out of the County, and generate tax revenues that support the County's public infrastructure needs.

As noted above, commercial (retail) areas do not have their own land use category on the future land use map and could be located in any land use district, at intensities consistent with the density designation.

All growth areas (except for most Low growth areas) are served or are planned for service in the Master Water and Sewer Plan. All Low growth areas could receive water and sewer service in the future.

Although suitable for development, growth areas also contain significant environmental resources, including wetlands, steep slopes, stream valleys, forests, and special plant and wildlife habitats (see Sensitive Areas element). Development that may impact sensitive areas should be planned to protect these resources to the greatest extent possible.

Achieving the desired development in Growth Areas will require proactive efforts on the part of the County:

- Continued efforts to make water and sewer infrastructure available in the growth corridor.
- Reviewing the zoning and subdivision ordinances for opportunities to simplify and streamline the development review and approval process. The Planned Unit Development (Article XII of the Zoning Ordinance) was cited during the Comprehensive Plan process as an example of a desirable, flexible development tool that now requires a special exception, but that could have an administrative approval process (in, for example, the High and Medium High growth areas. Fast tracking development applications in the growth corridor was also cited which, while feasible, needs to consider the equity concerns of development that is effectively delayed due to the fast tracking of other applications.
- Creating a more attractive transfer of development rights program (see below)
- Consider *minimum* development densities in key growth areas so that land valuable for high density development is used for that purpose, and not for lower density development that in total will have lower value to the County.
- Consider increasing the maximum height limits in the zoning ordinance.

The following sections describe the growth areas in more detail.

## High

High growth areas comprise about two percent of the County, or approximately 4,100 acres. All of the high growth areas are adjacent to the towns of Elkton, North East and Perryville. Higher density development is encouraged in these areas as a mix of housing types, including especially duplexes, townhouses, apartments and condominiums. Residential

areas should be connected to one another to the extent possible with pedestrian and bicycle linkages and result in well-designed, attractive and walkable neighborhoods.

Consistent with the High growth designation, commercial uses can be regional in nature and serve large market areas, provided they are well planned, designed in a manner that creates pedestrian and transit linkages to nearby areas, and support the County's land use and economic development goals. Larger commercial uses should be on major roads for safe and convenient access for large traffic volumes.

Residential densities will average five to eight dwelling units per acre but can be expected to increase to over 12 units per acre in some portions of the High growth areas.

**Housing is considered high density at 8.34 units per acre in Whitehall West subdivision (right) and at 11.23 units per acre in Chesapeake Landing (left).**

## Medium High

Medium High growth areas comprise about one percent of the County, or approximately 3,300 acres. These areas are located adjacent to the towns of North East and Elkton and are envisioned as pedestrian-friendly areas that provide a transition in density from High to Medium growth areas. As with the High growth areas, Medium High growth areas contain a mix of housing types, including single-family detached units, townhouses, apartments, and condominiums, as well as commercial development at moderately high intensities. Commercial uses generally serve the local population but can be regional in nature if located along major roads.

Residential densities will average four to six dwelling units per acre but can be up to 12 units per acre.

## Medium

Medium growth areas comprise about five percent of the County, or approximately 12,300 acres. They offer the opportunity for development on the periphery of the Designated Growth Area, especially north and northwest of Elkton, west of the Town of North East and north of Charlestown, and between Perryville and Port Deposit. Medium growth areas also form the growth areas around the smaller towns of Cecilton, Chesapeake City, and Rising Sun. Medium growth areas may contain commercial uses mostly at moderate intensities, as neighborhood commercial centers serving everyday shopping and personal service needs.

Residential densities are typically three to four units per acre but can range from two to six units per acre.

## Low

Low growth areas make up about seven percent of the County, or 15,100 acres. Low growth areas provide a transition between more densely developed areas and rural areas. Residential densities are two or less dwelling units per acre.

Although most areas designated for Low growth are not shown as water and sewer service areas in the Master Water and Sewer Plan, they may be eligible for public service in the future. As such, they represent future growth opportunities in the Designated Growth Area.

It is the County's intention to direct the majority of growth to High, Medium-High and Medium growth areas that are already served by or are planned for water and sewer service, only extending infrastructure to Low growth areas as feasible based on prioritization.

Where public water and sewer are not available, development in the Low growth area will likely be on larger lots that accommodate private water and sewer service.

## Employment

**Housing in Bethel Springs is low density at 1 unit per acre.**

Employment areas make up about three percent of the County, or approximately 5,700 acres. Thirteen employment areas are designated on the Future Land Use map, including the County's existing industrial parks and enterprise zones, as well as other locations strategically located along transportation corridors, including roads and rail lines. In addition to these areas, several large employment areas are located in the towns (see Chapter 4 Economic Development).

The intent of Employment areas is to provide for major industrial, manufacturing, office, and business uses and economic development opportunities in business parks and campuses near major roads. The goal is to provide sufficient land area and opportunities to support the expansion of the County's employment base and create opportunities for long-term economic development, as the local economy expands and diversifies.

Employment areas have, or are planned for, access to public water and sewer service. While some commercial (retail) uses could locate in Employment areas, they would be small, primarily to serve the Employment areas and not the regional, retail market. Employment uses should be screened and buffered, where necessary, to minimize negative impacts on adjoining residential land uses.

Employment areas should provide abundant opportunities for new and expanded industrial and office uses in a range of sizes to increase employment opportunities in the County. Public infrastructure improvements should be targeted to strategic development and redevelopment projects.

## Mixed Use Areas

A major goal of the land use plan is to attract mixed use development at appropriate locations in the Growth Corridor. Mixed use development is a combination of one or more of the following on one site or across several sites: residential, commercial, business, service, civic and open space. True mixed use development integrates the different uses horizontally (on the same site) or vertically (in the same building). The main streets of Cecil County's towns are examples mixed use areas. Mixed use development has several advantages over single use development:

- Uses reinforce each other, for example, residential supports business, business supports retail and so on.
- Automobile trips are reduced as more trips can be made on foot, creating a healthier environment.

- Mixed use areas can be livelier, with a more varied and interesting built environment. Parking areas can be shared and smaller.

The Comprehensive Plan designates two mixed-use areas: Mixed Use Residential and Mixed Use Employment along US 40 west of Elkton, supporting US 40 as Cecil County's primary business corridor (see Section 3.6). These areas benefit from their location along US 40 and its proximity to existing towns and infrastructure, as well as to the AMTRAK and CSX rail lines.

The Mixed Use areas would include medium to medium-high density residential uses, including townhouses and apartments and could have multi-story buildings with residential uses above commercial or office uses. Residential densities are envisioned as similar to the High and Medium-High growth areas.

The Comprehensive Plan envisions an area mix of 80 percent residential and 20 percent non-residential in the Mixed Use Residential area, and a 30 percent residential and 70 percent employment area mix in the Mixed Use Employment area.

New zoning districts will be needed to implement mixed use areas. They are envisioned as mapped or overlay districts[3] that would not require the developer to obtain use approval (like a special exception) but would require a master planning or a special study similar to those prepared for a planned unit developments (PUDs).

Service roads or consolidated access points may be developed along the US 40 corridor to provide access to developed properties and minimize the number of access points along the highway to preserve the free flow of traffic (see Chapter 5 Transportation).

## Mixed Use Residential

The Mixed Use Residential area contains approximately 660 acres west of Elkton, north of US 40 and south of Nottingham Road. This area is envisioned as an opportunity to develop attractive communities along the north side of the US 40 corridor. This area is envisioned as having a residential emphasis given the mostly residential character to its north and west.

This mixed-use area is strategically located along US 40 near the center of the County and benefits from its proximity to Elkton, North East and the developing areas between the towns. Concentrating mixed-use projects in this area provides opportunities to create transit-supportive nodes of density along a major corridor. When the Elkton train station is reopened, serving MARC commuter rail and as a potential integration with the SEPTA R-2 rail line, this area should be connected directly to the station area by transit. Such a connection would support the mixed-use area and provide alternatives to non-motor vehicle travel in a strategic part of the County.

## Mixed Use Employment

The Mixed Use Employment area contains approximately 800 acres west of Elkton, south of US 40 and north of MD 7 (Old Philadelphia Road) and the AMTRAK rail line. Given this area's location between MD 7 and US 40, close to the rail line and the existing low intensity business and industrial uses, this area is envisioned as a master planned, office, commercial and residential area.

As the County develops, the Mixed Use Employment area is intended to function as an attractive location for high- and mid-level office development, well designed and landscaped, and fronting or within easy access of US 40.

[3] An overlay district lays over the underlying district and provides an alternative or supplemental set of regulations.

### Town

As noted above, the eight incorporated towns have their own planning authority and adopt their own comprehensive plans. Towns account for approximately six percent of the County's land area. The Future Land Use Map shows the boundaries of the Towns as of 2009. In some cases the towns own land outside their boundaries but, for purposes of consistency, this land is only shown as "Town" if it has been annexed.

Each Town's proposed future growth areas are described in their Comprehensive Plan. During the life of this Comprehensive Plan, some of these lands that are in the County as of 2009 may be annexed into the Towns.

## *3.5.2 Rural Areas*

Rural areas make up approximately 71 percent of the County. Agricultural uses predominate in the coastal plain south of the Chesapeake and Delaware Canal and in the Piedmont in the north central section of the County. Large forested areas cover the east bank of the Susquehanna and the Elk Neck peninsula. Smaller forested areas are scattered throughout the Rural Areas especially in stream valleys and in much of the Chesapeake Bay Critical Area.

The County intends for rural areas to remain rural and for the agricultural and the other natural resources within them to remain viable and economically productive. The County will continue to support the permanent preservation of these areas for their natural and agricultural resources through the purchase or transfer of development rights or the acquisition of easements by government agencies and private organizations. As part of this support, the County will continue using its funds to supplement state funding through the MALPF, which is used to purchase development rights on agricultural lands. The County will also continue to support the economic viability of farming, forestry and related business activities such as broadening the list of permitted value-added agricultural related enterprises (see Chapter 4, Economic Development).

**Rural areas would make up approximately 70 percent of the County under the future land use plan.**

Rural areas include the Rural Conservation and Resource Protection districts. Both of these designations carry forward from the 1990 Comprehensive Plan. Chapter 7 of this Comprehensive Plan discusses a Priority Preservation Area (PPA) intended to further support preservation in the Rural area. To support the PPA, existing tools such as the purchase of development rights and the transfer of development rights programs will need to be strengthened, especially in the Rural Conservation area. The County will work to maintain its Agricultural Certification.

Residential development continues to be permitted in Rural areas but, as noted above (Table 3.3), over the past 11 years the number of building permits in Rural areas has been 40 to 50 percent of total County permits. This 2010 Comprehensive Plan recommends that the County consider a growth management policy to ensure that development in rural areas does not exceed a desirable share of overall county development.

In 2009, the General Assembly enacted the Smart Growth Goals, Measures, and Indicators and Implementation of Planning Visions Act that requires local planning commissions to

submit annual reports beginning in 2011 that include specific smart growth measures and indicators. The bill establishes a statewide land use goal of increasing the percentage of growth within PFAs and decreasing the percentage of growth outside PFAs. The annual report must include the amount, share and net density of growth being located inside and outside of PFAs; net density of growth that is being located inside and outside the PFA; as well as the number of acres preserved using local agricultural land preservation funding. This new law reinforces the need for Cecil County to make progress toward concentrating growth in growth areas and preserving agricultural land.

As noted above, commercial (retail) areas do not have their own land use category on the Future Land Use map. Low intensity commercial uses would be allowed in appropriate locations in Rural areas to serve rural communities. Villages are especially appropriate for commercial uses, given their function as historic rural centers, when consistent with the intent of the Village district as defined in Section 3.5.3. Small areas of business or light industrial use may be permitted in Rural areas with appropriate buffering.

The County's water and sewer policies for Rural areas are:

- Extension of public sewer and or water systems will not be permitted except in cases where a threat to public health exists.
- Residential and other non-agriculture development must be served by on-site sewer and water facilities. Private shared sewer facilities may be permitted and can provide an opportunity to preserve large open space areas[4].

## Rural Conservation

The Rural Conservation area is intended to encourage the retention of agricultural and forestry uses and to support the County's agricultural industry.

The Rural Conservation area makes up about 43 percent of the County, or approximately 95,800 acres. The area encompasses existing agricultural areas north of the Chesapeake and Delaware Canal, including the Fair Hill Rural Legacy Area. It includes much of the Elk Neck peninsula south of the Town of North East and west of Elkton. North of the I-95 and US 40 corridors, the district extends to the Pennsylvania state line and includes sparsely developed areas between towns and rural villages.

Residential development is permitted but at low density, a maximum of one dwelling unit per 10 acres, to maintain the rural character of this area of the County. When development does occur the essential elements of rural character need to be maintained, and opportunities taken to allow agricultural activities to continue, in open space areas for example[5].

The proximity of the Rural Conservation area to the Designated Growth Area distinguishes its agricultural areas from those of the Resource Protection area. Farmland in the Rural Conservation area has experienced significant development pressure, as evidenced by the trends in Table 3.3, which show that 39 percent of the residential building permits in Cecil County since 1997 have been issued in this area, the largest share of any land use district designated in the 1990 Comprehensive Plan. The need to protect agriculture is most acute in this area.

## Resource Protection

The Resource Protection area is intended to encourage retention of agricultural land and agricultural-related activities and to support the County's agricultural industry.

[4] Regulations to allow shared facilities were added to the County zoning ordinance in 2005 – see Section 175. Community Sewerage Systems.

[5] New subdivisions in the Northern Agricultural-Residential zoning district that implements Rural Conservation area must have a minimum 60 percent open space.

The Resource Protection area makes up about 28 percent of the County, or approximately 63,500 acres. The district lies south of the Chesapeake and Delaware Canal, where protection of agricultural land resources is well advanced. The areas designated as Resource Protection on the Future Land Use Map correspond to areas where agriculture continues to be the dominant land use. The County and other partners have been quite successful in preserving land in the Resource Protection area and there are some large blocks of protected land especially in the Sassafras Rural Legacy area and north and south of the Bohemia river in the MD 213 corridor.

Residential development is permitted in the Resource Protection area but at very low density, a maximum of one dwelling unit per 20 acres, to maintain rural character. When development does occur the essential elements of rural character need to be maintained, and opportunities taken to allow agricultural activities to continue, on open space parcels for example.


**Resource Protection areas aim to preserve agricultural land.**

### *3.5.3 Other Areas*

Other areas include the Mineral Extraction district and Villages. Together, they account for approximately five percent of the County's total land area. Villages are, technically, growth areas in that they are Priority Funding Areas but the amount of anticipated growth is so small that this Plan classifies them in this Other Areas category.

#### Mineral Extraction

The Mineral Extraction Area protects mineral deposits of economic importance from development until the deposits have been mined. Mineral Extraction Areas are not expected to be available for development during the term of this Comprehensive Plan. However, most Mineral Extraction Areas are future Growth Areas that are part of the Designated Growth Area (see Map 3.4).

Mineral Extraction areas consist of land with known mineral deposits primarily owned or otherwise controlled by the mineral extraction industry. They represent approximately 8,400 acres. Mining activities may occur only in the Mineral Extraction area.

The Mineral Extraction area serves several functions: to protect economically important mineral resources for current and future use; to prevent incompatible development that may directly or indirectly preclude access to the mineral resources until the resource has been removed; and to protect adjacent land uses from negative impacts that can result from mineral extraction activity.

The designation of an area as a Mineral Extraction area is an interim designation. After mineral extraction is complete, a special study and possible plan amendment will determine the future use of the land, taking into consideration the type and intensity of adjacent land uses and the availability of infrastructure and services, and the impact on water quality and

environmentally sensitive areas. The ultimate land use of mineral extraction areas will be decided in the context of the comprehensive plan in effect when a change is requested.

## Village

The purpose of the Village district is to protect the character of the County's historic villages by separating them from surrounding rural or developed areas. Crossroad villages are located at intersections of existing or historic roads. They may feature a cluster of structures that include historic buildings, architectural elements, community focal points, historic employment centers and commercial uses. Villages are classified into two categories: Crossroad (C) and Waterfront (W). The Comprehensive Plan recognizes 19 villages (see Map 3.3):

- Bay View (C)
- Calvert (C)
- Cherry Hill (C)
- Childs (C)
- Colora (C)
- Conowingo/Kilbys Corner (C)
- Crystal Beach (W)
- Earleville (C)
- Elk Mills (C)
- Fair Hill (C)
- Farmington (C)
- Fredericktown (W)
- Hacks Point (W)
- Leslie/Marysville (C)
- Locust Point (W)
- Port Herman/Hollywood Beach (W)
- Red Point (W)
- Warwick (C)
- Zion (C)

Villages make up less than one percent of the County's land area, or approximately 1,600 acres. The 1990 Comprehensive Plan also recognized 19 villages. The Village Residential (VR) zoning district has flexible design criteria and may be retained, even in the Designated Growth Area.

Waterfront villages are located along the shorelines of the Chesapeake Bay and its tributaries. The dwellings in these villages historically were built to provide seasonal occupancy for recreational purposes. Today permanent residents occupy the majority of these once-seasonal dwellings. Waterfront villages generally feature cottage-type housing on narrow lots, on a street grid, with water-dependent facilities and water-oriented development patterns.

The boundaries of crossroad villages are drawn to include developed areas near village centers and adjacent undeveloped land to allow for a limited amount of future growth, no more than 10 percent above what existed when they were first designated.

Residential densities are typically about one unit per acre without public sewer and water but can be increased to four units per acre with sewer and water. Villages generally rely on onsite sewage disposal and groundwater. However, villages are Priority Funding Areas (see Map 3.2) and are eligible for public water and sewer service, though this is only anticipated where there is threat to public health exists or where public services can be readily extended from nearby areas.

The 1990 Comprehensive Plan recommended a Village District Study to make recommendations to protect the villages' historic and architectural character. While the study was not done, the County did create village boundaries, opportunities for expansion, and the Village Residential zoning district, which allows some non-residential development and is a

flexible tool to preserve the neighborhood and community character of the villages. The VR district is used in some villages and in some areas that are not designated as villages. A village study would be worthwhile, especially in light of efforts to direct growth to growth areas, to determine whether adjustments should be made to the VR district.

### *3.5.4 Summary of Land Use Categories*

Table 3.6 summarizes the land use categories shown on the Future Land Use Map including the proposed ranges of residential densities for each of the categories. Although these density ranges are goals, the County understands that development projects are not always able to and sometimes are not intended to maximize density. Therefore, the actual densities realized in these areas may be toward the middle of these ranges.

## Table 3.6: Land Use Categories Summary

| Category | Intent, Types of Land Use |
|---|---|
| **Growth Areas** | |
| High<br><br>Medium-High<br><br>Medium | These areas are predominantly residential in character but may include commercial and business areas especially on major roads such as US 40. Mixed-use development through Planned Unit Developments is encouraged at appropriate locations in these areas.<br><br>High and Medium-High areas are mostly adjacent to Towns. Higher density development is encouraged in these areas with a mix of housing types, single-family, town houses, and apartments.<br><br>Residential densities in Medium-High areas are from six to 12 dwelling units per acre, increasing to over 12 dwelling units per acre in portions of High areas.<br><br>Medium growth areas offer opportunity for growth in outer parts of the Designated Growth Area, especially north of Elkton and North East and also between Perryville and Port Deposit. Medium growth areas also form the growth areas around the smaller towns, Cecilton, Chesapeake City, and Rising Sun. Residential densities in Medium areas are from two to six dwelling units per acre. |
| Low | Low Growth areas provide a transition from some higher growth areas to rural areas. Residential densities in Low areas are two dwelling units or less per acre.<br>All Low Growth areas could be eligible for public sewer service in the future, though most areas are not shown as planned water and sewer service areas in the Master Water and Sewer Plan. |
| Employment | Major industrial, manufacturing, office, and business parks and campuses, located at strategic locations with access to major roads and other infrastructure.<br>Some large employment areas are in towns, see Economic Development. |
| Mixed Use Employment<br>Mixed Use Residential | Mixed Use areas offer opportunities for an integrated mix of residential, employment, and commercial uses. Mixed Use areas are on US 40 and adjacent or close to the AMTRAK and CSX rail line, where they can benefit from future expanded transit service. Residential densities in mixed use areas are from six to 12 dwelling units per acre, increasing to over 12 dwelling units per acre in some portions. |
| Town | Incorporated towns. The towns have their own planning authority and adopt their own comprehensive plans. |
| **Rural Areas** | |
| Rural Conservation | The Rural Conservation Area is intended to encourage retention of agricultural and forestry uses and to support the County's agriculture industry. Residential development is permitted but at low density, one dwelling unit per 10 acres, to maintain rural character of this area of the County. |
| Resource Protection | The Resource Protection area is intended to encourage retention of agricultural land and agricultural-related activities and to support the County's agricultural industry. Residential development is permitted but at very low density, one dwelling unit per 20 acres. |
| **Other Areas** | |
| Mineral Extraction | The Mineral Extraction Area protects mineral deposits of economic importance from preemption by development until the deposits have been mined. Mineral Extraction Areas are not expected to be available for development during the life of this Comprehensive Plan. Most Mineral Extraction Areas are future Growth Areas that are part of the Designated Growth Area. |
| Village | The Village district is intended to protect the character of the County's historic villages by separating them from surrounding rural or developed areas and allowing a limited amount of growth. Villages are primarily residential, with a limited amount of commercial uses serving the needs of residents of the village and nearby rural areas. Residential densities are typically about one unit per acre without public sewer and water but can be increased to four units per acre with public sewer and water. |

## 3.6 Land Use Issues

### *3.6.1 Community Character*

By 2030 Cecil County is projected have 51,000 more people, 22,000 more housing units, and 19,500 more jobs (see Section 2.6). A key measure of the success of this Comprehensive Plan will be how attractive the County is after this development occurs. The challenge, in regard to community character and design, will be to integrate future development with the rural landscape and the development already in place to create a cohesive rural, suburban and urban character that features distinct, attractive and healthy communities.

Community character can be considered the sum of the characteristics that make a place distinctive. For Cecil County, these characteristics include agricultural landscapes, abundant open space, a diversity of environmental resources, small towns with historic cores, rural roads, historic resources, a range of housing types, and access to major transportation corridors and job centers.

**Farms such as Mt. Ararat near Port Deposit add character to the County.**
*Photo Courtesy of Cecil Soil Magazine*

Although many developed areas in Cecil County have been well designed as individual projects, the need to create a more cohesive development character will become more urgent as more growth occurs in "infill" situations (filling in spaces between existing development). Growth areas must be perceived as attractive places to live for development to occur there. Growth areas also must function well as places to live, work and play. This not only involves providing adequate infrastructure to support growth, but assuring that the design and layout of infrastructure and development enables residents and workers to benefit from convenient access to well-designed, attractive parks, schools, shopping areas, employment and public spaces.

The Plan has been drafted in light of the State's planning visions. These visions address quality of life and sustainability through the stewardship of environmental resources, and community design through the development of mixed-use, walkable communities. The Citizens Oversight Committee endorsed these visions and drafted goals that address these visions and define a vision of future land use.

A primary concern of many participants in the Comprehensive Plan process has been that development will compromise the very characteristics that make Cecil County an attractive place to live and work. Therefore, the County needs to consider character and design issues very carefully as the Plan is implemented. This section attempts to summarize the County's vision of community character.

### 3.6.2 Community Character in Growth Areas

Concentrating development in growth areas will help to protect rural character by directing development to higher density areas served, or intended for service, by public water and sewer. Within the growth areas are distinct districts with varying densities. The High and Medium High areas are more urban in character, as are the Mixed Use areas. Medium and Low growth areas are more suburban in nature. However, all growth areas should have a built environment and open spaces that enhance community character and reinforce the neighborhood's identity.

The overall vision for growth areas is for well-designed, attractive, compact, pedestrian-oriented communities with useable open space and convenient travel connections between adjacent and nearby developments. Residential and commercial areas should be connected where possible to provide residents with transportation options and to help reduce the demand for vehicle trips, especially for local travel.

The County can enhance community character by planning public projects and working with developers to:

- Create concentrations, or nodes, of development at strategic locations
- Develop plans that create a sense of place
- Incorporate existing and future transit considerations into development
- Locate commercial uses in nodes, and not as strip development along highways
- Create compact neighborhoods accessible on foot or by bicycle to open space and public uses
- Create usable public open spaces
- Incorporate green infrastructure considerations into development (see Chapter 7)
- Connect neighborhoods to parks, trails and greenways
- Create community centers, gateways and focal points with a design theme that reflects the vitality and character of the surrounding area
- Reduce potential conflicts between land uses through site design, buffers and landscaping
- Access major residential, commercial and industrial developments by internal roads, not directly from State or County roads
- Connect internal street networks between adjacent developments wherever possible to avoid concentrating traffic on major roads
- Design stormwater management systems so they become amenities

**Bus stops near residential uses support the use of transit at Chesapeake Ridge near North East.**

The County developed a Smart Code Report including many of the techniques listed above and a 2004 amendment to the 1990 Comprehensive Plan recommended the County adopt a "smart code" ordinance "that provides for the establishment of well planned, mixed use communities and neighborhoods in our priority funding areas."

#### The Elkton West Area

Perhaps the most strategic growth area in Cecil County is the area around Elkton, especially the area known as Elkton West. The area north, northwest and northeast of the Town has

been designated for growth for many years, but development has been stymied by the lack of public sewer and water infrastructure.

The County has attempted to move development forward by signing an agreement with the Artesian Water Company to provide water and wastewater service to this area. However, the Town of Elkton continues to view portions of Elkton West as potential annexation areas, consistent with its long-standing policy and vision of its boundaries as I-95 on the north, Frenchtown Road on the south, and the state line on the east.

The County's Future Land Use Plan envisions this area as a mix of High and Medium High growth areas, while the Town's vision is for more moderate densities and opportunities for employment growth. Given the importance of this area, an area plan would help to coordinate competing visions and develop a land use framework that can be implemented with infrastructure improvements to create an attractive and cohesive development pattern.

Similarly, the vision and timeframe for development south of Elkton differs between the County and the Town. This area should be examined further to prioritize its development relative to other growth areas.

## Coordination with the Towns

The areas around Elkton are examples of the need to coordinate with the Towns on their future growth areas and the character of the development in these areas. The land use vision in this plan concentrates development in the Growth Corridor more densely than in the past.

In order to implement the community character elements described in this section, the County's and the Towns' development visions need to be consistent and the provision of public infrastructure coordinated. Without this communication and coordination, these growth areas will likely develop on a project-by-project, haphazard basis unconnected and contrary to the vision of the County's development character as cohesive, interconnected and well-designed, with mutually supportive land uses.

## The US 40 Corridor as Cecil County's primary business corridor

The US 40 corridor in Cecil County extends from the Susquehanna River through Perryville, North East and Elkton, to the Delaware state line. Since the highway was constructed in the 1930s, it has served as the County's "Main Street" in the sense of its being the location of the county's major commercial and business areas as well as the Towns of Elkton, Perryville, and North East. It is a gateway to the Eastern Shore as well.

The County now has new business areas closer to I-95 but this Comprehensive Plan seeks to strengthen and reinforce US 40 as the County's primary business corridor – or "address street" to differentiate it from the smaller, more intimate main streets in the towns. Principio business park is a good example of new development reinforcing the US 40 corridor.

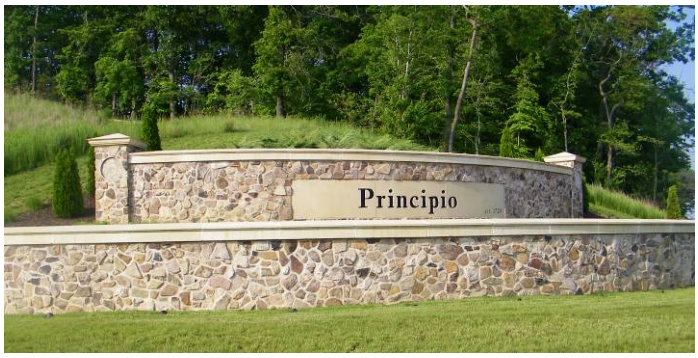
Segments of US 40, especially between Perryville and North East, cut through areas that today are undeveloped with a rural feel. However, a significant portion of the highway frontage contains automobile-oriented strip development. Setbacks, landscaping and building types are not consistent and pedestrian and vehicle connections between parcels is very limited. Although the general development pattern serves today's needs, continuation of this pattern will gradually increase the number of driveways, use up the available roadway capacity and result in more traffic signals, and travel delays – not supportive for a primary business corridor.

To address these issues, the Cecil County Economic Development Commission appointed a Route 40 Beautification Committee to take a comprehensive look at US 40, examine what other jurisdictions are doing along similar corridors, and recommend potential improvements. The committee recommended that the County develop a plan in coordination with Maryland State Highway Administration, property owners and the towns along US 40, with the

Department of Public Works and state representatives, to develop a coordinated approach to improve the character of the corridor. The committee recommended that the County consider developing a Route 40 Corridor Overlay District that would enable all of the parties to develop a common vision for the corridor and create the tools needed to implement it.

The significance of US 40 will continue to grow as the County does. The corridor will retain its function as a major east-west route connecting Delaware and Maryland, a primary transportation route for County residents, a commercial corridor, especially through the towns of Elkton, North East and Perryville, and an integral component of the County's economic development infrastructure.

This Comprehensive Plan envisions US 40 as a free-flow roadway incorporating transit, and connecting towns and nodes of development. This is especially true of the proposed mixed-use areas west of Elkton. These mixed-use areas provide an opportunity for the County to attract office and other employment uses in attractive mixed-use and business campus developments, flanked by commercial and residential uses in close proximity.




**Principio Business Park includes 800 acres of employment land along US 40 between Perryville and North East**

The Beautification Committee described a vision for US 40 consistent with the land use goals of the Comprehensive Plan, in that it seeks to "create vibrant, mixed-use, pedestrian-oriented retail and service centers within a mix of residential and office uses, ideally centers should be located within a quarter mile of higher density population concentrations; these centers should have higher quality design with pedestrian-oriented areas with focal points, cafes and plazas to create a sense of place."

As a major transportation facility, US 40 provides opportunities for the County to integrate transportation and land use and create a development pattern that supports future multi-modal transportation improvements. Chapter 5, Transportation, describes some future road section concepts for US 40.

### *3.6.3 Community Character in Rural Areas*

The primary characteristic of rural areas is a sense of openness. Rural landscapes are dominated by agricultural and forest land. Too much residential development in rural areas can impact this character by reducing the sense of openness and making rural areas appear more suburban in character.

A goal of this plan is to preserve rural character in an economically sustainable manner. This involves preserving agricultural, forested, wetland and waterfront landscapes, protecting scenic views, enhancing historic and cultural resources, maintaining the character of crossroad and waterfront villages, and incorporating a manageable amount of rural residential development. Although rural character is associated with open space, rural development, focused primarily on agriculture, agribusiness, and other natural resource-based enterprises is necessary to keep rural areas economically vibrant and sustainable.

#### Clustering Residential Uses to Preserve Open Space

Clustering, or conservation development, has become common in recent years as a way to allow development while still protecting environmental resources, creating open space, and protecting farmland and the character of rural communities. Cluster developments typically

allow for the same density yields as conventional development, but on smaller lots so that open space can be protected. Usually, the open space that is provided contains environmental resources and sometimes may not be developable based on environmental regulations.

Note, the County zoning ordinance distinguishes between "open space" which is land and water areas retained for use as active or passive recreation areas or for resource protection and "common open space" which is land for the use of owners and residents of a development. The Comprehensive Plan uses the term open space in its broader sense.

The advantages of clustering relate to the use and perception of the open space as an amenity. It creates an openness that many people desire, in some cases it can be farmed, and it can benefit the environment by better protecting a site's natural features, providing habitat for wildlife, reducing storm water runoff from impervious surfaces. By connecting the open space of adjoining conservation design subdivisions environmental habitat "corridors" can be created for wildlife.

While clustering provides many advantages, it is not always an effective tool to protect agriculture. Unless the open space is very large and regularly shaped, it can be difficult for traditional farming to continue in the open-space areas. The proximity of residential development, traffic, and concerns over nuisance complaints can discourage farmers from using such parcels.

The current development requirements in the NAR and SAR zoning districts effectively mandate clustering in that a minimum 60 percent of a new subdivision must be in open space. To achieve rural character and support agriculture and other natural resource uses, the required open space in subdivisions needs to be as large and regularly configured as possible.

### *3.6.4 Creating an Effective Transfer of Development Rights Program*

The County adopted a Transfer of Development Rights (TDR) program in 2006 to provide an additional incentive for agricultural land preservation in concert with increased density in the 1990 Comprehensive Plan's growth areas. However, the program has not yet been used. While this may be in part because the program was adopted just prior to a severe development slowdown, the program should be reviewed to incentivize its use to the greatest degree possible. A viable TDR program will be key to achieving several of this 2010 Comprehensive Plan's goals.

Part of the review should include the use of TDRs to increase density in the Growth Corridor. Higher density is desired in the Growth Corridor, especially in the high and medium-high areas but should be tied to land preservation, especially in the Priority Preservation Area (see Sensitive Areas element). The review should include TDR sending and receiving rates.

### *3.6.5 Historic Sites, Scenic Roads*

Cecil County has a rich historic heritage contributing to community character throughout the County in both growth areas and rural areas. The Cecil County Historic Sites Survey, maintained by the Maryland Historical Trust (MHT), lists 1,567 sites, of which 48 sites are listed on the National Register of Historic Places, and 20 sites are protected by a historic preservation easement held by the MHT.

**18th Century Elk Landing, a historic site south of Elkton, is on the National Register of Historic Places.**

Many important historic sites are in Towns, several of which have historic districts.

In 2000, as recommended by the 1990 Comprehensive Plan, the County amended its zoning ordinance to include a historic district overlay zone and create a Historic District Commission. The Overlay Zone is applied on a strictly volunteer basis and currently covers 24 sites (Map 3.5). The Lower Susquehanna Heritage Greenway is a certified Maryland Heritage Area, thus important to the County's historic heritage and, increasingly, important to tourism (see Chapter 4, economic development).

Cecil County's rural landscape is most easily viewed from roads. Cecil County has several state-designated scenic byways that also attract visitors including MD Routes, 213, 222, 273 and US 1. MD 213 is in the National Scenic Byways Program. In addition many County roads are scenic and historic and contribute greatly to local character.

Protecting historic and scenic resources wherever possible, and giving them due consideration in development planning is important to ensure that they continue to contribute to enhance the character of the County. A study of county scenic roads would be valuable to determine whether a protection program is warranted.

### *3.6.6 Watershed Planning*

In recent years, the State of Maryland, local governments, regional planning agencies, inter-jurisdictional governmental associations and nongovernmental organizations have focused efforts to improve water quality in the Chesapeake Bay and local watersheds. Many of these efforts address land use, because the characteristics of development, especially the amount of impervious surface have a direct impact on water quality. The greater the amount of impervious surface, the more that water quality is degraded. Therefore, how land is used – and local land use decisions are implemented – have a significant impact on water quality and the environment.

The watershed is the most appropriate geographic scale within which to assess and provide policy guidance to manage pollution and degradation of the County's waterways. This approach can help to prioritize capital expenditures and restoration efforts in portions of the County where water quality is most threatened.

Cecil County does not have a comprehensive watershed-based planning framework. Developing such a framework would give the County the policy basis for land use, environmental, and other decisions that have the potential to impact water quality. As described in Chapter 7, Sensitive Areas, a watershed planning approach also can provide guidance on decisions with the potential to impact the County's natural resources.

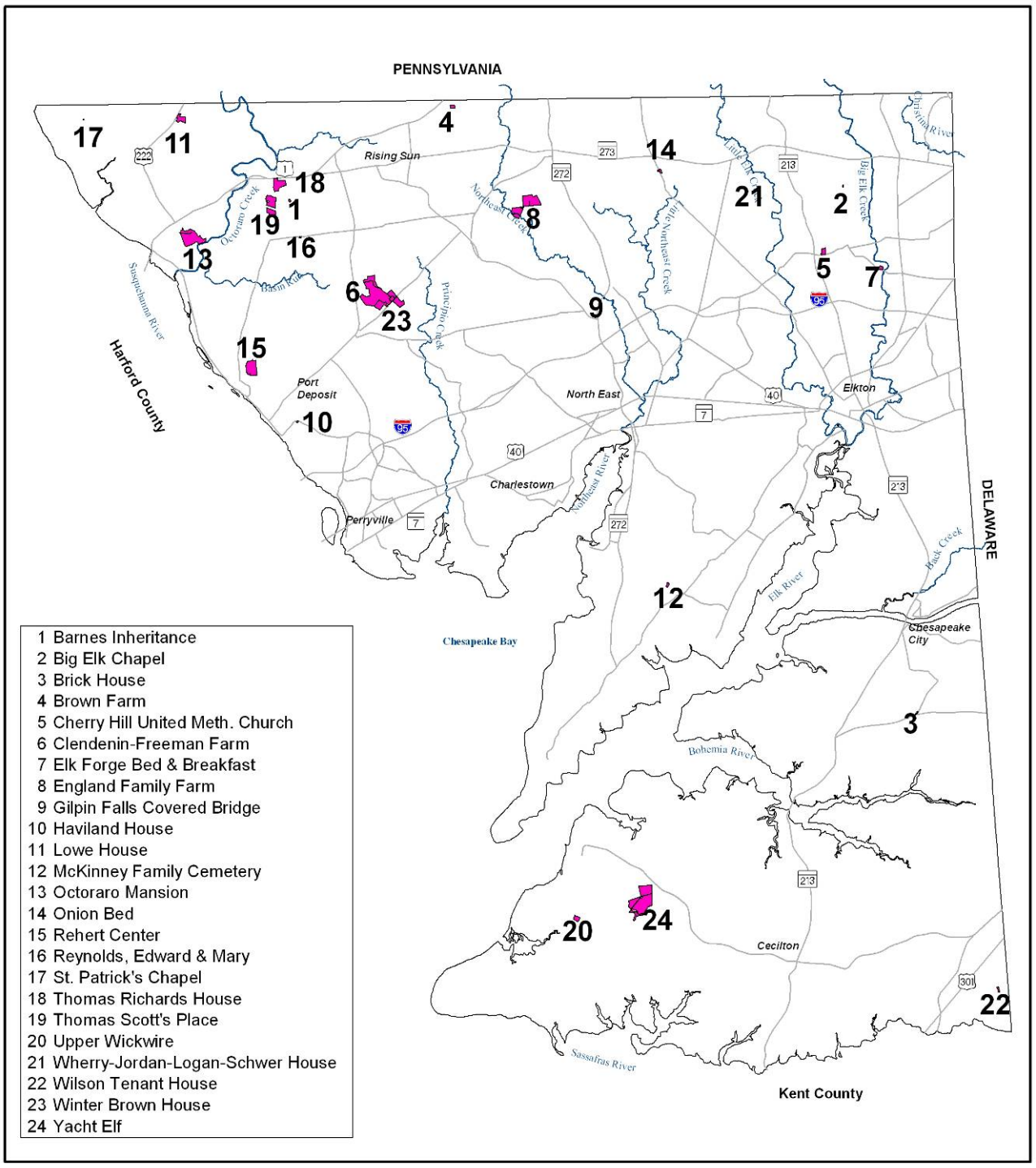
This Plan attempts to integrate the findings of the Water Resources element (Chapter 6) with land use and the protection of environmental resources (described in Chapter 7, Sensitive Areas) to create a sustainable framework for local land use decision-making. This approach, generally referred to as watershed planning, will become increasingly important as efforts to improve water quality are implemented and refined.

### *3.6.7 Protecting Private Property Rights*

This plan has been drafted to serve as a policy guide and framework for future growth and development in Cecil County. Many of the most important policy questions addressed by this plan deal with land use. As a county grows and its regional planning context changes, policies and regulations often need to change in response.

When a local government changes its policies, landowners may be affected, both positively and negatively. In drafting this plan, it has been a goal of the County to balance the need to manage growth with the rights of private property owners. Although achieving such a balance is a challenge, this plan seeks to protect property rights to the extent possible as it addresses the County's need to manage future residential, commercial and industrial growth for the County's overall benefit.

## Map 3.5: Historic Districts




**Historic Districts**
2010 Cecil County Comprehensive Plan

N
0 1 2 4
Miles

**Legend**
- Historic District
- Major Roads
- Major Streams

## 3.7 Policies and Actions

1. Use the future land use map (Map 3.3) and this chapter as a basis for updating the County's zoning map and zoning and land development ordinances.
2. Make the Growth Corridor attractive and functional to attract people to live and businesses to locate and expand:
   a. Provide adequate, attractive infrastructure and community facilities to serve the area; schools, transit, sidewalks and trails, parks, cultural amenities, police, fire and emergency services, health care, libraries, as well as basic services such as roads, water and sewer, telecommunications, and solid waste.
   b. Review the Planned Unit Development (PUD) regulations and approval process to make PUDs easier to develop in desired locations (see Section 3.5.1).
   c. Create mixed use zoning districts to facilitate development in the Future Land Use Map's Mixed Use areas. Encourage the development of horizontal and vertical mixed uses
   d. Adopt a Smart Code Ordinance to provide urban design requirements leading to the building of attractive, walkable, communities (see Section 3.6.2).
   e. Consider increasing the maximum height limits in the zoning ordinance.
   f. Consider establishing minimum development densities in portions of the Growth Corridor.
3. Consider a growth management policy to ensure that development in rural areas does not exceed a desirable share of overall county development. Between 1997 and 2008 approximately 50 percent of Cecil County building permits were issued for development in growth areas and 50 percent for development outside of growth areas (not including towns). This Comprehensive Plan, while not adopting a specific desirable share number, recognizes that 50 percent of development outside growth areas exceeds the desirable share.

   Following adoption of the Comprehensive Plan, appoint a broad-based committee to recommend a plan and related ordinances to implement this policy. The plan should consider the following:

   - What the desirable growth areas versus non growth areas shares of development should be, and how they should be measured, in acres or in lots, for example.
   - Whether the policy should be implemented through building permits or through the lot creation (subdivision) process.
   - A provision that would, in addition to the non growth areas share of development, permit the approval of residential building lots (perhaps up to two) between parents and children, or grandparents and grandchildren.
   - A fair and equitable queuing system for allocating building lots/dwelling units among competing residential projects. This might include phasing of development in large residential projects in non-growth areas that might, on their own, take up a large proportion of the available share of development.
   - Allowing periodic (annual or biannual) review by the County Commissioners of the policy, share numbers, and implementing regulations.

   The results of this effort should be coordinated with the State's Smart, Green and Growing requirements for an annual report beginning in 2011, establishing a goal and documenting the amount of growth occurring inside and outside of Priority Funding Areas.
4. Review the Transfer of Development Rights (TDR) program, including the sending and receiving rates, to incentivize its use to the greatest degree possible.

5. Continue to use all means to preserve land in the Rural Areas for agricultural and natural resource pursuits. See Chapter 7 the Sensitive Areas element.
6. Locate commercial uses at key intersections and nodes and not as strip development along major roads.
7. Coordinate with the Towns to plan for future annexation areas, and for compatible land uses along common boundaries.
8. Coordinate with the State and the Towns to identify improvements for the US 40 corridor to support its role as the County's primary business corridor (see Chapter 5).
9. Conduct a Village District Study to evaluate current conditions in villages, changes since the villages were designated, and whether adjustments should be made to the zoning map and text as they affect villages.
10. Conduct a study of county scenic roads and determine whether a protection program for the road and of the land and views from the road is warranted.

# 4 Economic Development

Many of the goals of the 2010 Comprehensive Plan relate to economic development in Cecil County. This chapter describes the County's economy and recent economic trends, discusses key issues, and documents the Comprehensive Plan's economic development goals, policies, and action items through 2030.

## 4.1 Goals and Objectives

1. Designate sufficient land in appropriate locations as employment, commercial and business areas.
2. Increase employment in Cecil County to provide jobs for residents, reduce the need to commute outside of the County to work, and expand the tax base.
3. Increase the ratio of jobs to housing units in the County.
4. Encourage the expansion of the manufacturing, high tech, and research and development industries.
5. Expand the job skills of the County workforce.
6. Encourage sustainable agribusiness and other natural resource based industries, including mineral extraction and fisheries.
7. Maintain the equity value of agricultural land.
8. Support a productive base of forestland and a forest resource industry, emphasizing the economic viability of privately owned forestland.
9. Promote tourism.

## 4.2 Overview

Located midway between Baltimore and Philadelphia and a short distance from Wilmington, Cecil County benefits from a multi-modal transportation network that provides easy connections to metropolitan areas throughout the Eastern Seaboard. As such, the County offers an attractive location for employers seeking to establish, expand and relocate their businesses.

Although Cecil County remains largely rural, its population growth over time is attributed in part to the in-migration of residents from neighboring jurisdictions. These relocators generally have retained their jobs, which has influenced the County's jobs-to-housing ratio, one measure of the local economy. This ratio is important because it relates the number of jobs in an area to the number of housing units; the more jobs per housing unit, the more economic opportunities for local residents and the less commuting to other jurisdictions that is required by local workers.

Compared to neighboring counties, Cecil County generally lacks jobs, as measured in terms the ratio of jobs to housing.[1] As the County grows and becomes more populous, it will need more jobs to provide economic opportunities for residents and to increase the tax base needed to support public services.

The availability of developable land, growth pressures originating in larger, surrounding jurisdictions, the effects of Base Realignment and Closure (BRAC), and the influence of

[1] In 2005, Cecil County had a jobs-to-housing units ratio of 0.99, compared to 1.22 in Harford County, 1.25 in Kent County, 1.60 in Lancaster County, 1.69 in Newcastle County and 1.76 in Chester County (U.S. Bureau of Economic Analysis and U.S. Census Bureau). A portion of Cecil County's lower ratio is attributable to a higher housing vacancy rate.

Interstate 95, US 40 and other elements of the Northeast's transportation infrastructure bring the potential for rapid residential growth in the years ahead.

The County's challenge is to both stimulate economic development and manage it proactively in a way that creates a balanced tax base while protecting the County's environment and rural character and providing adequate infrastructure for this growth. Part of creating this balanced tax base is developing an economic environment that attracts high–wage employers and businesses that contribute to indirect economic development opportunities such as secondary job creation and spinoff spending that supports existing businesses and creates new opportunities.

This Plan seeks to bolster the County's economic position by providing the land use framework to support increases in both the absolute number of jobs in the County and the ratio of jobs to households. Plan policies support the growth of local employers and encourage the development of high-tech, research and development industries, as well as manufacturing, in designated employment areas, mixed-use areas and in employment areas in the towns.

Agribusiness and natural resource-based industries are important economic engines for Cecil County (see Section 4.2.2). As the county grows and development pressures increase, protecting natural resource-based land from extensive development will be critical so that the County retains a sustainable natural resource-based economic sector.

This element also addresses fisheries in Cecil County.

### *4.2.1 Employment*

Cecil County benefits from a diverse business community of more than 2,000 employers that provided more than 28,000 jobs as of 2008 (Table 4.1)[2]. Eighty percent of these jobs are in the private sector, while one-fifth is in the Federal, State or local governments. More than 30 of these employers have 100 or more workers, led by W.L. Gore, the Perry Point VA Medical Center, Union Hospital of Cecil County, Alliant Techsystems (ATK), Cecil County Government, Wal-Mart and IKEA (Table 4.2).

[2] Note, the numbers in Tables 4.1, 4.3 and 4.4 reflect "covered employment"; jobs on which unemployment insurance taxes are paid. The employment numbers in Table 2.1 are higher because they include all jobs.

**Table 4.1: Full Time Jobs in Cecil County and Maryland, 2008**

| Sector | Cecil County Jobs | Cecil County Share of Total | State of Maryland Jobs | State of Maryland Share of Total |
|---|---|---|---|---|
| ***Government*** | **5,407** | **19%** | **470,409** | **19%** |
| Federal[1] | 1,250 | 4% | 127,150 | 5% |
| State | 323 | 1% | 99,683 | 4% |
| Local | 3,834 | 14% | 243,576 | 10% |
| ***Private Sector*** | **22,944** | **81%** | **2,066,991** | **81%** |
| Natural Resources and Mining | 623 | 2% | 6,528 | 0% |
| Construction | 1,354 | 5% | 178,076 | 7% |
| Manufacturing | 4,600 | 16% | 128,440 | 5% |
| Trade, Transportation, and Utilities | 6,332 | 22% | 461,249 | 18% |
| Information | 246 | 1% | 49,820 | 2% |
| Financial Activities | 787 | 3% | 149,220 | 6% |
| Professional and Business Services | 1,534 | 5% | 398,952 | 16% |
| Education and Health Services | 3,273 | 12% | 367,671 | 14% |
| Leisure and Hospitality | 3,241 | 11% | 236,048 | 9% |
| Other Services/Unclassified | 954 | 3% | 90,987 | 4% |
| **Total Employment (Non-Farm)** | **28,351** | **100%** | **2,537,400** | **100%** |

[1] Maryland Department of Labor, Licensing, and Regulation's official federal number is 3,567, but this number includes all Veterans Administration Healthcare System in Maryland (an official break out by County is not available). Table 4.1 uses 1,300 (1,125 from table 4.2 plus an estimated 125 for post office and other federal employment).

*Sources: Maryland Department of Labor, Licensing, and Regulation (DLLR), 2008 Cecil County, State of Maryland Fact Sheets*

As a primarily rural county in one of the country's most urbanized states, Cecil County has an economic profile that differs from the State of Maryland. The County continues to have a significant manufacturing sector (16 percent of all jobs in Cecil County, versus 5 percent of all jobs statewide) that offers competitive pay and benefits. In fact, the manufacturing sector represents the second highest payroll category of all industry sectors in Cecil County (Table 4.3).

Given its location along major transportation corridors, the County also has a large warehouse and distribution sector (included in the "Trade, Transportation and Utilities" category on Table 4.1), representing more than one in five jobs countywide in 2008. Retail jobs are counted in this category, which generally has relatively low-paying jobs (the third lowest among the sectors listed in Table 4.3).

Cecil County lags behind the state in terms of jobs in the Professional and Business Services. Only five percent of jobs in the County are within this category, compared to 16 percent statewide. The County also has a small financial sector, with 787 jobs, or three percent of all jobs in the County. Six percent of all jobs statewide are in this sector.

Approximately one in five jobs in Cecil County are government jobs, the same proportion than exists statewide. Four percent (1,250 jobs) are for the Federal government, which is comparable to the percentage of Federal jobs for the state as a whole (five percent). More than 1,100 of these jobs are at the Perry Point VA Medical Center in Perryville.

## Table 4.2: Major Employers, 2009

| Company | Workers | Product / Service | Industry |
|---|---|---|---|
| W. L. Gore & Associates | 2,667 | Medical products / R&D | Manufacturing |
| Perry Point VA Medical Center[1] | 1,125 | Medical services | Health care |
| Union Hospital of Cecil County | 864 | Medical services | Health care |
| ATK | 795 | Propellants, rocket motors | Manufacturing |
| Cecil County Government | 610[2] | Government | Government |
| Terumo Medical | 565 | Medical products/ R&D | Manufacturing |
| Wal-Mart | 500 | Consumer goods | Retail trade |
| IKEA | 370 | Home furnishings distribution | Wholesale trade |
| Cecil College | 300 | Higher education | Educational services |
| Performance Food Group | 265 | Food products distribution | Wholesale trade |
| Burris Logistics | 250 | Refrigerated trucking | Transportation and warehousing |
| Moon Nurseries | 240 | Nursery products | Agriculture |
| Terumo Cardiovascular Systems | 220 | Medical products / R&D | Manufacturing |
| Chesapeake Publishing | 200 | Newspaper publishing & printing | Information |
| Upper Bay Counseling and Support | 200 | Medical services | Health care |
| Calvert Manor Healthcare Center | 186 | Nursing care | Health care |
| C&S Wholesale Grocers | 180 | Food products distribution | Wholesale trade |
| Petro Fuel Operation | 175 | Truck fueling station | Retail trade |
| General Electric / Holman | 163 | Appliance distribution | Wholesale trade |
| Acme Markets | 160 | Groceries | Retail trade |
| Estes Express Lines | 150 | Truck terminal | Transportation and warehousing |
| Laurelwood Care Center | 150 | Medical services | Health care |

1: Employee counts for federal and military facilities exclude contractors

2: Full time equivalent

*Source: Cecil County Office of Economic Development*

**Table 4.3: Employment and Payrolls, Cecil County, 2008**

| Industry | Average Number of Reporting Units | Annual Average Employment | Average Weekly Wage Per Worker |
|---|---|---|---|
| **Total Employment** | **2,039** | **28,351** | **$842** |
| **Government** | **76** | **5,407** | **$1,160** |
| Federal Government[1] | 27 | 1,250 | $1,554 |
| State Government | 6 | 323 | $748 |
| Local Government | 43 | 3,834 | $828 |
| **Private Sector** | **1,963** | **22,944** | **$735** |
| *Goods Producing* | *398* | *6,577* | *$1,121* |
| Natural Resources and Mining | 40 | 623 | $628 |
| Construction | 295 | 1,354 | $689 |
| Manufacturing | 63 | 4,600 | $1,314 |
| *Service Providing* | *1,565* | *16,367* | *$581* |
| Trade, Transportation, and Utilities | 469 | 6,332 | $576 |
| Information | 18 | 246 | $804 |
| Financial Activities | 188 | 787 | $700 |
| Professional and Business Services | 300 | 1,534 | $819 |
| Education and Health Services | 184 | 3,273 | $757 |
| Leisure and Hospitality | 231 | 3,241 | $300 |
| Other Services | 175 | 954 | $418 |

[1] Per Table 4.1 Maryland Department of Labor, Licensing, and Regulation's official federal number is 3,567, but this number includes all Veterans Administration Healthcare System in Maryland (an official break out by County is not available). Table 4.3 uses 1,300 (1,125 from table 4.2 plus an estimated 125 for post office and other federal employment).

*Source: Maryland Department of Labor, Licensing, and Regulation (DLLR)*

Cecil County experienced 14 percent job growth between 2002 and 2008 (Table 4.4). The largest increases in jobs occurred in the manufacturing, education and health services, trade transportation and utilities, and local government sectors. The fastest growing sectors in terms of rate of growth were education and health services, manufacturing, professional and business services and local government.

### *4.2.2 Key Industry Sectors*

This section describes some of the major components of the County's economy.

#### Warehousing and Distribution

The largest employment sector in Cecil County is trade, transportation and utilities, which includes warehousing and distribution, as well as commercial/retail employers. As of 2008, this sector had 6,300 full-time jobs or more than one-in-five of the full-time jobs in the County. This figure represents a 13 percent increase over 2002.

**Table 4.4: Employment Trends, Cecil County, 2002-08**

| Industry | 2002 | | 2008 | | Change 2002-08 | | |
|---|---|---|---|---|---|---|---|
| | Units | Jobs | Units | Jobs | Units | Jobs | Job Growth (%) |
| **Total Employment** | **1,696** | **26,873** | **2,039** | **30,668** | **343** | **3,795** | **14%** |
| **Government** | 48 | 6,978 | 76 | 7,724 | 28 | 746 | 11% |
| Federal Government[1] | 28 | 1,250 | 27 | 1,250 | -1 | 27 | 1% |
| State Government | 7 | 333 | 6 | 323 | -1 | -10 | -3% |
| Local Government | 13 | 3,105 | 43 | 3,834 | 30 | 729 | 23% |
| **Private Sector** | **1,648** | **19,895** | **1,963** | **22,944** | **315** | **3,049** | **15%** |
| *Goods Producing* | *363* | *5,791* | *398* | *6,577* | *35* | *786* | *14%* |
| Natural Resources and Mining | 32 | 525 | 40 | 623 | 8 | 98 | 19% |
| Construction | 266 | 1,583 | 295 | 1,354 | 29 | -229 | -14% |
| Manufacturing | 65 | 3,683 | 63 | 4,600 | -2 | 917 | 25% |
| *Service Providing* | *1,282* | *14,098* | *1,565* | *16,367* | *283* | *2,269* | *16%* |
| Trade, Transportation, and Utilities | 438 | 5,582 | 469 | 6,332 | 31 | 750 | 13% |
| Information | 15 | 258 | 18 | 246 | 3 | -12 | -5% |
| Financial Activities | 115 | 724 | 188 | 787 | 73 | 63 | 9% |
| Professional and Business Services | 217 | 1,233 | 300 | 1,534 | 83 | 301 | 24% |
| Education and Health Services | 135 | 2,450 | 184 | 3,273 | 49 | 823 | 34% |
| Leisure and Hospitality | 206 | 2,991 | 231 | 3,241 | 25 | 250 | 8% |
| Other Services | 156 | 860 | 175 | 954 | 19 | 94 | 11% |
| **Unclassified** | **3** | **6** | **0** | **0** | **-3** | **-6** | **-100%** |

[1] See footnote to tables 4.1 and 4.3 for adjustments to federal employment.

*Source: Maryland Department of Labor, Licensing, and Regulation (DLLR)*

Cecil County has a significant distribution industry that benefits from the County's location on Interstate 95, US 40 and two rail corridors, and its proximity to major metropolitan centers. This industry sector also has relatively minor water and wastewater infrastructure needs, which has made it a viable industrial use in areas of the County that have had limited public infrastructure.

The largest existing facility is the 1.7 million square foot IKEA distribution center in Perryville, which employs 370 people. The General Electric/Holman Distribution center at Principio Business Park is the second largest facility in terms of size, with 1.1 million square feet. The second and third largest distribution facilities in terms of employees are Performance Food Group (265 jobs) on MD 279 north of Elkton and Burris Logistics (250 jobs) at Broadlands Business Park in Elkton.

In 2007, the Cecil County Economic Development Commission created a workgroup to develop a growth study compiling and analyzing data for use in policy and decision-making. The resulting *Growth Study* discussed the future of the distribution industry in light of the

County's efforts to diversify the local economy.[3] One of the key questions the study identified was whether the County should continue to actively pursue large distribution centers and warehouses. Many factors underlie this concern. Wages in this sector are generally lower than in the manufacturing and professional and business service sectors; warehousing supports fewer jobs per acre than these sectors; distribution facilities generate significant truck traffic; and developing more distribution facilities will reduce the amount of employment land available for other, higher wage purposes.

Since 2007, in light of this study, the County has focused economic development efforts on attracting jobs in sectors with higher wage structures that provide more secondary benefits and spinoff spending. The County does not offer tax incentives to companies seeking locations for warehouse and distribution centers but will otherwise support their development.

As the County grows, it will need commercial and retail establishments to serve the local population. Therefore, the retail segment of this sector likely will grow as the County does.


**North East Commerce Center provides over 345,000 SF of industrial space.**

## Manufacturing

Manufacturing has been an important element of Cecil County's economy for many years. Although the number of manufacturers is relatively small (63 employment units in 2008), together they generate 4,600 jobs, making manufacturing the County's second largest employment sector. Manufacturing also represented the fastest growing employment sector in the County between 2002 and 2008, in terms of the number of jobs, with 917 new jobs generated, a 25 percent increase from six years earlier (Table 4.4).

Cecil County is home to several large and innovative manufacturers that have continued to perform well in a challenging economy. The largest among these is W.L. Gore, with 2,600 employees across 13 locations in Cecil County, as part of its "eastern cluster" in the Delaware Valley. These facilities produce electronic interconnects, fabric laminates, industrial sealants, filtration media and membrane technologies. W. L. Gore also has a growing research and development operation at its Cherry Hill facility.

Alliant Techsystems Inc. (known as ATK) operates its Tactical Propulsion and Controls unit in Elkton with 795 employees, up from 350 a few years ago. ATK is one of the largest aerospace and defense contractors in the United States. Terumo Medical has two plants in Elkton employing 565 people who make cardiovascular equipment. The *Growth Study* noted

[3] The 2007 Growth Study was completed after the 2004 Cecil County Strategic Plan and shares much of its data.

that average weekly wages in manufacturing recorded the largest increase in Cecil County in the five years prior to 2007 due to increased demand for specialized labor.

Given the importance that manufacturing plays in the local economy, the County will need to continue its efforts to support workforce development, so that local residents have the skills needed to work in the evolving manufacturing sector (see Section 4.2.4).

## Education and Health Services

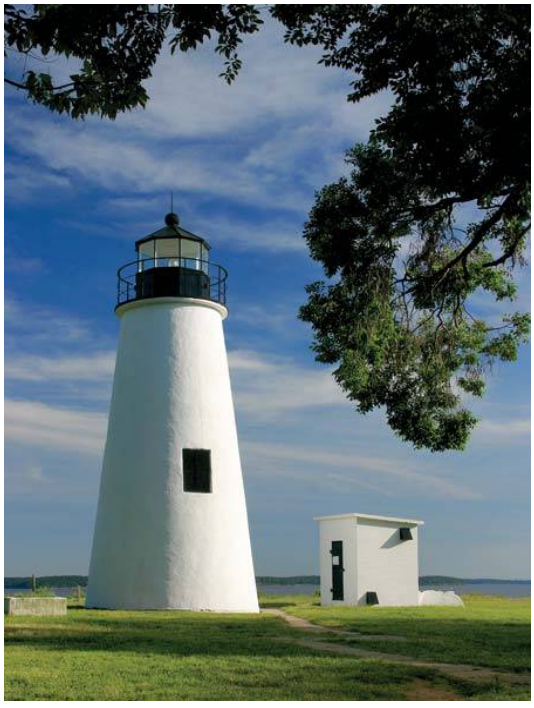
The fastest growing employment sector in Cecil County since 2002 has been education and health services. This reflects growth at Union Hospital of Cecil County, the Perry Point VA Center, as well as many smaller medical services and nursing care providers. As the local population ages, this sector is likely to continue to grow.

In terms of education, Cecil College is the fastest growing community college in Maryland, with enrollment growing more than 20 percent between 2005 and 2009, to 3,175 credit students. To serve this growing enrollment, Cecil College employs 300 people. The college plans to continue to expand enrollment at its campus in North East, a satellite facility in Elkton and a planned facility at Bainbridge in Port Deposit.

## Tourism

Cecil County's rural character, quaint small towns, 220 miles of shoreline, water-oriented sporting activities, equine industry, and accessibility to the Chesapeake Bay attract visitors from throughout the region. The County's proximity to Washington D.C., Baltimore, Philadelphia, and New York City provide opportunities to market the County's historic, cultural and natural resources to large populations within a short drive.

Cecil County's colonial history dates to the 17th Century when Captain John Smith established a settlement named Head of Elk near the confluence of Big Elk and Little Elk creeks, the area's oldest transportation corridors. Later, the Town, now named Elkton, became known as the "Marriage Capital of Maryland," drawing couples wanting to marry quickly to Cecil County.



**Elk Neck State Park features the Turkey Point Lighthouse, a National Register Site.**

Today the County has approximately 1,500 historic sites and structures, 50 of which are listed on the National Register of Historic Places. Significant historic resources include Elk Landing, the Mount Harmon Plantation, Principio Iron Works, Rodgers Tavern and the Turkey Point Lighthouse. The incorporated towns also feature many historic resources, including Historic South Chesapeake City (a village located along the southern bank of the Chesapeake and Delaware Canal) and the entire Town of Port Deposit, both of which are listed on the National Register, and the Big Elk Creek Covered Bridge.

Cecil County also contains many recreational and natural areas that draw visitors. Elk Neck State Park includes 2,200 acres of forests, cabins and campsites, as well as trails, a beach and the Turkey Point Lighthouse. It is also a popular destination for birdwatchers due to hawk migration patterns. The Fair Hill Natural Resources Management Area includes 5,600 acres of natural areas and 40 miles of trails. Together, these two state parks are the most popular

tourist destinations in Cecil County, accounting for 800,000 visitors in 2008, half of whom came from outside the County, according to the Cecil County Office of Tourism.

Other important resources that attract tourism include the Elk Neck Trail, Lower Susquehanna Heritage Greenway, and the East Coast Greenway. In 2001, Cecil County adopted the Lower Susquehanna Heritage Greenway Management Plan and it is appended by reference onto this 2010 Comprehensive Plan. The Heritage Plan documents the Susquehanna's cultural, natural and recreational resources and is designed to increase and enhance visitation in the region. Cecil County has several state-designated scenic byways that attract visitors, including MD routes 213, 222, 273 and US 1. MD 213 south of Chesapeake City is in the National Scenic Byways Program.

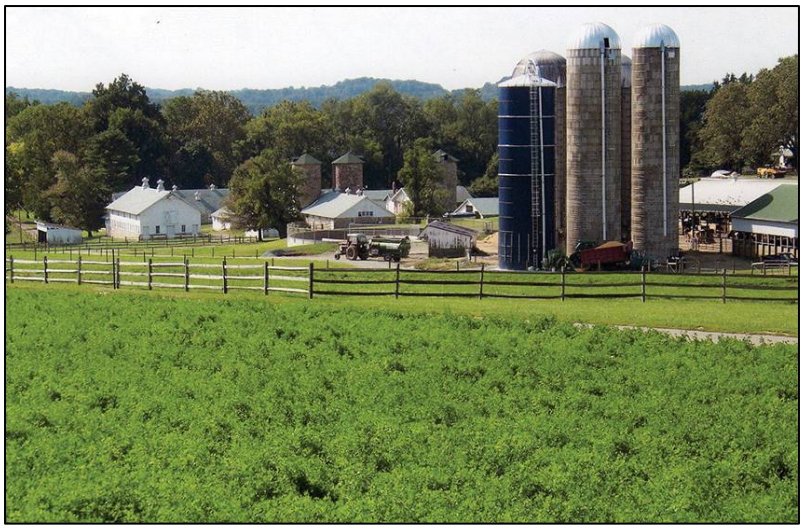
Leisure and hospitality, a category that includes tourism-related industries, accounted for 11 percent of the County's full-time jobs in 2008, although wages in this sector tend to be low (see Table 4.3). Expanding the base of tourism-related industries can help to diversify the local economy and provide economic opportunities for residents and businesses.

In 2008, voters approved gambling at five sites across Maryland, including one in Perryville. The proposed 138,000-square foot gaming parlor would be on 36 acres west of Perryville Road (MD 222) north of Interstate 95 in Perryville. The parlor, which is proposed to include between 500 and 1,500 slot machines, is scheduled to open in October 2010. The property is part of a larger 140-acre site proposed as an entertainment destination featuring shops, restaurants, entertainment venues, a theater, conference center and hotels. An economic and fiscal impact analysis completed for the Office of Economic Development in January 2009 estimated that the project, once completed in three proposed phases, would generate a total economic impact of $123 million locally and support 967 new jobs representing potential wages of $31.6 million.

## Agriculture

Agriculture remains an important component of Cecil County's economy, and the rural landscape defines the County's character. As of 2007, about 38 percent of the County's land area was in farms. The exact number of acres (85,206 in 2007) has varied in recent agricultural censuses but has been in the range of 85,000 acres, or slightly less than 40 percent of the County's land area, since at least 1992.

Table 4.5 summarizes key data about Cecil County's agricultural industry. These data show



**Agriculture is an important component of the County's economy and heritage.** *Photo Courtesy of Cecil Soil Magazine.*

several key trends:

- The number of farms in Cecil County has increased since 2002, but the average farm size has decreased. Although this increase may be surprising given the amount of growth in the County, it is not inconsistent with other Maryland counties, eight of which also saw increases between 2002 and 2007.
- The number of farm operators identifying agriculture as their primary occupation has increased with the number of farms, though the number is small (296).
- The market value per farm of agricultural products has increased steadily since 1997.
- The number of small farms (defined as smaller than 50 acres) has increased over time, while the number of large farms (180 acres or larger) has remained the same since 1997.
- The amount of acreage dedicated to corn and beans has increased as prices for these commodities have risen.
- The amount of acreage planted in wheat, forage and other cropland has decreased over time.

In 2007, prior to the 2007 Census of Agriculture, an *Agriculture Study* was prepared for the Office of Economic Development. The study included an extensive review of data, as well as interviews with stakeholders in the agricultural industry. Among the study's key findings were:

- Cecil County has not lost farms or farmland as rapidly as the State of Maryland as a whole
- Cecil County farmers report higher net cash farm income on average than their counterparts in the rest of the state. However, farms reporting net losses in Cecil County outnumbered net gainers by a ratio of approximately 3 to 2
- Farm incomes were neither high nor stable enough to promote high survival rates
- The County's horse breeding industry is in decline
- The next generation is not interested or prepared to guarantee agriculture's future in Cecil County
- Agri-tourism and horticulture represent promising opportunities

Virtually all interviewees in the study agreed that the greatest threat to the future of Cecil County agriculture is generational. According to the farmers interviewed, younger family members were generally not interested in farming, with many lured to nearby metropolitan areas in search of more lucrative opportunities.

Several interviewees suggested that the widespread lack of interest in farming was the result of a lack of awareness among young people about farm-related opportunities. These interviewees believe that agriculture-related courses should be available at all county high schools and that the county would benefit from a new trade school (see Chapter 8, Community Facilities).

## Mining

Mining has played an important role in the economic and employment history of Cecil County. The County's primary mineral resources are aggregates, including sand, gravel, stone, as well as clay. On average, approximately 3 to 3.5 million tons of sand, gravel, and stone are produced and sold annually by the County's three largest producers. In 2008, this sector provided 623 jobs in Cecil County, or two percent of all full-time jobs (see Chapter 10, Mineral Resources).

## Table 4.5: Agricultural Economic Data

| | 1997 | | 2002 | | 2007 | | Change 2002 to 2007 | |
|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Land in County (acres) | 222,655 | | 222,655 | | 222,655 | | | |
| Number of farms | 510 | | 468 | | 583 | | 115 | 25% |
| Land in farms (acres) | 86,419 | 39% | 77,089 | 35% | 85,026 | 38% | 7,937 | 10% |
| **Land in farms by land use (acres)** | | | | | | | | |
| Cropland | 62,168 | 81% | 56,603 | 73% | 60,147 | 78% | 3,544 | 6% |
| Woodland | 13,213 | 17% | 9,520 | 12% | 11,960 | 16% | 2,440 | 26% |
| Pasture | 6,517 | 8% | 7,446 | 10% | 8,040 | 10% | 594 | 8% |
| Other (house lots, roads) | 4,521 | 6% | 3,520 | 5% | 4,879 | 6% | 1,359 | 39% |
| **Number of Farms by Size** | | | | | | | | |
| 1-9 acres | 44 | 9% | 49 | 10% | 68 | 15% | 19 | 39% |
| 10-49 acres | 194 | 38% | 192 | 41% | 239 | 51% | 47 | 24% |
| 50-179 acres | 143 | 28% | 113 | 24% | 162 | 35% | 49 | 43% |
| 180-499 acres | 88 | 17% | 77 | 16% | 72 | 15% | -5 | -6% |
| 500-999 acres | 28 | 5% | 22 | 5% | 25 | 5% | 3 | 14% |
| 1000+ acres | 13 | 3% | 15 | 3% | 17 | 4% | 2 | 13% |
| **Market Value of Products Sold $ millions** | | | | | | | | |
| Crops (including nursery & greenhouse) | $22.70 | 39% | $30.20 | 44% | 44.1 | 46% | $13.90 | 46% |
| Livestock | $35.90 | 61% | $38.40 | 56% | $51.70 | 54% | $13.30 | 35% |
| Total | $58.70 | | $68.60 | | $95.80 | | $27.20 | 40% |
| Market Value of Land and Buildings $ millions | $367.40 | | $457.10 | | $653.90 | | $196.80 | 43% |
| **Farms by value of sales** | | | | | | | | |
| $24,999 or less | 381 | 75% | 342 | 73% | 403 | 69% | 61 | 18% |
| $25,000 and above | 129 | 25% | 126 | 27% | 180 | 31% | 54 | 43% |
| **Top crops (acres)** | | | | | | | | |
| Corn for grain | 19,570 | 31% | 18,760 | 33% | 21,970 | 39% | 3,210 | 17% |
| Soybeans | 14,203 | 23% | 13,849 | 24% | 18,006 | 32% | 4,157 | 30% |
| Forage (hay, grass) | 8,523 | 14% | 8,713 | 15% | 8,365 | 15% | -348 | -4% |
| Wheat | 6,639 | 11% | 6,724 | 12% | 6,589 | 12% | -135 | -2% |
| Other | 13,233 | 21% | 8,557 | 15% | 5,217 | 9% | -3,340 | -39% |
| **Principal Farm Operator Characteristics** | | | | | | | | |
| Farming as primary occupation | 248 | 53% | 255 | 54% | 296 | 51% | 41 | 16% |
| Other as primary occupation | 262 | 56% | 213 | 46% | 287 | 49% | 74 | 35% |
| Average age | 56 | | 57.3 | | 56.6 | | | |
| Hired Farm Labor (full and part-time) | *629* | | *1,423* | | *1,110* | | *-313* | *-22%* |

Note: Total County acreage (222,655) does not match other tables in this Plan because USDA uses a different map base.

*Sources: USDA, 2007, 2002 and 1997 Censuses of Agriculture*

### *4.2.3 County Economic Policy*

#### Cecil County Office of Economic Development

The Cecil County Office of Economic Development is responsible for coordinating and implementing the County's economic development strategy to increase jobs and capital investment. The Office of Economic Development partners with the Maryland Department of Business and Economic Development (DBED), Cecil College, the Chesapeake Science and Security Corridor (CSSC), the Cecil County Chamber of Commerce, the Susquehanna Workforce Network, the Wilmington Area Planning Council (WILMAPCO) and federal agencies to provide a variety of incentives and technical assistance to employers.

The Cecil County office of the Maryland Small Business Development Center Network (MSBDC) was established through a cooperative effort between the Maryland Small Business Development Center and Cecil College. The Small Business Development Center (SBDC) provides counseling, training and technical assistance in all aspects of small business management to emerging and small businesses. Its goal is to strengthen small and medium sized businesses, and contribute to the growth of the local economy.

#### Cecil County Growth Study

In 2007, the Office of Economic Development commissioned the *Cecil County Growth Study (Strategic Plan),* a detailed statistical analysis of the issues facing the County, intended to provide policymakers and stakeholders with information needed to adopt a coherent set of policies and principles to guide economic growth and development. Although the plan does not list specific goals, it states its "overarching purpose" is to help shape, channel and marshal growth to create better quality of life outcomes, given the growth forecast for the County by 2030.

The Strategic Plan plan offers six recommendations intended to promote economic growth and prosperity while securing the County's rural heritage and fiscal viability. These recommendations include:

1. Developing an aggressive County-led infrastructure strategy for the growth corridor.
2. Enabling the County to enact impact fees and excise taxes, and creating tax incremental financing (TIF) districts to spur redevelopment in areas characterized by low quality, unattractive development.
3. Moving the I-95 tollbooths to the Delaware border to support the potential for more intense and higher quality development in the county's growth corridor, particularly in and around Perryville and Port Deposit; and continuing support for commuter rail extensions linking Perryville and Elkton to Newark and Wilmington, Delaware.
4. Committing the County to concepts of clustering development and creating shared facilities that would permit more land to be set aside as open space and that would use land more efficiently.
5. Focusing the County's economic development efforts on recruiting and retaining high-wage service sector and research and development (R&D) jobs, including R&D efforts that take place within manufacturing contexts, spurring further economic development.
6. Designating a County Growth Coordinator to coordinate economic development activities and maximize the proportion of growth that takes place within designated growth areas.

The Offices of Planning and Zoning and Economic Development have taken on the role of growth coordinator. The other recommendations outlined in this report are discussed in this Comprehensive Plan.

### 4.2.4 Existing Economic Activity

Cecil County has nine business and technology parks, totaling more than 2,600 acres (Map 4.1). As of September 2009, approximately 1,200 acres were available for development (Table 4.6). This includes business parks in towns, such as a portion of Bainbridge in the Town of Port Deposit, the Upper Chesapeake Corporate Center and Triumph Industrial Park in the Town of Elkton, the North East Commerce Center in the Town of North East, and Perryville Industrial Park in the Town of Perryville. The business parks not in towns account for approximately 1,600 total acres, and 784 available acres as of 2009.

Each of these business parks are state-designated Enterprise Zones. Businesses that locate or create jobs in Enterprise Zones are eligible for property tax or state income tax credits.

Each of the industrial parks has existing buildings, ranging in size from 5,000 to 600,000 square feet, available for occupancy. A 600,000 square foot crossdock distribution facility, expandable to 1.2 million square feet, is available in the Principio Business Park. Construction has been completed on a 45,000 square foot flex/office building at the Cecil Technology Campus at Principio. The campus has been permitted for five buildings totaling 225,000 square feet.

Bainbridge represents the redevelopment of the former Bainbridge Navy Base, west of MD 222 and south of MD 276 in Port Deposit. The site includes 1,200 acres, of which approximately 350 acres have been set aside for employment uses and a campus for Cecil College. The remaining land will be developed as residential uses, except for a parcel containing the former Tome's School buildings, which are being refurbished as a retirement community.

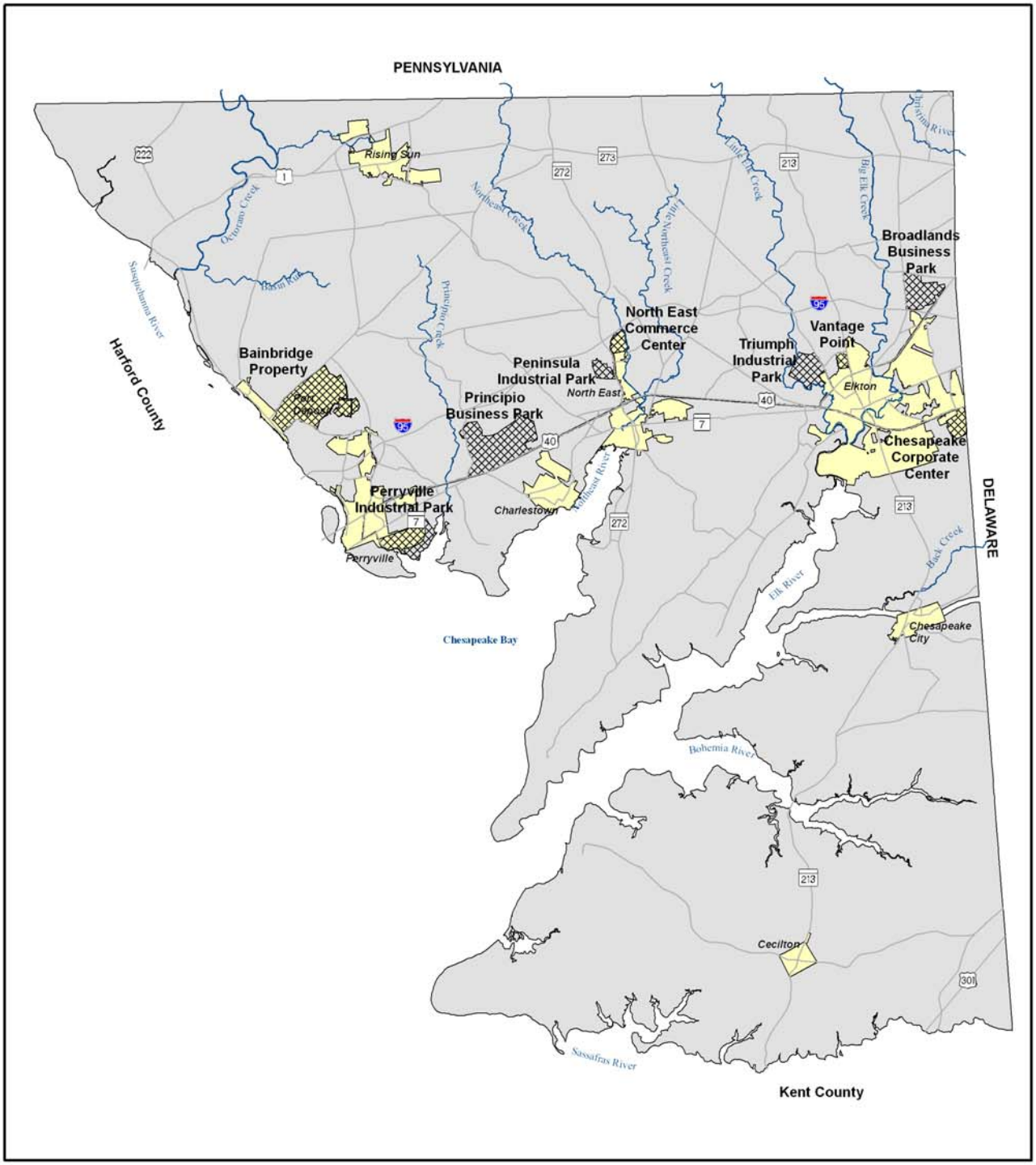
#### Major Economic Development Projects

Between 2005 and 2009, the County attracted nearly $200 million in new and expanded industrial investment, generating almost 4.4 million square feet of building space and approximately 1,850 jobs (Table 4.7). Most of this development was new construction. Employment areas that attracted multiple projects include the Triumph Industrial Park, North East Commerce Center, North East Business Center, Principio Business Park, the Upper Chesapeake Corporate Center and the Town of Elkton.

#### Commercial Areas

Commercial (retail) activity in Cecil County is concentrated in the towns of Elkton, North East and Perryville, as well as along the US 40 corridor within unincorporated areas of the County. Cecilton, Rising Sun, Charlestown, Port Deposit and Chesapeake City also have limited commercial areas primarily serving the local population. A number of villages (see Chapter 3, Land Use) also have some retail activity, reflecting the County's historical settlement and commercial patterns. One example of this village-type development is Conowingo/Kilbys Corner, at the corner of Rock Springs Road and US 1 in the northwestern part of the County.

**Map 4.1: Business Parks**




**Cecil County Business Parks**
2010 Cecil County Comprehensive Plan

Legend
- Municipalities
- Business Park
- Major Roads
- Major Streams

N
0 1 2 4
Miles

## Table 4.6: Business Parks, 2009

| Business/Technology Parks | Location | Acres | | Major Occupants | Infrastructure |
|---|---|---|---|---|---|
| | | Total | Available | | |
| Broadlands Business/Gore Industrial Park | Cecil County (I-95 and MD 279) | 313 | 90 | Burris Logistics, Michelin | Water, sewer, natural gas, broadband |
| North East Commerce Center | North East | 93 | 15 | New England Motor Freight, Herr's Foods | Water, sewer |
| Peninsula Industrial Park | Cecil County (I-95 and MD 272) | 100 | 4 | Composites USA, Tim Plastics, Buildings First Source | Water, sewer, broadband |
| Triumph Industrial Park | Cecil County (MD 279 and MD 545) | 375 | 90 | Colonial Metals, Liqui-Box, Veltec, Fluoron | Water, sewer, natural gas |
| Upper Chesapeake Corporate Center | Elkton | 149 | 35 | W.L. Gore, Estes Trucking, Delmar Surgical, Cecil County Government | Water, sewer, natural gas, broadband |
| Perryville Industrial Park | Perryville | 373 | 0 | IKEA | Water, sewer, natural gas |
| Principio Business Park | Cecil County (US 40 and Belvidere Road) | 800 | 600 | General Electric/Holman, Perryville Cold Storage, General Resonance | Water, sewer, broadband intended but not available as of 2009 |
| Bainbridge[4] | Port Deposit | 350 | 350 | None (Cecil County Public Library and Cecil College, under development) | Water, sewer, natural gas |
| Vantage Point | Elkton | 59 | 59 | None | Utilities nearby but not on site |
| **Total Business/Technology Parks** | | **2,612** | **1,243** | | |
| **Total within Cecil County (outside towns)** | | **1,588** | **784** | | |
| **Percentage within Cecil County (outside towns)** | | **61%** | **63%** | | |

Source: Cecil County Economic Development

[4] The Bainbridge site includes 1,239 acres, 350 of which have been designated for employment uses.

**Table 4.7: Major Industrial Construction and Expansion, 2005-09**

| Type of Development | Square feet | Jobs | Investment ($millions) |
|---|---|---|---|
| Expansions | 1,414,400 | 529 | $43.95 |
| New Construction | 2,965,000 | 1,335 | $150.74 |
| **Total** | **4,379,400** | **1,864** | **$194.69** |

*Source: Cecil County Office of Economic Development*

## 4.3 Discussion of Issues

### *4.3.1 Employment Areas*

One of the primary goals of the Comprehensive Plan is to make sure the County has sufficient land for employment, commercial and business uses, so as the County grows the employment base can increase to provide jobs for residents, reduce the need for residents to commute outside the County to work, and to increase the tax base that supports public services.

The Comprehensive Plan projects that Cecil County will gain 19,500 jobs between 2010 and 2030, a 47 percent increase. Identifying employment areas sufficient and appropriate for this growth was a central task of the planning process. As noted in Chapter 3, Land Use, one of the key differences between this plan and the 1990 Comprehensive Plan is the addition of employment areas as a land use category. Although thousands of acres are zoned for business, industrial and commercial uses, this is the first time the County has had a specific Employment designation in the Comprehensive Plan. This action reflects Cecil County's interest in reserving land for economic development purposes to stimulate economic development, especially in employment sectors with higher-paying jobs, in particular, office-based employment.

In addition to existing business and technology parks (Section 4.2.4), new areas along rail lines adjacent to existing industrial uses and along major roads are designated as Employment areas. The Future Land Use map designates approximately 5,700 acres for Employment, plus 1,450 acres for Mixed Use, a significant portion of which is intended for employment uses (Table 3.6).

Employment areas are intended to provide for major industrial, manufacturing, office, and business uses and economic development opportunities in business parks and campuses near major roads. By adding this land use category, the County intends to promote economic development in areas served by infrastructure and best located to generate high-wage employment while protecting these areas for future employment. Many of these locations are along the US 40 corridor and CSX rail line.

Mixed Use areas offer opportunities to integrate residential, employment, and commercial uses. These areas have been designated to support US 40's role as the County's primary business corridor and provide a land use framework that will enable the County and State to coordinate land use with future transportation facilities, including rail and bus transit. (More information on the development character of the US 40 corridor is included in Chapter 3, Land Use.)

Commercial (retail) areas do not have their own land use category but could be located in any land use district, at intensities consistent with the land use district's density designation. Limited commercial uses also are permitted in Villages, consistent with existing development and their historic development pattern.

In 2010, Cecil County had 5,700 acres zoned for light or heavy manufacturing. This figure includes scattered industrial sites throughout the County. An additional 1,800 acres were

zoned for commercial use (including the Business General, Business Intensive and Business Local categories). The incorporated towns also include scattered employment sites not located in business parks. The industrial and employment sites can be located in any land use category at an intensity appropriate for the land use district.

The Comprehensive Plan identifies approximately 2,900 acres for new employment uses (Table 4.8). This includes the land available in business and technology parks (Table 4.6), as well as Employment areas that are not currently zoned for employment. In addition, it is the Plan's goal to develop 70 percent of the Mixed Use Employment and 30 percent of the Mixed Use Residential area as employment uses. This would yield another 688 acres (557+131) for employment in the Mixed Use areas.

**Table 4.8: Land Available for Employment Uses, 2009**

| Land Available for Employment Uses | Acres |
|---|---|
| Business and Technology Parks | 1,243 |
| Employment areas not in Business Parks | 955 |
| Mixed Use Employment area | 557 |
| Mixed Use Residential area | 131 |
| **Total** | **2,886** |

*Source: ERM*

At a low density of 15 employees per acre, typical of one-story industrial development, the land identified in Table 4.8 would support more than 43,000 jobs, more than twice the projected job growth. Office-based employment can average 150 employees per acre in multi-story buildings, which would use land more efficiently and generate a higher yield of jobs. The more successful the County is at encouraging the development of office jobs, as envisioned in this Comprehensive Plan, the better able it will be to concentrate employment density and job growth and have land available for economic development projects and utilize public transit.

Table 4.8 does not include scattered industrial sites in the County or employment areas in Towns not located in business parks. Nor does it include the potential of redevelopment of existing employment areas. Therefore, the potential yield of employment lands designated in the Plan is higher than 43,000 jobs.

### *4.3.2 Infrastructure: Sewer, Water, Roads and Broadband*

The 2007 *Cecil County Growth Study (Strategic Plan)* highlights the need for the County to take the lead in developing infrastructure in growth areas. In the past, the County has relied on the municipalities to supply infrastructure – primarily sewer and water service – to these areas. However, complexities between the County and some of the towns in the Growth Area have complicated the implementation of this effort, primarily in regard to residential development. The County will need to continue to lead this effort to ensure that the provision of infrastructure is consistent with its economic development goals.


**North East Commerce Center offices of Delmarva Power, which provides power for much of Cecil County.**

The provision of public infrastructure, including roads in addition to water and sewer, is critical to attract and retain employment. All of the county's

business and industrial parks (Section 4.2.3) have water and sewer service. A few new employment areas designated in this plan lack water and sewer, including the area west of MD 316 and across from Broadlands Business Park, an area near Childs along the CSX line north of I-95 and west of MD 213, an area west of MD 213 north of Cherry Hill Middle School, and an area northeast of the Town of Rising Sun.

As these employment areas develop, road infrastructure will need to be expanded and upgraded. In particular, the western portion of the Elkton Loop Road described in Chapter 5, the Transportation Element, linking MD 781 (Delancy Road) to MD 279, through Elkton West to Marley Road and to US 40 will provide access to employment areas and the Mixed Use Residential area envisioned north of US 40. The intersections of this loop road with major north-south roads such as Appleton Road (MD 316), Singerly Road (MD 213) and Blue Ball Road (MD 545) could become mixed-use "nodes."

Intersection upgrades are needed at the US 40 intersections with MD 213 in Elkton and MD 222 in Perryville. A north-south connection between US 40 and MD 7 would serve the Mixed Use Employment area.

Another important infrastructure issue related to economic development is the location of the tollbooths on Interstate 95. Just north of the Susquehanna River along the northbound lanes, the tollbooths serve as an economic barrier between areas to the south, including the Baltimore metropolitan area, and provide an incentive for through-traffic to divert to local roads to avoid or pay lesser tolls.

The *Growth Study* attributed the relative lack of economic activity in the western part of the County, especially in Perryville and Port Deposit, to the tollbooth location. Relocating the toll to a point closer to the state line would remove this barrier between Cecil County and the rest of Maryland. Such an action also would support the County's efforts to maximize the economic benefits of BRAC, as it would remove an obstacle between Cecil County and the Aberdeen Proving Ground. The relocation of the tollbooths also would support the effort to establish the Perryville area as a regional entertainment destination.

In 2004, the *Maryland Eastern Shore Broadband Strategic Plan*, conducted in conjunction with DBED, Maryland's Technology Development Corporation, the Tri-County Council for the Lower Eastern Shore and the Mid-Shore Regional Council, concluded that the Eastern Shore suffers limited access to competitively priced high-speed communication technologies that are widely available in urban areas.[5] As of 2010, not all of the County's existing and proposed employment areas have broadband service, and rural areas also lack access to high-speed Internet service. Working in partnership with service providers can help to fill this gap.

## Financial Tools

The infrastructure improvements described in the previous section will require resources. The *Growth Study* emphasizes the need for the County to take the lead in assuring the provision of infrastructure to ensure that growth is directed to areas the County has designated for it. County government should look at tools to finance this infrastructure, including impact fees and excise taxes, both of which were recommended in the past.

The need to diversify the financing tools the County has available, using special taxing district and Tax Increment Financing districts (TIFs), for example, will become more acute as growth occurs.[6] Without these tools, the County will be dependent upon property taxes, bonds, and

[5] *The Maryland Technology Development Corporation (TEDCO), the Tri-County Council for the Lower Eastern Shore of Maryland, the Mid-Shore Regional Council and the Maryland Department of Business and Economic Development (DBED) are working together to expand the Eastern Shore's communications infrastructure capacity and competitiveness. The Maryland Eastern Shore Broadband Strategic Plan seeks to resolve the lack of quality access on the Shore by determining best practices to use the region's assets, analyzing and defining critical gaps in infrastructure, and providing specific solutions for all counties on the Eastern Shore.*

[6] Cecil County has authorized TIFs on three occasions, although their use was not executed.

state and federal aid (when available) to pay for necessary infrastructure improvements. Other financial tools and approaches are discussed in detail in Chapter 11, Implementation.

### 4.3.3 Base Realignment and Closure (BRAC)

The Department of Defense's Base Realignment and Closure (BRAC) program is expected to have significant impacts in Cecil County. BRAC is a long-term effort by the Federal government to consolidate facilities for the Armed Forces and make these facilities more efficient. In 2005, the Department of Defense announced the most recent round of realignments and closures, actions that would relocate functions from Fort Monmouth in New Jersey to the Aberdeen Proving Ground (APG) in Harford County.

BRAC is expected to bring 8,200 jobs to APG and generate almost 28,000 direct, indirect and induced jobs within 40 miles of the base. In 2007, the County's *BRAC Action Plan* estimated that five percent of these jobs were likely to locate in Cecil County. The growth in jobs will spur population growth as well. As discussed in the BRAC Action Plan. Cecil County would receive about 12 percent of the projected population growth associated with BRAC at APG, or more than 5,000 residents.

The BRAC Advisory Panel, a group of Cecil County officials and residents, developed the recommendations in the BRAC Action Plan and expressed concern that the County does not have sufficient land zoned for office, industrial and commercial uses that is "fully approved and permitted and available for immediate use," in response to the demands of BRAC. The lack of commercial office space was seen particularly acute, given the lack of available office space in the County.

This Comprehensive Plan responds to the needs generated by BRAC by designating employment areas in strategic locations along major transportation routes. The Plan also designates two large mixed-use areas along US 40. The Mixed Use Employment area is envisioned as an attractive location for master planned office parks interspersed with retail and residential uses. This area would be a primary location for multi-story office uses and provide a prime "address" for companies locating in Cecil County.

### 4.3.4 Affordable Housing

The availability of adequate affordable and workforce housing can encourage businesses to expand and locate in Cecil County. The County is more affordable compared to adjacent counties like Harford and New Castle, and it would be well positioned to build upon this advantage by increasing infrastructure availability in the Growth Corridor.

The *BRAC Action Plan* specifically noted that workforce housing is a critical component of the County's business development and growth strategy. The jobs generated by BRAC will help to diversify the local economy and bring higher-wage jobs to the County. However, not all of the jobs locating in Cecil County will be high income, so provisions are needed to assure that a range of housing at various price points are available. The BRAC Advisory Panel envisioned mixed-use development and incentives to develop affordable units within the growth corridor, as well as transportation improvements and amenities that make the growth corridor an attractive place to live, as key to the County's success in maximizing the benefits of BRAC.

Chapter 9, Housing, explores affordable and workforce housing in greater detail.

### 4.3.5 Workforce Development

The 2007 *Cecil County Growth Study (Strategic Plan)* highlighted some of the challenges Cecil County will face as the local economy evolves with BRAC and the development of higher-wage and higher-skilled jobs. The County's labor force participation rate has been declining since 1990, especially among men, and is projected to decline through 2030, according to data from the Maryland Department of Planning. Part of this decline is traced to the aging of the population, but it is also tied to the County's educational attainment. Of the

population aged 25 and older in 2005, 13 percent of County residents had at least a bachelor's degree, compared to 19 percent of Maryland residents, according to the Census Bureau's 2007 American Community Survey.

With jobs demanding a higher skill level, many residents may find it more difficult to get a job locally as the economy evolves. A number of interviewees cited in the *Cecil County Growth Study (Strategic Plan)* noted the lack of availability of technically proficient labor, including workers with specialized skills in engineering, health and information technology. Both the *Growth Study (Strategic Plan)* and *BRAC Action Plan* noted the need for more workforce development programs, to augment the classes provided by Cecil College and the Cecil County Public Schools.

These efforts can focus on vocational offerings at the high school level (carpentry, automotive, HVAC, plumbing, electrical), as well as Science, Technology, Engineering and Math (STEM) programs at all levels from kindergarten through college. Adult and workforce education also can take place through the Small Business Development Center and Business Training Resource Center.

### *4.3.6 Agriculture*

Land in farms in Cecil County has remained fairly stable since 1992 and the number of farms has risen slightly, reflecting a shift from large- and medium-sized farms to smaller farms (Table 4.5). The agriculture industry and agribusiness face a number of challenges.


**Scheeler Seeds, LLC, located near Cecilton, has been supplying seed to farmers, landscapers and homeowners in and around Cecil County for 25 years.**
*Photo Courtesy of Cecil Soil Magazine*

Much of the most productive agricultural land (and prime soils) are in the northern part of the County, part of a large agricultural region that extends through southern Pennsylvania. This area is also the portion of the County most affected by rural residential development since 1990 (see Chapter 3, Land Use). As large tracts are parcelized and rural areas suburbanize, the County faces the potential of losing the critical agglomeration of rural lands that sustain its agriculture industry.

Directing growth to Growth Areas is one way the Comprehensive Plan addresses this issue. But other measures are needed to support agriculture, especially among smaller farmers whose families have farmed their land for generations. For these farmers, the monetary value of their land for future development can outweigh the benefits of agriculture, creating an incentive to sell their farms for residential uses when this option is available.

Supporting farmland preservation, including through an attractive Transfer of Development Rights program, promoting agribusiness by expanding the types of activities considered to be value-added agricultural related enterprises as permitted uses, and expanding permitted sales so as not to be strictly limited to agricultural products can help to generate more income for farmers and help to support the County's agriculture industry.

## 4.4 Fisheries

State law requires that all counties located on tidal waters include a Fisheries Element in their Comprehensive Plan, focusing on the designation of areas for loading, unloading, and processing finfish and shellfish, and for docking and mooring commercial fishing boats and vessels.

**Recreational fishing is popular along the County's shores.**
*Photo Courtesy of Cecil Soil Magazine.*

A handful of commercial fishing operations are based in Cecil County. Although more than 200 individuals from the County held state-administered commercial fishing licenses in 2009, a lack of local facilities limits the ability to offload catch in the County. No commercial docks operate in the County, and there are only 13 publicly owned boat ramps, despite the County's 220 miles of shoreline.

According to the Maryland Department of Natural Resources, fishing in local waters yielded almost 2 million pounds of catch in 2008 valued at $1.4 million (Table 4.9). This represented about three percent of the total catch in Maryland and two percent of the total value. These figures account for commercial fishing in the Elk River, Bohemia River, Northeast River, Susquehanna Flats, Susquehanna River, Sassafras River and Upper Chesapeake Bay region. The data do, however, include segments of the rivers not in Cecil County.

### Table 4.9: Total Fish Catch in Cecil County and Maryland, 2008

| | Total Catch in Cecil County-Area Waters | | State of Maryland Totals | | Share of State Total from County-Area Waters | |
|---|---|---|---|---|---|---|
| **Year** | **Pounds** | **Dollars** | **Pounds** | **Dollars** | **Pounds** | **Dollars** |
| 2008 | 1,953,601 | $1,439,913 | 59,862,351 | $74,886,212 | 3% | 2% |

*Source: Maryland Department of Natural Resources*

In addition to commercial fishing, two wholesalers operate in the County.

A 2003 *Tourism Industry Impact Study* prepared for the Office of Economic Development found that, of 804 people surveyed, 187 or 18.4 percent of visitors came to Cecil County for fishing, creating 96 (29.9%) of 321 overnight stays. They also accounted for 91 (18.8%) of 483 day trips.

Encouraging recreational fishing will remain a key component of the County's tourism strategy.

## 4.5 Policies and Actions

1. Encourage the development of flex space/office uses along the US 40 corridor, especially in the Mixed Use areas, where they can be integrated with residential and commercial/retail uses.
2. Focus the Mixed Use area between US 40 and MD 7 west of Elkton on employment uses, in campus-like office settings, supporting the County's goal of making US 40 its primary business corridor and center for economic development and providing opportunities for office uses.
3. Make available a listing of all commercially and industrially zoned land that can be developed as office uses in support of BRAC.
4. Provide infrastructure, including water, sewer and roads, to designated employment and mixed use areas.

5. Continue efforts to relocate the tollbooths on Interstate 95 to the Maryland-Delaware state line.
6. Support the economic viability of farming, equine, forestry and related business activities.
    a. Review the need to expand the types of activities considered to be value-added agricultural related enterprises as permitted uses in the Resource Protection and Rural Conservation areas (see definition of agriculture in the zoning regulations).
    b. Consider expanding permissible agriculture and forestry support enterprises in the Rural Conservation and Resource Protection areas, for example, add farm implement servicing as an accessory use to farm implement sales, which is currently permitted by special exception.
    c. Review standards for retail on-site sales on land not zoned for business use (currently addressed in the zoning regulations as farmers markets and roadside stands). Consider expanding permitted sales so as not to be strictly limited to agricultural products produced by the owner or within the immediate neighborhood, though County products should be the preponderance of goods sold, with the balance coming from the local region.
7. Promote tourism by continuing to build upon the County's character, including small towns, rural agricultural enterprises, heritage, scenic byways, water and equine related recreational opportunities including access to the water, and County and State parks. Coordinate with the State, towns, and businesses to attract tourists from nearby major population centers, especially to the Lower Susquehanna Heritage Greenway trail system and other off-road and on-road trails.
8. Take advantage of the freight rail lines that traverse Cecil County by promoting this asset as an economic development opportunity and directing employment uses that rely on fuel-efficient cargo operations to designated employment areas along rail lines.
9. Encourage and support the provision of broadband high-speed internet services / telecommunications to commercial, industrial, governmental, and residential users in the Growth Areas to advance the economic, essential services, and cultural development of the County. Work with service providers to extend broadband to other areas of the County so that all residents can be served.
10. Encourage the training and development of the local labor force to fulfill the future needs of local industry, especially in science, technology, engineering and math. Continue to work with Cecil College, the Cecil County Public Schools and other partners to expand workforce development programs.
11. Explore the potential to develop a commercial fishing dock in Cecil County to provide opportunities for the offloading of seafood.

# 5 Transportation

## Summary

This Chapter describes the countywide transportation system, including roads, bus and rail transit systems, pedestrian facilities, bicycle facilities, and other elements. Cecil County's vision for its future transportation network is a multimodal system that meets the mobility and accessibility needs of its residents and employees through a combination of roads, transit, and non-motorized facilities. The extension of MARC and SEPTA commuter rail service along the I-95/US 40 corridor (and the development of a supporting local transit network) is a particular priority.

Full development of such a system will take many years, likely beyond this Plan's 2030 horizon. This Chapter identifies transportation improvements and policies that are needed to support the County's 2030 projected population and employment, improve the function and safety of the transportation system, and build towards the County's long-range vision. The local transportation needs within Cecil County's eight towns are addressed by each town's individual Comprehensive Plan.

**The MARC station in Perryville**

## Transportation Needs Analyses

Many of the recommendations in this Comprehensive Plan are based on the 2007 Cecil County Roadway Improvement Strategic Plan, prepared for the Department of Public Works (DPW). That document focused on 2007 and future (2030) traffic volumes, safety, transit, and other transportation network factors related to the I-95/US 40 corridor.

Separate from the Strategic Plan, as part of the Comprehensive Plan development process, the Comprehensive Plan's land use and transportation recommendations were modeled to evaluate 2008 and 2030 conditions, as well as conditions at buildout. A description of this model and its results is in Section 5.2.4 and, in more detail, in the Comprehensive Plan Appendix.

While this Transportation chapter focuses on the County's transportation needs through the year 2030, the transportation buildout analysis highlights the need to think beyond the 2030 horizon. In particular, prior to 2030, the County will need to plan right of way expansions and acquisitions that will be necessary to meet the County's transportation needs beyond 2030.

## 5.1 Goals and Objectives

The Comprehensive Plan's transportation goals and objectives are:

1. Provide a multi-modal public transportation system, including road, rail, bus, pedestrian, and bicycle, that meets the needs of residents and workers in terms of safety, mobility, and convenient access to everyday destinations.
2. Expand the road network in the Growth Corridor to increase connectivity and provide alternate route options, especially through and around the towns and north-south between the US 40 and I-95 corridors.
3. Develop US 40 into the County's primary business corridor; preserve capacity, maintain free traffic flow, enhance its visual appearance, expand transit, and pedestrian, and bicycle options.

4. Increase transit options (bus and rail) to increase transportation choices and reduce automobile trips. Establish commuter rail transit and infrastructure to serve the Designated Growth Area, including its five towns.

## 5.2 Roads

### *5.2.1 Road Network*

Roads within Cecil County are owned and maintained primarily by the Maryland State Highway Administration (SHA), the County, and the eight municipalities. Cecil County's major roadways are shown on Map 5-1. The primary routes in Cecil County connect to Harford County to the west and New Castle County, Delaware to the east. These include I-95, US 40, US 1 (which turns north into Chester County, PA), and MD 273. MD 213 is the County's primary link to the Delmarva Peninsula. Other north-south routes, including MD 222/US 222 and MD 272 link the I-95/US 40 corridor to Pennsylvania.

#### State

Cecil County is within the Maryland State Highway Administration's (SHA) District 2, headquartered in Chestertown. SHA and the Maryland Transportation Authority (MdTA), which is responsible for toll facilities, own and maintain approximately 200 miles of roadway in Cecil County.

#### County and Municipal Roads

The Roads Division of the Cecil County Department of Public Works builds and maintains County roads and bridges. The eight incorporated Towns within the County are responsible for operation and maintenance of their local roads. These County- and locally-maintained facilities include approximately 980 miles of roads and 139 bridges.

#### Functional Classification

Functional classification groups roadways into a hierarchy based upon the type of service they are intended to provide to a community. Roads work together as a system to provide for travel in a region, striving to simultaneously provide access to property and travel mobility. Local roads provide land access, arterials provide mobility for through traffic, and collectors bridge the gap between the functions of land access and mobility.

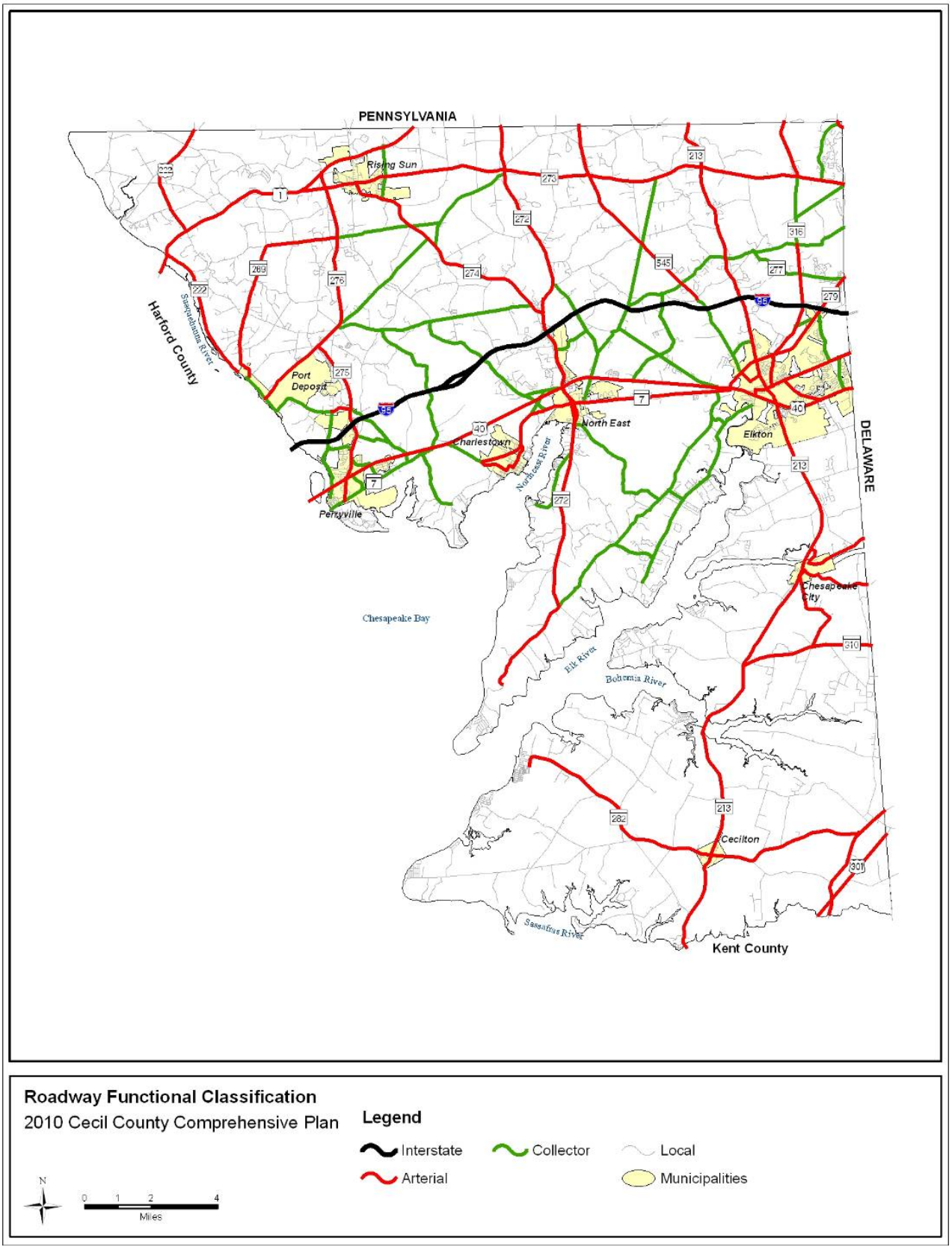
The classification system is used for federal, state and local highway programs and can be used for a variety of other planning purposes, such as prioritizing maintenance and snow removal. The Comprehensive Plan defines four roadway classifications (from highest to lowest): interstate, arterial, collector, and local. These classifications are shown on Map 5.1, which also serves as the Official Cecil County Roadway Classification Map.

### *5.2.2 County Traffic Trends*

In 2009, for the most part, traffic flows well in Cecil County. Traffic volumes are relatively low, and most roads experience free-flow conditions with no delays, and only a few road segments and intersections have poor levels of service—defined in this plan as Level of Service (LOS) E or F—at certain times.[1]

[1] Level of Service (LOS) analyses assign a letter grade, ranging from A to F, to roadway segments and intersections. Level of service is determined by evaluating factors, including capacity, speed, and delay. LOS A represents the very best conditions, where the driver experiences very little delay. LOS F represents the worst conditions, where congestion and delay are significant or an intersection is unable to serve the traffic demand. LOS D (or better) is considered acceptable in Cecil County, while LOS E and F are generally considered unacceptable.

## Map 5.1 Cecil County Roadway Functional Classifications



SHA monitors traffic volumes at a number of locations throughout Cecil County. Average Annual Daily Traffic (AADT) counts for these locations are shown in Map 5.2. I-95 and US 40 carry the largest traffic volumes in the County. The highest AADT in the County is nearly 89,000 vehicles per day (vpd), along I-95 near MD 272. Although high, this volume is indicative of the County's rural/suburban position in the Baltimore-Philadelphia corridor. For example, AADT on I-95 near I-695 in Baltimore County is approximately 160,000 vpd.

Map 5.3 shows the average annual percentage change in AADT since 1998. There are several trends worth noting:

- Change in AADT at monitoring locations in Cecil County generally ranged from a decline of approximately three percent per year (over the 10-year analysis period) to an increase of more than five percent per year. By comparison, traffic growth was approximately 2.0 percent statewide and 1.4 percent in District 2 during the same period.
- Traffic volumes have declined in some locations, most notably on MD 213 in and north of Elkton, south of US 40 on MD 272, and on US 40 just west of North East.[2]
- Despite declines in some specific locations, overall traffic volumes along I-95 and US 40 grew by about one percent per year, or 50,000 vpd overall since 1998.
- Traffic volumes grew at all monitoring locations along US 1 and MD 273 in the northern rural area. Overall, traffic on these two roads grew by about 1.6 percent per year.
- Traffic volumes on MD 272 north of I-95 also grew by 1.6 percent per year.

### *5.2.3 Planned Road Improvements*

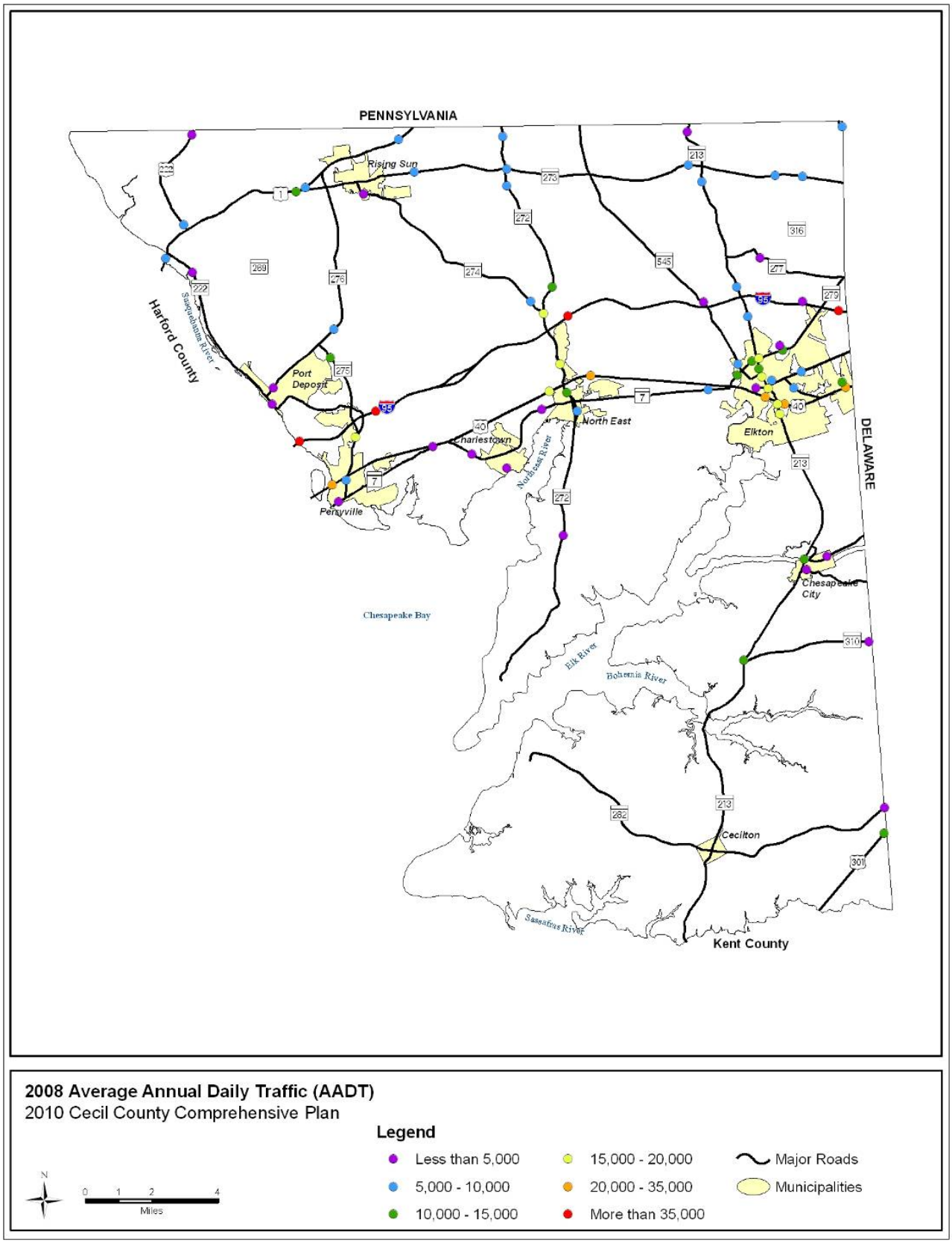
#### State Roads

SHA identifies highway improvement needs in the six-year Consolidated Transportation Program (CTP), which is part of the Maryland Transportation Plan. Cecil County projects in the 2009-2014 CTP include deck replacement on the Hatem Bridge (US 40 over the Susquehanna River) and a few small maintenance projects.

SHA also maintains a Highway Needs Inventory (HNI) which is a longer-range list of needs on state-maintained highways. The HNI is updated by SHA every two years and it serves as the technical basis for projects to be added into the state transportation capital budget or the CTP. Since transportation needs often exceed available state transportation funding, the HNI often identifies projects for which funding has not yet been identified. Table 5.1 shows the projects listed in the HNI for Cecil County. The County also wishes to evaluate a potential new I-95 interchange between MD 222 and MD 272, although the eventual need for and implementation of this interchange is likely tied to long-term redevelopment of the Mineral Extraction Area.

[2] This finding is counterintuitive, given the overall traffic growth in Cecil County and statewide, and may not reflect the experience of Cecil County residents. Construction, temporary traffic patterns, or faults in SHA traffic monitoring equipment may explain these data.

## Map 5.2 Average Annual Daily Traffic, 2008



## Map 5.3 AADT Trends, 1998-2008

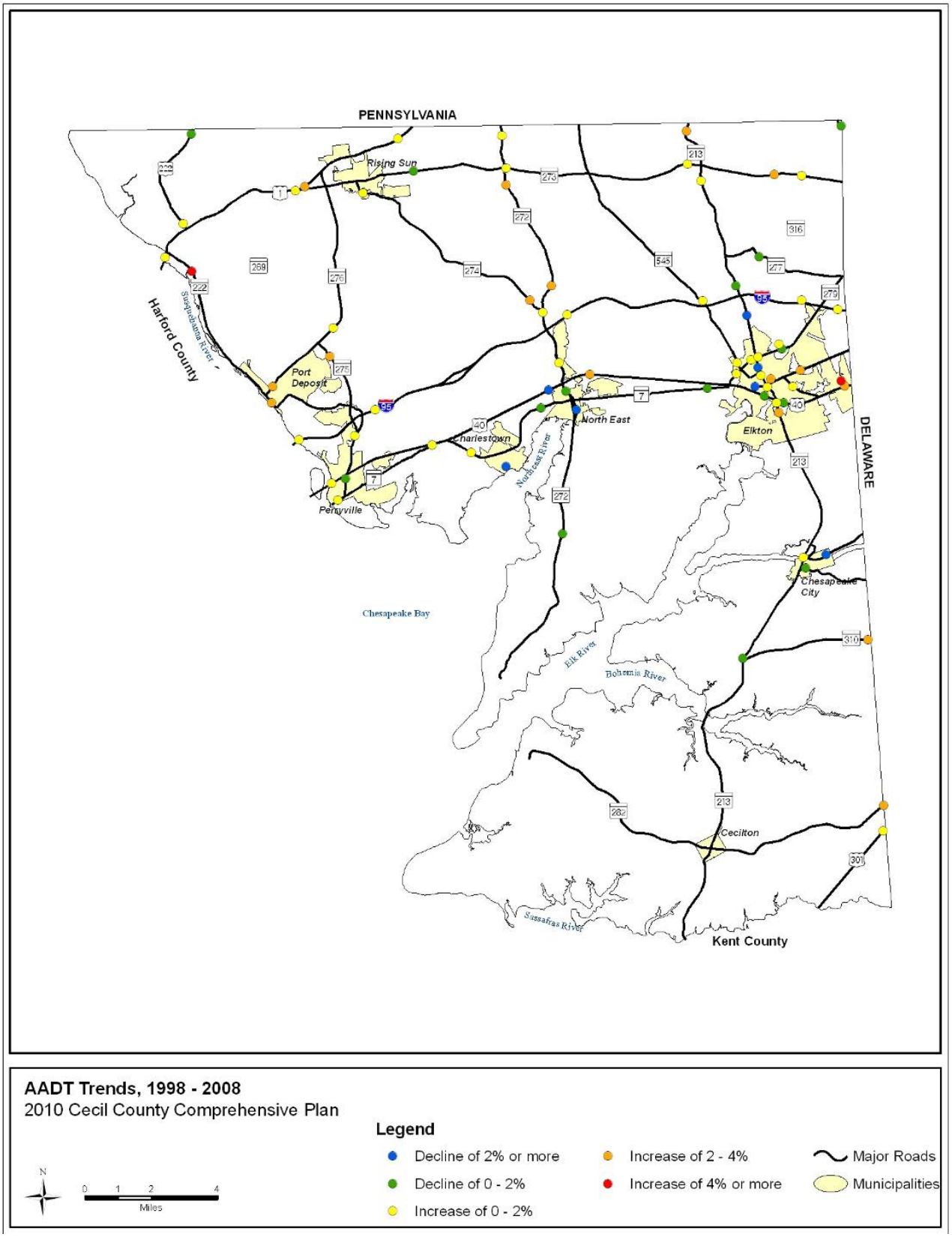


**Table 5.1: Highway Needs Inventory Projects in Cecil County**

| Facility | Type of Improvement |
|---|---|
| US 40, from MD 279 to state line | Divided highway reconstruction. |
| US 301, from Kent County to state line | Access control improvements |
| MD 7, from Charlestown to MD 272 | Two lane reconstruction. |
| MD 213 | |
| • From MD 285 to US 40 | • Divided highway reconstruction. |
| • US 40 to MD 279 | • Multi-lane reconstruction. |
| • North of Providence Road to MD 273 | • Two lane reconstruction. |
| MD 222 | |
| • US 40 to MD 275 | • Multi-lane reconstruction. |
| • MD 275 to Bainbridge entrance | • Two lane reconstruction. |
| MD 272 | |
| • North end of couplet to US 40 | • Multi-lane urban reconstruction. |
| • US 40 to Lums Road | • Divided highway reconstruction. |
| MD 273, from Rising Sun to Sylmar Road | Two lane reconstruction. |
| MD 279 | |
| • From MD 213 to MD 316 | • Multi-lane reconstruction. |
| • North of US 40 to west of MD 213 | • Divided highway reconstruction. |

*Source: SHA. Highway Needs Inventory*

Priorities for upgrades to Cecil County's road network are also influenced by regional planning conducted by the Wilmington Area Planning Council (WILMAPCO)—the Metropolitan Planning Organization (MPO) for Cecil County and New Castle County, DE. The WILMAPCO 2030 Regional Transportation Plan[3] lists three projects in Cecil County:

- I-95 (entire length in Cecil County), widening of one lane in each direction;
- MD 272 (US 40 to Lums Road) as described in Table 5.1; and
- MD 213 reconstruction (2 to 4 lane divided), Frenchtown Road to US 40.

## County Roads

Cecil County's 2010-2014 Capital Improvement Plan (CIP) includes funds for upgrades to Lums Road, Oldfield Point Road, Old Elk Neck Road, Racine School Road, and Theodore Road. The CIP also includes upgrades to several small intersections, as well as the replacement or rehabilitation of 43 road bridges throughout the County.

In addition to the improvements recommended above, the following projects were recommended in the 2007 Roadway Improvement Strategic Plan.

- A northern loop around Elkton, to increase connectivity in the north Elkton area and reduce traffic through downtown Elkton. This loop would include the following segments:
    - A new roadway connection between MD 281 and MD 316, via extension of Delancy Road (MD 781);
    - A new roadway connection between the western terminus of Ricketts Mill Road and the eastern terminus of Zeitler Road;
    - A new roadway connection between the western terminus of Zeitler Road and Marley Road; and
    - Upgrades of existing segments of Ricketts Mill, Zeitler, and Marley Roads, and other roads as necessary.

[3] The Regional Transportation Plan, prepared in 2007, is a federally-mandated document that identifies long-term transportation needs within the MPO's service area.

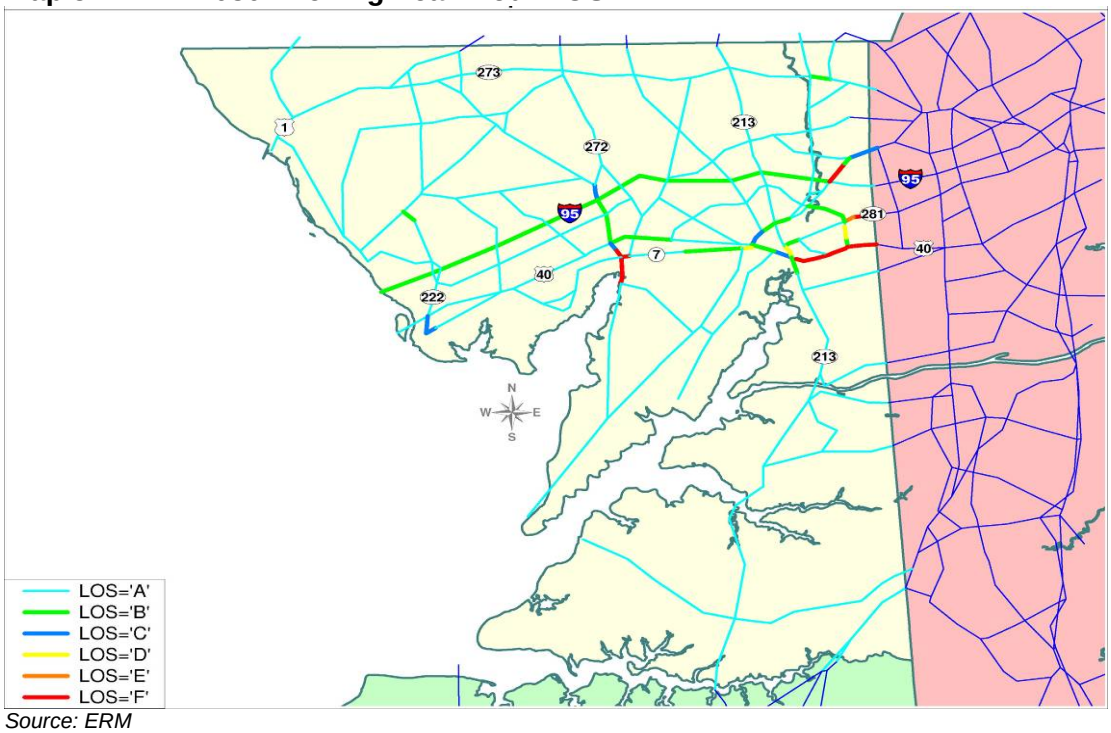
- A new east-west road between Red Toad Rd, Belvidere Road, and Jackson Station Rd, providing an alternative route parallel to and between I-95 and US 40. This road would serve long term (beyond 2030) development in this part of the County.
- Widening of MD 272 from I-95 to US 40, to alleviate congestion.
- Widening of MD 222 between MD 275 and US 40 to alleviate congestion.

### 5.2.4 *Future Traffic*

In order to evaluate the anticipated traffic impact (in 2030) of the Future Land Use Plan on the Cecil County transportation system, the growth associated with that Plan was modeled using the State's Upper Eastern Shore regional travel demand model. The model assumed that WILMAPCO's Regional Transportation Plan improvements would be in place by 2030, as would the 2007 Roadway Improvement Strategic Plan improvements.

Based on these improvements, the population, household, and housing unit projections in Table 2.1, and the Future Land Use Plan in Chapter 3, the model determined future peak-hour[4] Levels of Service (LOS) for major roads in the County.[5] Map 5.4 shows the results. With the upgrades described in this section, peak hour congestion would generally remain at acceptable levels. A few major roads—particularly in and around North East and Elkton—would approach LOS E or F. The model estimated that an additional 11 lane miles of new roadway (primarily on the County's major roadways) would be needed to attain LOS D[6] throughout the county. However, upgrades to the US 40/MD 213 intersection, among others, could alleviate some of the projected congestion.

**Map 5.4 2030 Evening Peak Hour LOS**




*Source: ERM*

[4] Peak hour refers to the hour or hours of maximum traffic volume. In Cecil County, this occurs during the evening commute period.

[5] For more details on the transportation model, methodology, and findings, please see Transportation Modeling Methodology in the Comprehensive Plan Appendix.

[6] Note that this standard is consistent with the peak-hour minimum level of service set for Growth Areas in this Comprehensive Plan (and for the Development District in the 1990 Comprehensive Plan).

The model was also run for projected traffic at buildout (per the analysis described in Section 2.6.3). The key finding of this analysis was that approximately 63 additional lane-miles of new roadway (primarily on the County's major roadways) would be needed to attain LOS D throughout the County.

### *5.2.5 Discussion of Issues—Road Network*

This section describes some of the key issues and recommendations related to the County's road network.

#### Level of Service

A Level of Service policy establishes a basis for evaluating proposed development plans and projects against the LOS that the County seeks to achieve or maintain as growth occurs. These criteria are used to evaluate the transportation system impacts of proposed development and the Future Land Use Plan (as described in Section 5.2.4), to evaluate alternative transportation plans, and to determine capital requirements. The recommended minimum level of service (LOS) for developments in each land use designation in Table 3.6 are listed in Table 5.2. These LOS standards carry forward from the 1990 Comprehensive Plan.

**Table 5.2: Recommended Minimum Level of Service**

| Land Use Designation | Off Peak | Peak Hour |
|---|---|---|
| *Growth Areas*<br>High, Medium-High, Medium, Low, Employment, Mixed Use Residential, Mixed Use Employment | LOS C | LOS D |
| *Rural Areas*<br>Rural Conservation, Resource Protection | LOS B | LOS C |
| *Other Areas*<br>Village, Mineral Extraction | LOS C | LOS D |

Current LOS deficiencies on roadways would prohibit future development adjacent to these roadways. However, new development in such areas should not be approved if it reduces (worsens) LOS below the roadway's current level, unless those adverse effects are mitigated by the developer.

Minimum LOS standards can be made part of the development approval process in several ways, including an Adequate Public Facilities requirements, Impact Fees, or direct incorporation of the standards into ordinances. Because most roads in Cecil County have and are projected to have adequate levels of service, an APFO for roads is unlikely to be effective in managing development. Impact fees are recommended elsewhere in this plan (see Chapter 11), and may be appropriate for roads.

The County should consider amending its development ordinances and regulations to either refer to LOS standards in this Comprehensive Plan or to directly incorporate them into the ordinance or regulations language. This would enable the County to require traffic studies on a case-by-case basis (depending on the size or scale of the proposed development), to require improvements if a transportation facility (roadway or intersection) does not meet the standards, or to amend development proposals that would exceed LOS standards regardless of mitigation.

#### Upgrades and Expansions

To ensure acceptable Levels of Service on the County's road network and to improve connectivity, road system upgrades and expansions should focus on the following key objectives:

- Improving north-south connections between US 40 and I-95. For businesses and towns in the US 40-MD 7 corridor to flourish, fast, easy access to I-95 will be critical. Recommended improvements include upgrades to MD 222, MD 272, MD 279, plus the proposed northern loop road around Elkton.
- Increasing connectivity within the Designated Growth Area to provide alternate route options so that all the traffic is not channeled onto a few roads. In particular, new or upgraded east-west connections are needed in the Designated Growth Area in the area, running parallel to I-95 and US 40. Recommended connections include the extension of Chesapeake Boulevard to Maloney Road, a new connection to serve the Mixed Use Employment area west of Elkton, and working with landowners to acquire or dedicate right-of-way for an east-west road serving long-term (beyond 2030) redevelopment of the Mineral Extraction Area between Perryville and North East.
- Preserving US 40 to the greatest extent possible as a "free flowing" road with few traffic signals. See below.
- Expansion of I-95, as recommended by WILMAPCO and MdTA. I-95 is a regionally significant road. Expanding capacity on I-95 will also help to keep regional traffic off of the County's local road network. The expansion of I-95 in Cecil County is a component of larger regional plans to widen the interstate from MD 24 in Harford County through New Castle County, Delaware.
- Continuing the County's program of bridge rehabilitation and replacement. The County tries to upgrade or replace five bridges per year.

To achieve these objectives, this Comprehensive Plan concurs with the recommendations of the Regional Transportation Plan and the 2007 Roadway Improvement Strategic Plan. In addition, upgrades to the US 40/MD 213 intersection should be investigated.[7] Map 5.5 shows the Comprehensive Plan's recommended road system upgrades and expansions, which are also listed in Section 5.6.

## US 40 (Pulaski Highway)

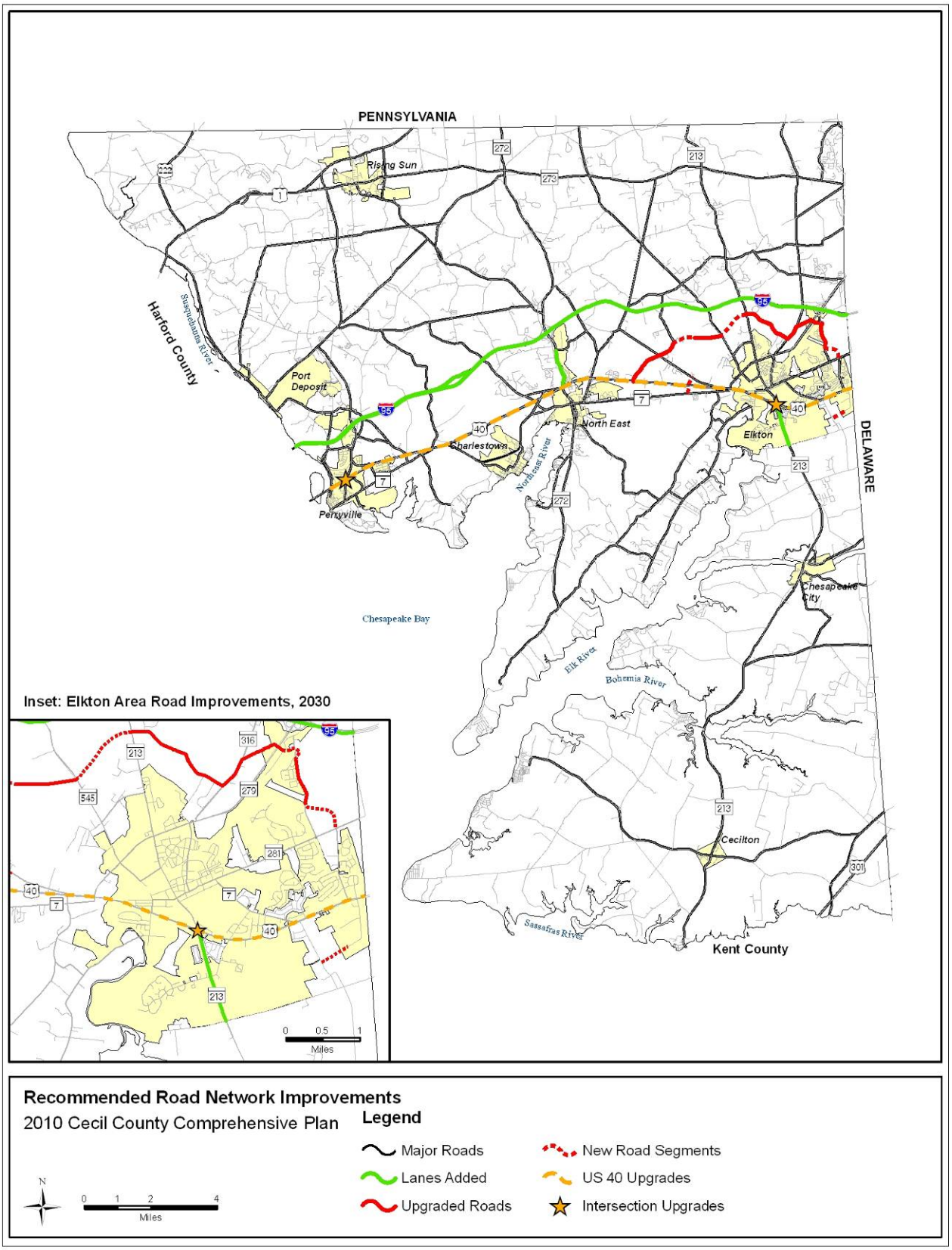
US 40 has historically been Cecil County's primary thoroughfare. Even several decades after the construction of I-95, US 40 remains one of the County's busiest roads, serving both regional and local traffic. As described in Chapter 3, the County envisions US 40 as the County's primary business corridor, a free-flow roadway that incorporates transit and bicycle/pedestrian facilities, and connects towns and nodes of development.

Achieving this vision will require coordination with SHA to alter the design of the roadway itself, specifically to accommodate transit service, bicycle and pedestrian facilities, and access management facilities. Figure 5.1 shows some conceptual cross-sections that could be used to guide the redesign of US 40. Options 1 and 2 may be more applicable to less developed portions of the US 40 corridor, where right-of-way is available or easier to acquire. Option 3 may be more applicable within towns or in developed portions of the US 40 corridor, where right-of-way is more difficult to acquire.

**U.S. Route 40 Eastbound at MD 279**

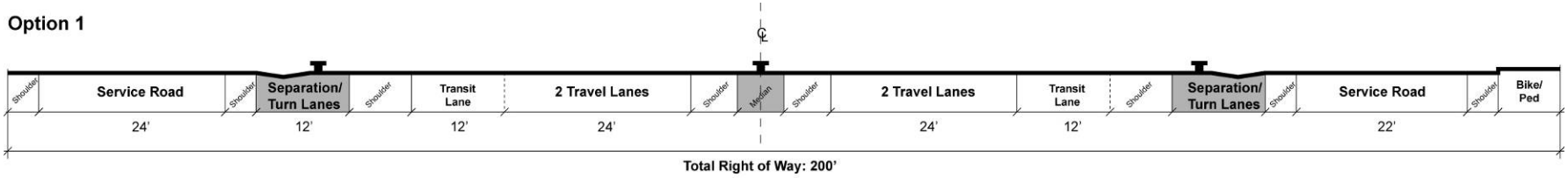
[7] The US 40/MD 222 intersection in Perryville and the US 40/MD 272 intersection in North East have also been identified as a potential source of traffic congestion. Although modeling indicates that these intersections do not appear to be problematic in 2030, the County should carefully monitor congestion in these locations.

## Map 5.5 Recommended Road System Improvements

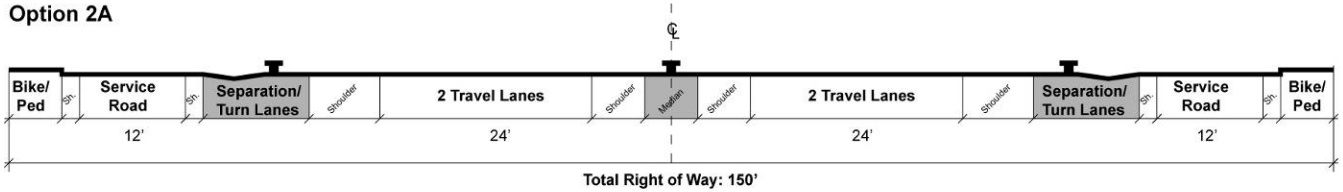


## Figure 5.2 Conceptual US 40 Cross Sections

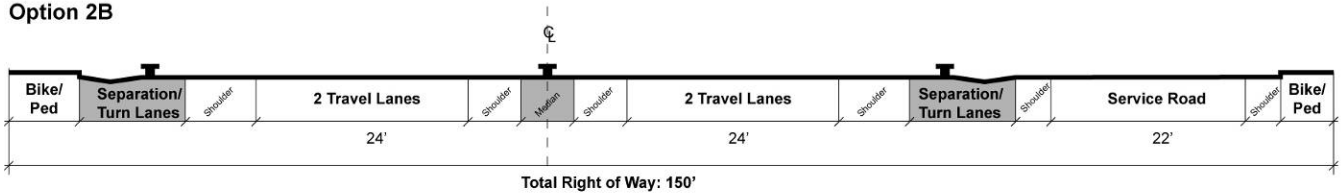
**Option 1**



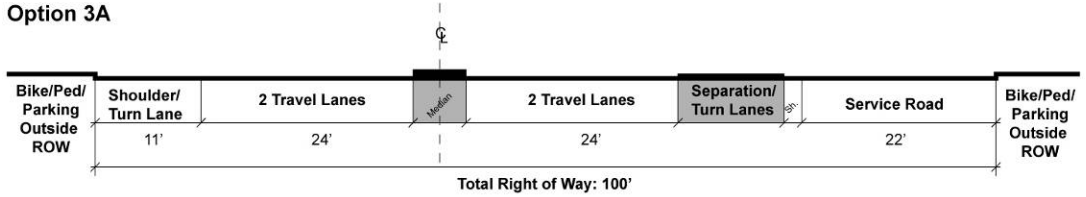

**Option 2A**



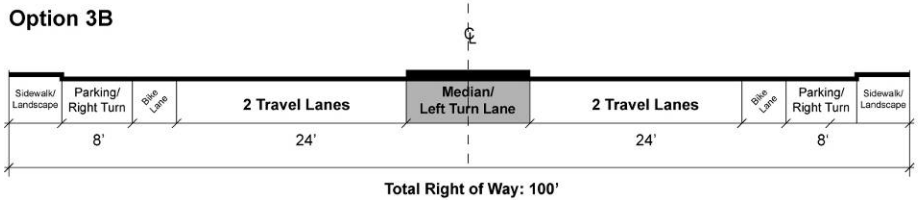

**Option 2B**




**Option 3A**




**Option 3B**



Access management preserves road capacity by limiting the number of new entry points. The 2007 Roadway Improvement Strategic Plan recommends a number of access management techniques along the entire length of US 40, including consolidation of existing entrances and driveways, construction of curbs and narrowing of existing driveways, and construction of service roads.

Aesthetic improvements, such as those recommended by the US 40 Beautification Committee (see Section 3.6.1), are also important components of future upgrades to US 40. While most of the Beautification Committee's recommendations relate to land use, code enforcement, and other non-transportation aspects of the corridor, a few recommendations address roadway design. In particular, the Beautification Committee report recommends tree-planting and other beautification of US 40's medians; pedestrian access; and signage. The County, municipalities, and SHA should work together to develop a coordinated plan for redesign of US 40 to achieve the objectives described in this Comprehensive Plan.

## Elkton Loop Road

As described in Section 5.2.3, the Roadway Improvement Strategic Plan recommended the development of a new northern loop road around Elkton. The intent of this loop road is to increase overall connectivity in the area north of Elkton and Elkton West and provide access to I-95 that does not require travel through central Elkton.

This Comprehensive Plan carries forward the Strategic Plan's recommendation, with an alignment modification in the vicinity of Muddy Lane and Belle Hill Road. However, there is some concern that implementation of such a loop road could lead to increased traffic congestion on US 40, MD 279, and MD 281 east of Elkton. In particular, drivers may use the eastern portion of this loop (between MD 279 and US 40) to bypass the Delaware toll plaza on I-95. The portion of the road east of MD 279 could also be costly as it would require an upgrade of the Amtrak railroad crossing at Muddy Lane. The pros and cons of this proposed road should be carefully studied to ensure that its implementation helps to achieve the County's transportation goals.

## Tolls

The Maryland Transportation Authority (MdTA) collects tolls on northbound I-95 north (east) of the Tydings Bridge, and on northbound US 40 north (east) of the Hatem Bridge. The County is concerned that the tolls, both of which are near Cecil County's western border, discourage travel to and economic development within Cecil County. One option to address the economic impacts of MdTA's tolls is to relocate the toll facilities to the eastern side of the County, near the Delaware line. The major concern about this option is the potential that individuals who wish to avoid tolls would detour along local roads or smaller state roads such as MD 279, MD 281, and Frenchtown Road to bypass the toll, overwhelming the capacity of these roads.

To address toll-related issues, the County should work with MdTA, SHA, and the Delaware Department of Transportation (DelDOT) to study the feasibility of and options for toll relocation.

A separate concern is DelDOT's plans to convert US 301 to a limited access toll road in New Castle County (associated with the planned US 301 bypass around Middletown). Cecil County is concerned about toll and truck weight evasion, which could increase traffic in rural parts of southern Cecil County, and through small communities such as Cecilton and Chesapeake City. The County, SHA, and DelDOT should work together to ensure enforcement of truck weight limits and toll avoidance.

## Safety

Roadway safety is an ongoing concern for existing and proposed future roads, and applies to drivers, pedestrians, and bicyclists alike. The Roadway Improvement Strategic Plan

identifies several County road segments, listed below, where safety improvements should be priorities.[8] Recommended safety improvements include alterations of road geometry (curves, hills, and slopes); signage; and pavement marking.

Another candidate location for safety improvement is at the I-95/ MD 222 interchange. Some citizens have identified the weave move from the southbound ramp to I-95 south as dangerous due to the speed of southbound traffic.

- Barksdale Road
- Bouchelle Road
- Frenchtown Road
- Jackson Station Road
- Jones Chapel Road
- Lums Road
- Mechanics Valley Road
- Mountain Hill Road
- Muddy Road
- Nottingham Road
- Old Elk Neck Road
- Red Toad Road
- Reservoir Road

## 5.3 Transit

### Existing Conditions

Three agencies provide transit service in Cecil County. The Penn Line of the Maryland Transit Administration (MTA)'s Maryland Commuter Rail (MARC) service has its northern terminus at Perryville, and links the County to Baltimore and Washington, D.C. As of 2009, there were six scheduled trips per weekday in each direction.

The Delaware Transit Corporation (DART First State) operates bus service between Elkton and Newark, Delaware via MD 279, providing a connection to SEPTA (Southeastern Pennsylvania Transportation Authority—the Philadelphia-area transit system) and Amtrak trains at the Newark station. As of 2009, there were six scheduled DART bus trips per weekday in each direction.

The Cecil County Department of Senior Services and Community Transit runs "The Bus," which offers both scheduled, and demand-response (reservation-based) service, as follows:

- Glasgow Connection: Scheduled service between downtown Elkton and People's Plaza in Glasgow, Delaware (with connections to DART First State bus service). The Glasgow Connection offers twelve trips per weekday and five trips per weekend day in each direction.
- Perryville Connection: Scheduled service between Downtown Elkton and downtown Perryville (including the MARC/Amtrak station), including stops in North East. The Perryville Connection offers eight weekday trips per day in each direction.
- CT Cruiser: This is demand-response service, available to all County residents, but designed primarily for seniors and persons with functional disabilities. Service is available within Cecil County and to neighboring jurisdictions from 8:00 a.m. to 4:00 p.m., and reservations are required. Prices are based on the distance traveled. The CT Cruiser also provides service to the Perryville and Elkton Senior Centers.

Although SEPTA does not directly serve Cecil County, its R2 Regional Rail line offers multiple round-trips from Newark, Delaware to Wilmington and Philadelphia.

Park-and-ride lots are available for commuters who wish to carpool. The lots are located at:

- MD 222 at Blythedale/Bainbridge Roads (62 spaces)
- I-95 at MD 272 (100 spaces)
- I-95 at MD 279 (25 spaces)

[8] SHA maintains a separate list of Candidate Safety Improvement Locations on state roads.

- MD 213 at Frenchtown Road (18 spaces)

## Discussion of Issues

Developing more robust transit service is a key priority of the Comprehensive Plan. Such a system will create options for residents and people who work in the County. This includes extension of two commuter rail systems—MARC from Perryville and SEPTA from Newark, Delaware—as well as enhanced bus service.

WILMAPCO's Track A Feasibility Study (2003) examines opportunities to extend commuter and freight rail between Perryville and Newark, DE, likely along the existing Amtrak rail corridor. Phase I of this study involved extension of SEPTA commuter rail service from Newark (its current southern terminus) to Elkton. Phase II examined extension of MARC commuter rail from Perryville (its current northern terminus) to Elkton. Key considerations for extension of commuter rail include:

- Provision of additional trackage to ensure free flow of Amtrak, MARC, SEPTA, and freight rail along the existing Amtrak corridor.
- Construction of new stations at Elkton and North East, and rehabilitation of the Perryville Station
- Coordination of freight and passenger rail infrastructure and service.
- To link rail investments to economic development and growth management strategies.

**Amtrak crossing the Susquehanna River**
*Photo Courtesy Cecil Soil Magazine.*

The Phase II study, conducted in 2005, found that likely land use patterns, population densities, and likely park-and-ride commuter demand would justify extension of MARC rail service to Elkton by 2025. Extension of SEPTA to Elkton by 2030 should also be feasible. In addition, the County believes that there is demand for limited Amtrak service at Elkton.

This Comprehensive Plan envisions higher residential densities and concentrations of economic activity in the Designated Growth Area than were envisioned in the WILMAPCO transit study, thus bolstering the case for extension of commuter rail across the County. Increased density is strongly associated with increased demand for and use of mass transit. Federal funding decisions for transit systems are based in part on the relationship between land use and transportation, with preference given to jurisdictions that encourage density near potential transit stations. Accordingly, the Comprehensive Plan's recommendations for mixed use development in the Designated Growth Area would further support transit, as would the cross-sections in Figure 5.1 that include transit right-of-way.

Along with extension of rail transit, development of a countywide transit system should include expansion of bus transit options. This should include additional routes and scheduled service by "The Bus" and/or DART First State. Bus service should link train stations to employment and commercial centers, in the County, as well as more densely developed residential areas. The County specifically recommends bus stops along MD 279 to enhance DART First State service. Park-and-ride lots, served by transit, should be provided at train stations and at other key points in the County to reduce the number and distance of automobile trips.

## 5.4 Bicycle and Pedestrian Facilities

### On-Road Bicycle Facilities

SHA's 2007 Maryland Bicycle Map identifies the following on-road bicycle routes in Cecil County:

- US 40, from MD 222 to the Delaware State Line;
- US 1, from the Susquehanna River to MD 273;
- MD 273, from US 1 to the Delaware State Line;
- MD 222, from US 1 to US 40; and
- MD 213, from MD 273 to the Kent County Line.

These routes are generally marked with "Share the Road" signs. Designated bicycle lanes are generally not present along these routes, although many have shoulders.

As part of the 2002 Statewide 20 Year Bicycle and Pedestrian Access Master Plan, the Maryland Department of Transportation (MDOT) compiled a Bicycle and Pedestrian Needs Inventory. Similar to the HNI, the Bicycle/Pedestrian Needs Inventory identified those state roads with the greatest need for bicycle and pedestrian improvements. Table 5.3 lists Cecil County's bicycle improvement needs, as identified in the 2002 Plan. Facilities designated as Tier 1 have the highest priority for state funding, while facilities designated as Tier 2 have secondary priority for state funds.

### Pedestrian Facilities

Pedestrian facilities can include multi-use paths, sidewalks, crosswalks, pedestrian crossing signals, signage, and pedestrian-level street lighting. Pedestrian facilities in Cecil County are generally found in municipalities, and are limited in other parts of the County.

It is desirable to promote walking as a means of transportation for overall personal health and environmental reasons, as well as to preserve road capacity by reducing automobile trips. Additionally, federal, state, and local transportation policies support pedestrian travel as a viable alternative to driving where the land uses make it feasible.

As new County facilities with high levels of activity are planned, and community facilities (schools, college, libraries, parks, etc.) are improved, an assessment of pedestrian access should be completed to ensure that safe pedestrian access within and to these sites is encouraged and facilitated. Consideration should be given to pedestrian access along and across roads in developed and developing areas (including villages), particularly the need for marked crosswalks or pedestrian crossing signs to promote safety.

**Table 5.3: Bicycle Improvement Needs[1]**

| Route | From | To | Length (mi.) |
|---|---|---|---|
| *Tier 1 Facilities* | | | |
| MD 213 | US 40 | MD 7 (Main Street) | 0.6 |
| MD 279 | US 40 | Elkton Corporate Limits | 0.25 |
| *Tier 2 Facilities* | | | |
| US 1 | County Line | State Line | 9.5 |
| MD 7 | North East Corporate Limits | US 40 | 4.6 |
| MD 7 | US 40 | Baltimore Street (MD 267) | 1.2 |
| MD 7 | Charlestown Corporate Limits | North East Corporate Limits | 1.9 |
| MD 7 | Perryville Corporate Limits | US 40 | 2.4 |
| MD 213 | MD 273 | McClearly Road | 0.4 |
| MD 213 | Johnstown Road | I-95 | 0.3 |
| MD 213 | Elkton Corporate Limits | Glebe Road | 9.2 |
| MD 222 | Perryville Corporate Limits | I-95 | 1.1 |
| MD 222 | US 1 | Port Deposit Corporate Limits | 4.3 |
| MD 272 | State Line | Southern Terminus | 19.2 |
| MD 273 | MD 316 | Rising Sun Corporate Limits | 12.7 |
| MD 277 | MD 279 | MD 316 | 1.3 |
| MD 279 | Appleton Road | MD 277 | 2.6 |
| MD 310 | MD 213 | County Line | 5.0 |
| MD 316 | MD 277 | I-95 | 1.0 |
| MD 342 | MD 310 | Chesapeake City Corporate Limits | 2.7 |
| MD 545 | Leeds Road | Gravelly Run | 1.9 |

*1: Excludes segments that are wholly or primarily within municipalities.*
*Source: Maryland DOT, http://www.mdot.state.md.us/Planning/Bicycle/TECHNI.PDF*

## Recreational Trails

A number of bicycle/pedestrian trails are currently under development or are planned, and Cecil County has an opportunity to create an excellent network of trails that could be a tremendous countywide and regional amenity.

The East Coast Greenway (ECG) is a planned multi-state 2,600-mile long trail geared to both bicyclists and hikers that would link the east coast cities from Maine to Florida. It is planned to run through Cecil County in three segments (see Figure 5.2): from Perryville to Newark, DE generally along the US 40 corridor; and from the Conowingo Dam to Newark via US 1 and MD 273; and from Kent County to Elkton via MD 213. The eventual intent of the East Coast Greenway is to establish a complete off-road trail system. However, in the interim, the Greenway follows portions of US 40 (across the Hatem Bridge), MD 222, MD 7, MD 316, MD 277, and other local and state roads.

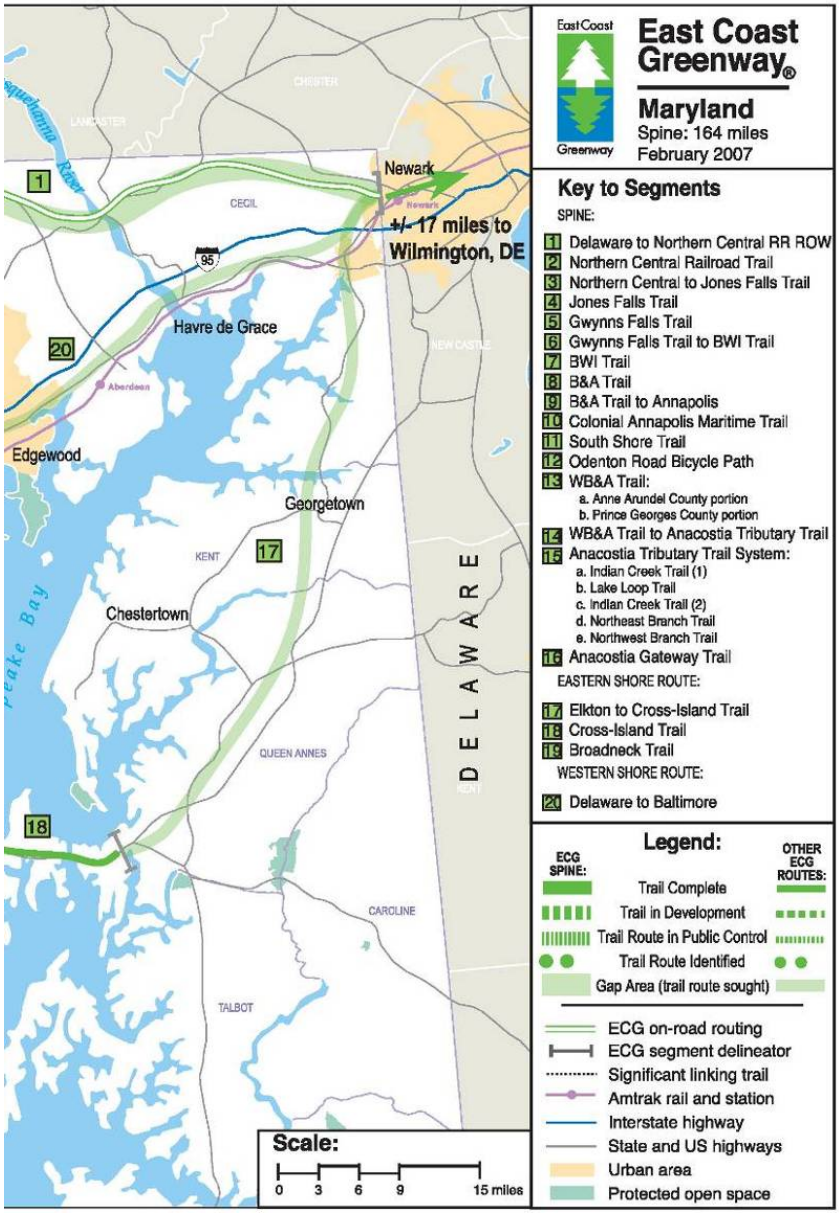
**The Lower Susquehanna Heritage Greenway Trail stretches from Conowingo to Principio Furnace.**

The 2005 Land Preservation, Parks, and Recreation Plan (LPPRP) describes the recommended recreational (off-road) trail network for the County. In addition to the East Coast Greenway, recommended trails of regional significance include:

- Elk Neck Trail, stretching 12 miles from Elk Neck State Forest to Elk Neck State Park;
- Lower Susquehanna Heritage Greenway Trail, stretching 16.5 miles from Conowingo to Principio Furnace; and
- Mason-Dixon Trail, stretching 20 miles from Perryville to Elkton via the central portion of the County. This trail segment is part of a larger multi-state trail that runs from Pennsylvania to Delaware.

For more detail on these facilities, please see section III.C.5 of the LPPRP.

## Figure 5.2 East Coast Greenway




*Source: East Coast Greenway*

## 5.5 Other Transportation Facilities

### *5.5.1 Scenic Roads*

#### Existing Conditions

The Maryland Scenic Byways Program, managed by SHA, has designated the following scenic byways in Cecil County.

- Mason and Dixon Scenic Byway: US 1 from the Harford County line to MD 273; and MD 273: US 1 to Delaware state line.
- Chesapeake Country Scenic Byway: MD 213 from the Kent County line to Chesapeake City. Designated "sidetracks" include portions of MD 282, Grove Neck Road, Pond Neck Road, Worsel Manor Road, and Bohemia Church Road in the vicinity of Cecilton, Grove Point, and Pond Neck. This portion of the Chesapeake Country Scenic Byway is also a designated National Scenic Byway.
- Lower Susquehanna Scenic Byway: MD 222: US 1 to MD 7 via Port Deposit and Perryville.

The mission of the Maryland Scenic Byways Program is to enhance the quality of life and pride in, and the visitor appeal of the local community. The Program promotes responsible management and preservation of the state's most scenic cultural and historic roads and surrounding resources. The Program provides funds for community based corridor management plans, which makes them eligible for additional grant funds.

#### Discussion of Issues

In addition to state-designated Scenic Byways, a number of County roads in Cecil County are potentially valuable for their scenic and/or historic attributes. Establishment of a local scenic and/or historic road program could recognize the value of these roads, and their contributions to the County's scenic and historic character.

To establish such a program, the County would first need to conduct an inventory of scenic and/or historic roads. Next, the County would need to develop policies to protect and enhance these roads. Policies could relate to the physical attributes of the road itself (such as vertical or horizontal curves), as well as to the land and resources (aesthetic or cultural) visible from the designated roads. Amendments to the County's Roads Code would address the former, while changes to the County's land development ordinances would address the latter.

### *5.5.2 Airports*

#### Existing Conditions

Cecil County Airport, along Oldfield Point Road southwest of Elkton, is the only General Aviation airport in Cecil County. The privately-owned public-use airport has a 3,000 foot paved runway, but currently hosts no scheduled commercial air service. The Raintree Airpark Seaplane Base is in the Elk River, adjacent to Cecil County Airport.

Cecil County Airport's long-range Master Plan includes extension of the runway to 4,000 feet, extension of the taxiway, a new terminal building, and hangars.

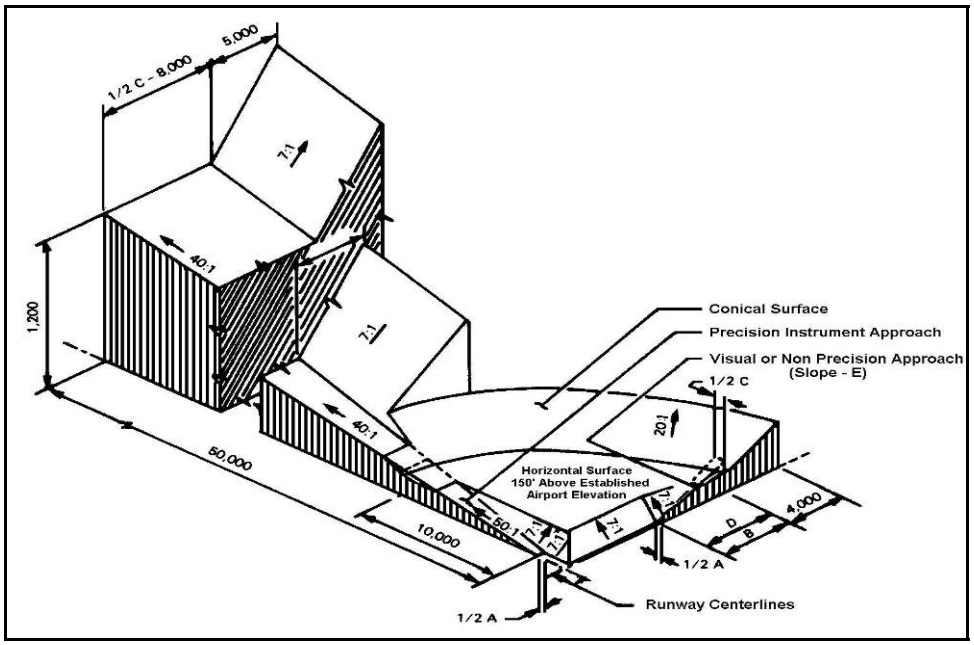
Residents who wish to travel via commercial air carriers typically travel to either Philadelphia International Airport or Baltimore-Washington International Thurgood Marshall Airport. MARC and SEPTA rail systems provide links to these airports.

## Issues

In addition to serving transportation needs, Cecil County Airport contributes to economic development in the County by attracting business and providing an alternative to commercial airports. During the Comprehensive Plan development process, concerns were raised that the County's existing land development regulations do not adequately address the airport's safety areas, which are defined by Federal Aviation Administration (FAA) guidelines.

Airports are permitted as a Special Exception in the NAR, SAR, SR, BI, M1, M2, and OS zoning districts. The zoning ordinance makes reference to Maryland Aviation Administration and FAA guidelines for airport design. FAA guidelines are also the basis for height restrictions near the airport. The Maryland Code of Regulations defines various "imaginary surfaces" extending beyond airport boundaries. Under state law, obstructions (including structures, trees, or other objects) that would cause airport or air navigation hazards are prohibited within these imaginary surfaces. Figure 5.3 shows the typical imaginary surfaces associated with airports.

**Figure 5.3 Imaginary Surfaces for Airports**




*Source: FAA*

To ensure compatible land use, the County should consider adopting an overlay zoning district around airports that would alert County staff, residents, and businesses regarding the potential for off-airport navigation hazards, and a requirement for review of proposed development projects by the Maryland Aviation Administration.

### *5.5.3 Freight Transportation*

## Existing Conditions

There are three freight rail lines in Cecil County. The CSX line runs east-west, from Perryville to Newark, DE, to the north of US 40. Norfolk-Southern operates two lines. One line is co-located with the Amtrak Northeast Corridor between Perryville and Elkton, while another runs along the east bank of the Susquehanna River from Perryville into Pennsylvania. Access to freight rail is often a factor in siting decisions for industrial and commercial facilities. This was the case for several major employers in Cecil County, including General Electric and Perryville Cold Storage in the Principio Industrial Park, and Cargill near Elkton.

Initially constructed in 1829, the Chesapeake and Delaware (C&D) Canal stretches approximately 14 miles from the Elk River to the Delaware River via Chesapeake City. It is one of America's most economically important canals, handling approximately 40 percent of all ship traffic from the Port of Baltimore.[9]

### Discussion of Issues

The existing freight facilities in Cecil County represent a significant economic development asset. This is particularly true of rail, which offers a comparably fuel-efficient cargo option in an era of escalating fuel costs and increased traffic on major highways. The Comprehensive Plan recognizes this opportunity, in part by ensuring that many of the areas designated as Employment Centers in the Land Use Plan (see Chapter 3) have access to freight rail lines. The County should work with CSX and Norfolk Southern to encourage continued marketing of rail-accessible sites and employment centers. The co-location of Norfolk-Southern and Amtrak does pose some conflicts in using rail to promote economic development, since not all sites along the Norfolk-Southern line are equally accessible without crossing Amtrak tracks.

## 5.6 Policies and Actions

### Road System Improvements

1. Complete the following projects, working the State Highway Administration as appropriate.
    - o I-95 widening (one lane in each direction) through Cecil County.
    - o MD 213 US 40 to Frenchtown Road; 2 to 4 lane divided.
    - o MD 272 US 40 to Lums Road; 2 to 4 lane divided
    - o Intersection upgrade at US 40 and MD 213 in Elkton.
    - o North-south connection between MD 7 and US 40 to serve the Mixed Use Employment area west of Elkton.
    - o Extension of Chesapeake Boulevard to Maloney Road
2. Work with the State Highway Administration to evaluate the following projects:
    - o Northern loop route around Elkton, from MD 781 (Delancy Road) to MD 279, through Elkton West to Marley Road and to US 40.
    - o Intersection upgrade at US 40 and MD 222 in Perryville.
3. Work with the State Highway Administration and the Departments of Public Works, Planning and Zoning, and Economic Development to put in place plans and programs that implement the County's vision for US 40. Inputs include:
    - o This Comprehensive Plan, including the Future Land Use Map and Recommended Road Network Improvements. Future road section concepts for discussion with SHA are shown on Figure 5.1. Special focus should be on the portion of US 40 through Elkton which, without improvements, is projected to operate at LOS E or F in 2030.
    - o US 40 Beautification Committee report (2008). This committee was established by the Cecil County Economic Development Commission to create a vision for the future of the US 40 corridor.
    - o Access management recommendations in the Cecil County Roadway Improvement Strategic Plan (2007).

[9] Source, US Army Corps of Engineers: http://www.nap.usace.army.mil/sb/c&d.htm

- Transit considerations such as a dedicated transit lane.

4. Work with MdTA, SHA, and DelDOT to evaluate the relocation of tolls on I-95 and US 40 to the eastern side of the County, and to minimize toll and truck weight avoidance in conjunction with establishment of a US 301 toll.
5. Consider amending the County's development ordinance to refer to the Comprehensive Plan's LOS standards or to adopt those standards directly into the ordinances.

## Transit

6. Support the extension of MARC and SEPTA rail service to Elkton, in cooperation with MTA, WILMAPCO, and other agencies as appropriate.
7. Increase local bus transit in Cecil County to augment proposed rail service, and to link rail stations to employment and commercial centers and residential areas.
8. Incorporate transit considerations into US 40 upgrades (see Policy 3).
9. Promote ride sharing by establishing and expanding park and ride lots at key locations, including train stations, and link park-and-ride lots to transit service.
10. Encourage transit accessibility to nearby commercial airports in Baltimore and Philadelphia.

## Non-Motorized Transportation

11. Create a trails network building on the trails and greenways concept in the County's Land Preservation Parks and Recreation Plan (2005), including the Lower Susquehanna Heritage Greenway trail system.
12. Encourage the development of walkable communities that serve a wide range of incomes and physical abilities, while reducing dependence on automobile travel.

## Funding

13. Consider impact fees or a development excise tax to provide additional County funds for transportation improvements.
14. Consider designating funds specifically for transit, bicycle, pedestrian, and other projects that provide alternatives to single-occupant vehicle trips (see Chapter 11, implementation).

## Other Policies

15. Consider a County scenic and/or historic roads program, focused on County roads. The first step in establishing such a program is to conduct an inventory of eligible roads.
16. Support the use of existing rail lines for commercial goods shipments to reduce through truck traffic on major roads. Work with rail companies (including Amtrak) to reduce or eliminate freight/cargo conflicts and maximize access to freight rail lines.
17. Utilize County waterway connections to the Chesapeake and Delaware Canal to promote shipment of commodity goods such as gravel and agricultural products out of the County by barge rather than by truck.
18. Consider adopting an Airport Overlay District for the area around the County's airports. Provisions of this district would include notification of potential navigation hazards, and coordination with the Maryland Aviation Administration, as described in Section 3.6.6.
19. Continue to improve the safety of roads in the County, particularly those identified in the 2007 Roadway Improvement Strategic Plan, as well as the I-95/MD 222 interchange.
20. Continue the County's program of bridge rehabilitation and replacement.

# 6 Water Resources Element

## 6.1 Introduction

In 2006, the Maryland General Assembly passed House Bill 1141 (HB 1141), which modified Article 66B of the Annotated Code of Maryland by requiring the inclusion of a Water Resources Element in Comprehensive Plans. The Water Resources Element must establish a clear relationship between existing and proposed future development, the drinking water sources, and wastewater facilities that will be necessary to serve that development. It must also evaluate the discharge of nutrients (nitrogen and phosphorus) from point sources (such as wastewater treatment plants) and nonpoint sources (such as stormwater runoff), and must evaluate the impact of these discharges on the rivers, streams, and other waters that receive these pollutant loads.

This Chapter (the Cecil County Water Resources Element) conducts these evaluations within the framework of the County's watersheds—specifically its 13 "eight-digit" watersheds,[1] shown in Map 6.1. Of these watersheds, twelve drain into the Chesapeake Bay and one, the Christina River watershed, drains into the Delaware Bay.

## 6.2 Goals and Objectives

The Water Resources goals for the County are to:

1. Increase the capacity and extent of water resources infrastructure—water supply and wastewater collection, treatment, and discharge capacity—in Growth Areas.
2. Plan growth in a way that allows sufficient time to develop adequate drinking water and wastewater resources and infrastructure.
3. Work with municipalities in the County, neighboring jurisdictions, the Susquehanna River Basin Commission, other regional organizations, and private service providers to address water resource issues related to water supply, wastewater treatment, and nonpoint source pollution.
4. Enhance stormwater management programs, to reduce non-point source loading of nutrients and sediment into the Chesapeake Bay, and to increase infiltration and aquifer recharge.

## 6.3 Background

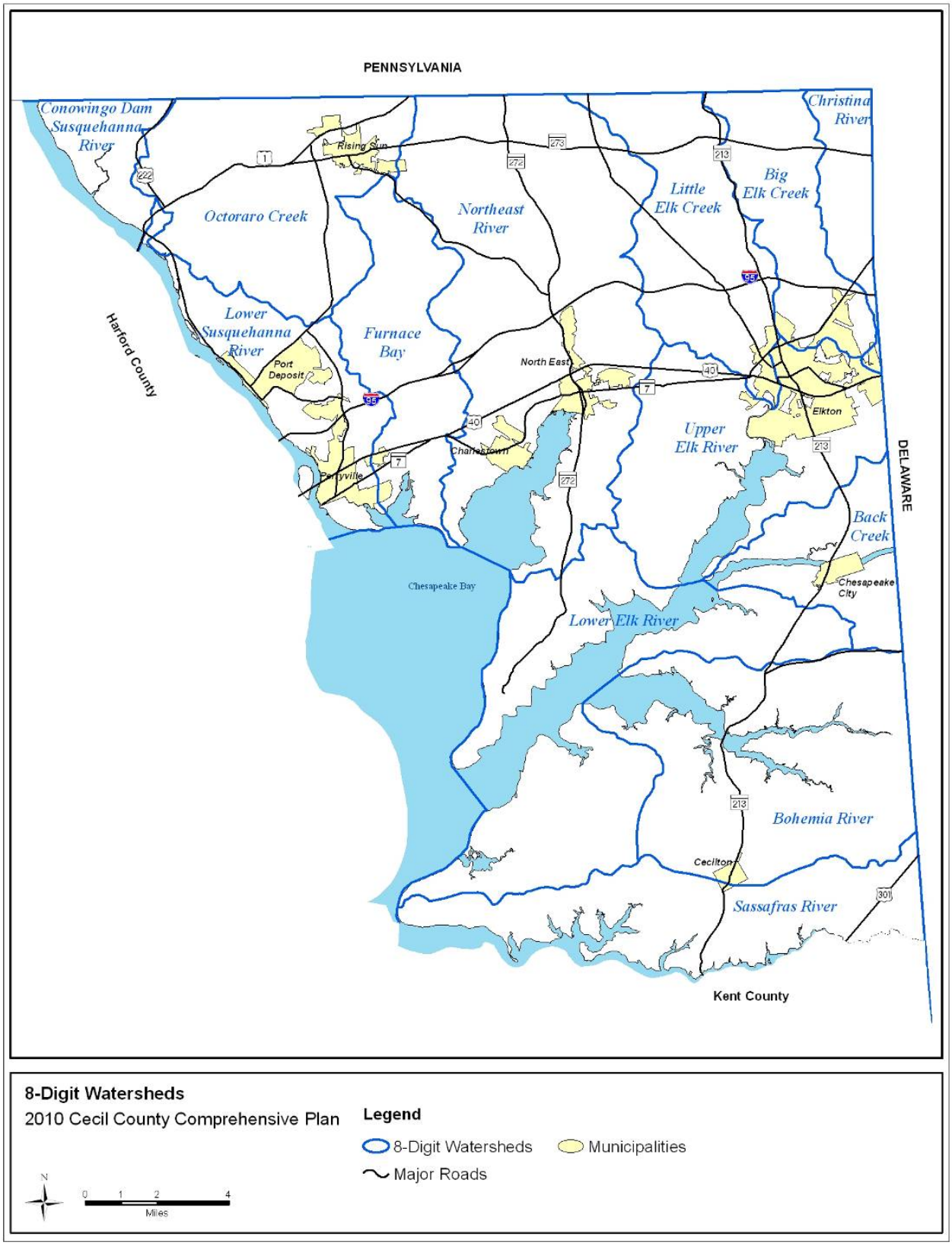
### *6.3.1 Coordination with Cecil County's Municipalities*

The Cecil County Department of Public Works (DPW) owns and operates one public wastewater collection and treatment system—the Seneca Point Advanced Wastewater Treatment Plant) but no public water systems. With a few exceptions, the eight incorporated Municipalities in Cecil County all offer public water and sewer service to residents and businesses within their boundaries (wastewater from the Towns of North East and Charlestown flows to Seneca Point). Water and sewer service not provided by the County or municipalities is provided by private entities, subject to franchise agreements with the County.

The County's municipalities are currently preparing Comprehensive Plan updates, to include Municipal Growth Element (MGE) and Water Resources Element (WRE), as required by HB 1141. This County Water Resources Element compiles and synthesizes, to the greatest degree possible, data from the municipalities (including their WREs and MGEs, if available) in order to link water resources, growth, and land use for the entire County.

[1] This refers to the numeric classification system used by the Maryland Department of the Environment.

## Map 6.1 Watersheds in Cecil County



The County coordination efforts extend beyond data collection. A parallel process with the local Council of Governments (COG), comprised of representatives from the County and its municipalities, examined Countywide water and sewer capacity issues concurrently with the preparation of the County Comprehensive Plan. As part of the COG process, County representatives participated in monthly COG meetings and held in-depth discussions with the municipalities and their technical consultants. While this document contains the water resources policies for unincorporated portions of the County, the County's policies are intended to be compatible with the policies of the municipalities.

### *6.3.2 Growth and Development Scenarios*

Through the Comprehensive Plan COC process, a consensus future land use plan emerged, as described in Chapter 3. This WRE evaluates the water resources impacts of the consensus plan as a single scenario.

While multiple scenarios are not evaluated directly in this Element, the consensus concept is the product of evaluation (which included water resources factors) of several rounds of preliminary concepts.[2] A COC exercise in 2008 evaluated public water and sewer demand, demand for new septic systems, and increases in impervious surface from two different land use scenarios. A white paper describing the demands and capacities of the County's water resources at buildout was prepared in 2009. A white paper describing the COC "Concept Plan" (the forerunner of the Future Land Use Plan) included description and analysis of current and future water resources capacities and limitations. These analyses were major inputs into the future land use plan shown in Chapter 3. These materials are summarized in the WRE Appendix and the COC materials included in this Plan.

## 6.4 Drinking Water Assessment

This section describes demand for drinking water in Cecil County, including public and private water systems, and water for agriculture, business, and other uses.

### *6.4.1 Public Water Systems*

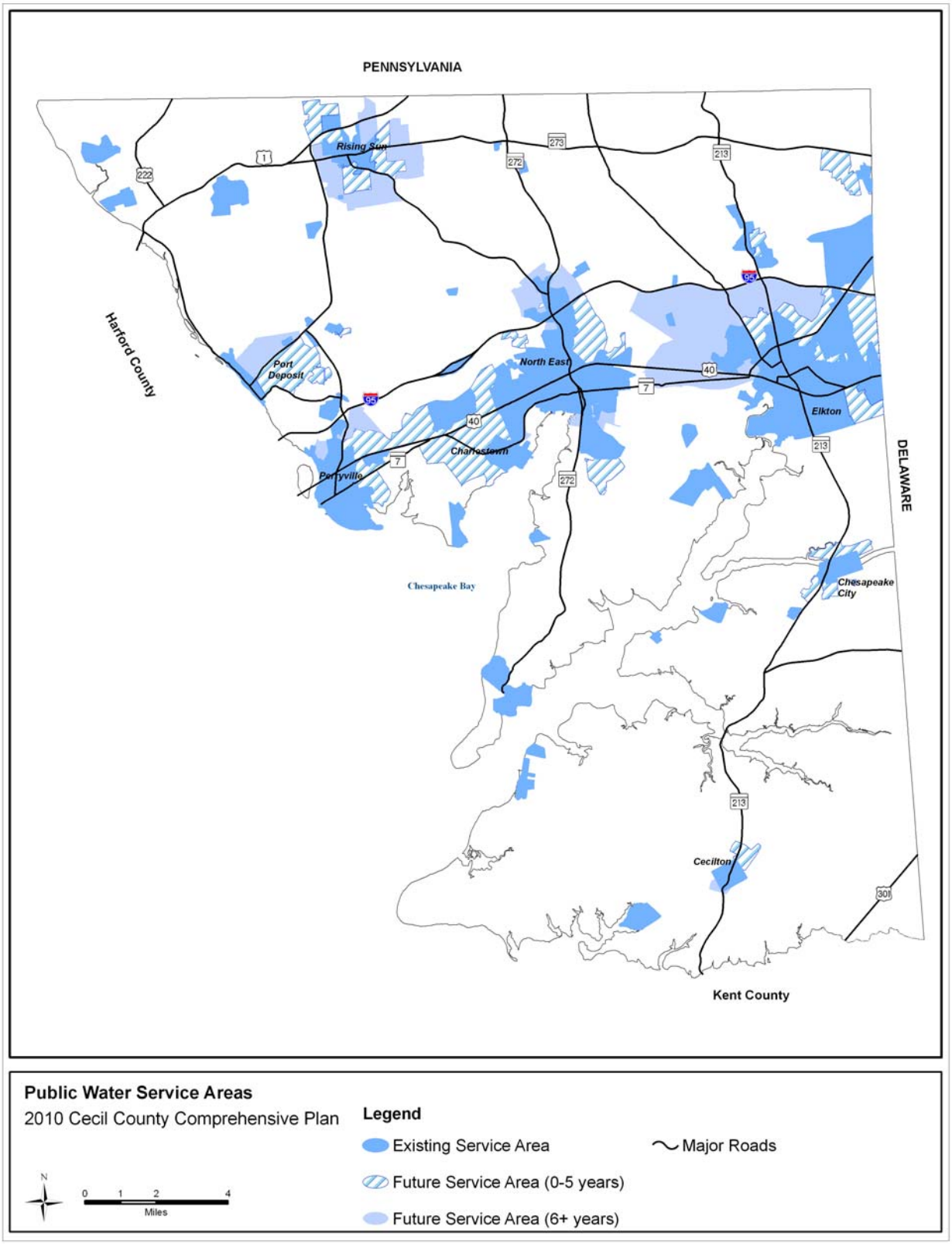
Approximately 17,100 dwelling units in Cecil County and its towns (44 percent of the County total in 2008)[3] receive drinking water from public or private water systems, shown on Map 6.2. This includes water systems maintained by the municipalities, as well as those operated by private water providers such as Artesian Water Maryland, Inc. (Artesian); CECO Utilities; Crystal Beach; Port Herman; and the Mountain Hill Company (a subsidiary of Artesian). A comparable share of non-residential development is connected to these water systems. In 2009, the Meadowview/Highlands, Pine Hills and Harbour View public water systems formerly owned and operated by Cecil County were acquired by Artesian (see Section 6.4.3). The County no longer owns or operates any public water systems.

Approximately 65 percent of the drinking water for public systems comes from surface water, while the remaining 35 percent is withdrawn from groundwater or purchased from private water companies. Groundwater availability is highly dependent upon geology. Cecil County straddles the Piedmont and the Coastal Plain physiographic provinces. The dividing line between these regions, known as the Fall Line, generally follows the I-95 corridor. Geologic formations in the Piedmont region, to the north and west of the Fall Line are not suitable for large-scale groundwater withdrawal due to the reliance on fractures and other irregularities.

[2] MDP and MDE require evaluation of at least one future land use scenario as part of the WRE, with iterative adjustments to that scenario to reflect water resources limitations. Through multiple rounds of preliminary scenario evaluation, the WRE embodies such iterative evaluations.

[3] 2008 was used as the base year for most Water Resources Element analysis because it was the most recent year for which data were available.

## Map 6.2 Water Service Areas in Cecil County




Source: Cecil County Water and Sewer Master Plan, Municipal WREs and MGEs.

To the south and east of the Fall Line, confined Coastal Plain aquifers are generally suitable for public water supplies. The major coastal plain aquifers in Cecil County are the Potomac, Magothy, and Monmouth formations (see diagram of water bearing formations in the WRE Appendix).

The characteristics of surface water sources also vary according to their location in either the Piedmont or Atlantic Coastal Plan. The Piedmont in Cecil County is dissected or bordered by four major waterways, the Susquehanna, Northeast, and Elk Rivers, and Octoraro Creek. These waterways provide a major portion of the water used daily in Cecil County (primarily from the Susquehanna).[4] The Atlantic Coastal Plain is drained by the Bohemia and Sassafras Rivers, which tend to be slower-moving, more prone to water quality concerns, and are therefore not used for public water supplies.

Table 6.1 provides basic information about each public water system. Greater detail about each system can be found in the WRE Appendix.

**Table 6.1: Public Water System Characteristics**

| Water System | Source | Planned/Potential System Upgrades or Expansions | Source Concerns, System Issues |
|---|---|---|---|
| Cecilton | 2 wells - Magothy formation | Additional well & storage tank | Iron & Manganese |
| Charlestown | 2 wells - Magothy formation | Additional wells and storage. Possible connection with Mountain Hill Water Company. | Iron, pH, system near capacity |
| Chesapeake City North & South | 4 wells - Potomac formation | Privatization of drinking water system, capacity increase to 400,000 gpd | Iron |
| Elkton | 2 wells - Potomac formation; Big Elk Creek | Additional wells and capacity | None |
| Harbour View | 2 wells - Potomac formation | None | None |
| Meadowview / Highlands | 2 wells - Potomac formation; United Water of DE | None | None |
| North East | North East Creek | Expanding capacity to 2 MGD | None |
| Perryville | Susquehanna River | Technology upgrades | Quality concerns due to sedimentation |
| Pine Hills | 2 wells - Potomac formation | None | None |
| Port Deposit | Susquehanna River | System upgrades underway | Quality concerns due to sedimentation |
| Rising Sun | 5 wells - Potomac formation | Additional wells | Inadequate future water quantity. |

Sources: Water and Sewer Master Plan; Municipal WREs and MGEs; Surface Water Supply Study for Cecil County Designated Growth Area, 2006

Table 6.2 shows the existing and projected future drinking water production, demand, and net available capacity for public water systems in Cecil County. Projected demand is based on Table 2.1, adjusted to include nonresidential demand. Most public systems currently have excess capacity, although a few, such as Rising Sun and Elkton, are close to their limits. Chesapeake City is at or slightly over its capacity. Without new water sources, several public water systems will be unable to support projected growth through 2030.

[4] Source: Cecil County Master Water & Sewer Plan, 2004.

**Table 6.2: Drinking Water Demand and Capacity**

| | | Cecilton | Charlestown* | Chesapeake City* | Elkton* | Harbour View | North East | Perryville* | Port Deposit* | Rising Sun | Elkton West (*Meadowview, Highlands, Cherry Hill*) | Pine Hills |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water Production, 2008[1] | gpd[2] | 98,000 | 207,000 | 170,000 | 2,150,000 | 51,700 | 1,200,000 | 800,000 | 400,000 | 260,000 | 1,133,000 | 165,000 |
| | ERU[3] | 392 | 828 | 680 | 8,600 | 207 | 4,800 | 3,200 | 1,600 | 1,040 | 4,532 | 660 |
| Water Demand, 2008 | gpd | 47,800 | 92,400 | 176,000 | 1,800,000 | 19,800 | 670,000 | 376,000 | 58,000 | 216,100 | 390,000 | 73,000 |
| | ERU | 191 | 370 | 704 | 7,200 | 79 | 2,680 | 1,504 | 232 | 864 | 1,560 | 292 |
| **Available Capacity, 2008** | **gpd** | **50,200** | **114,600** | **(6,000)** | **350,000** | **31,900** | **530,000** | **424,000** | **342,000** | **43,900** | **743,000** | **92,000** |
| | **ERU** | **201** | **458** | **(24)** | **1,400** | **128** | **2,120** | **1,696** | **1,368** | **176** | **2,972** | **368** |
| Total New Demand through 2030[4] | gpd | 63,200 | 120,660 | 137,031 | 1,237,500 | 4,950 | 804,750 | 840,000 | 502,000 | 205,592 | 804,750 | 58,400 |
| | ERU | 253 | 483 | 548 | 4,950 | 20 | 3,219 | 3,360 | 2,008 | 822 | 3,219 | 234 |
| Total Projected Demand 2030[5] | gpd | 111,000 | 213,060 | 313,031 | 3,037,500 | 24,750 | 1,474,750 | 1,216,000 | 560,000 | 421,692 | 1,194,750 | 131,400 |
| | ERU | 444 | 852 | 1,252 | 12,150 | 99 | 5,899 | 4,864 | 2,240 | 1,687 | 4,779 | 526 |
| Likely Capacity, 2030[5, 6] | gpd | 98,000 | 207,000 | 400,000 | 3,150,000 | 51,700 | 2,000,000 | 2,000,000 | 1,500,000 | 260,000 | 3,000,000 | 165,000 |
| | ERU | 392 | 828 | 1,600 | 12,600 | 207 | 8,000 | 8,000 | 6,000 | 1,040 | 12,000 | 660 |
| **Net Available Projected Capacity, 2030** | **gpd** | **(13,000)** | **(6,060)** | **86,969** | **112,500** | **26,950** | **525,250** | **784,000** | **940,000** | **(161,692)** | **1,805,250** | **33,600** |
| | **ERU** | **(52)** | **(24)** | **348** | **450** | **108** | **2,101** | **3,136** | **3,760** | **(647)** | **7,221** | **134** |

Sources: Cecil County Department of Public Utilities; Water and Sewer Master Plan; Municipalities. * Indicates municipalities where data was provided by Water Resources and/or Municipal Growth Elements. Note that 2008 water demand in municipalities are based on Equivalent Residential Units (ERU), and may not match the housing unit data in Table 2.1 because public water service areas are not necessarily coterminous with municipal boundaries, and because ERUs include nonresidential development.

1: Indicates the most restrictive of either the system's permitted withdrawal or the water treatment plant's treatment capacity.

2: gpd = gallons per day

3: ERU = An Equivalent Residential Unit (ERU) is 250 gallons per day (gpd). This figure represents the average amount of water used by one household, and is also used to calculate residential and non-residential (e.g., businesses) water demand.

4: Includes new demand from residential and nonresidential development, as well as system extensions to existing development.

5: Total projected demand for these systems in 2030 would be approximately 8.7 MGD, versus total capacity of approximately 12.8 MGD.

6: Incorporates all ongoing or planned capacity upgrades.

## 6.4.2 Water Use Outside of Public Systems

### Summary

Table 6.3 presents a profile of the overall water use in Cecil County in 2000 (the most recent year for which data on overall water use is available). Although these data are not up-to-date, they do indicate the relationship between different types of water users in the County. In 2000, approximately 10.3 million gallons per day (MGD) of fresh water were used in Cecil County, of which 7.3 MGD was from groundwater and 3 MGD was from surface water withdrawals. Public water supplies (including private utilities) and individual wells for homes each used more than one third of this total withdrawal. Groundwater for domestic supply was the largest single water use category, reflecting the large amount of development in the County's rural areas.

**Table 6.3: Water Withdrawals in Cecil County, 2000**

| Type of Withdrawal | Surface Water (MGD) | Ground Water (MGD) | Total (MGD) | Percent of County Withdrawals |
|---|---|---|---|---|
| Public Water Supply | 2.0 | 1.6 | 3.6 | 35% |
| Domestic Supply (wells) | 0 | 3.8 | 3.8 | 37% |
| Commercial | 0.5 | 0.7 | 1.2 | 11% |
| Industrial | 0 | 0.1 | 0.1 | 1% |
| Mining | 0.2 | 0.1 | 0.3 | 3% |
| Livestock Watering | 0.2 | 0.1 | 0.3 | 3% |
| Irrigation | 0.1 | 0.9 | 1.0 | 10% |
| Total | 3.0 | 7.3 | 10.3 | 100% |

Source: USGS Water Science Center. Freshwater Use and Withdrawals, 2000. http://md.water.usgs.gov/freshwater/withdrawals/#top

### Domestic Water Supply

All residents in portions of Cecil County beyond the reach of public water systems (approximately 21,400 homes, or 56 percent of all homes in the County) obtain their water from private wells or small private water providers. These wells draw water from a variety of water-bearing formations in the County, but rely primarily on the Potomac aquifer and numerous piedmont crystalline rock aquifers.

### Commercial and Industrial Water Use

Other users, such as agricultural irrigation, commercial establishments, and mining operations, account for 28% of the remaining withdrawals. Of these, commercial uses account for the majority of both the surface water and ground water withdrawals, closely followed by agricultural irrigation. In 2004, industrial groundwater appropriation permits totaled 0.4 MGD.[5] The largest commercial users in the County tend to be mining operations and nurseries, some of which have annual permitted withdrawals of more than 0.9 MGD.

**The majority of County nurseries use surface water for irrigation.**

[5] Cecil County Water and Sewer Plan. March 2004.

### Agricultural Water Use

Agricultural use of groundwater includes the watering of livestock and irrigation. Agricultural irrigation is most common in the agricultural areas south of Elkton (in the Resource Protection area of Cecil County). The majority of water for agriculture is withdrawn from unconfined or surficial aquifers—aquifers that are fed directly by rainwater. These aquifers are separate from the confined aquifers used for public and domestic supplies in the Coastal Plain, or the crystalline aquifers used in the Piedmont. Thus, while agricultural water use is an important consideration, it can be considered separately from public water supplies.

## *6.4.3 Issues of Concern—Drinking Water*

This section summarizes the key issues related to drinking water that emerged through the Comprehensive Plan process.

### Elkton West Franchise Agreement

In August 2008, Cecil County and Artesian Water Maryland, Inc. (Artesian) signed a franchise agreement that transferred all County-owned drinking water assets to Artesian. By terms of the agreement, Artesian will provide water and wastewater service to the Elkton West area (areas to the west and north of Elkton), initially through an interconnection to Artesian Water Company of Delaware. The transfer of assets includes the Harbour View, Cherry Hill, Meadowview, Pine Hills and Route 7 systems, and associated parcels, easement rights and water transmission and distribution systems. Artesian will initially provide 3 MGD of water for the Elkton West area, with plans to expand water production for this area up to 5 MGD.

The County will provide oversight for Artesian's extension of public water service. However, during development of the Comprehensive Plan, the following concerns were raised about the compatibility of the franchise agreement and the Comprehensive Plan's land use and growth priorities:[6]

**Reliability**: Particularly during a drought, there is a concern that water flows from out-of-state sources could be reduced or even stopped, although Artesian has considerable excess capacity. Artesian's Delaware subsidiary currently purchases much of its water from the Chester Water Authority in Pennsylvania, raising concerns[7] that more than one state could choose to shut off the County's water supply regardless of the provisions of the franchise agreement. Artesian plans to develop water sources in Cecil County. As a matter of County policy, the establishment of drinking water sources within Cecil County should become a priority.

**Consistency**: Artesian can only provide water service within the Elkton West service area, all of which is designated as a Growth Area. However, there is some concern that, within Elkton West area, Artesian's priorities for water service extensions may differ from the County's priorities, as expressed by the Future Land Use plan and other Comprehensive Plan priorities. Close County oversight of Artesian's operations, as established in the franchise agreements, is required to ensure maximum consistency between development policy and the provision of water infrastructure.

### Unmet Future Demand in Public Water Systems

To serve projected growth, the County and the municipalities will need to obtain additional water supplies, and will, in many cases, need to upgrade and expand treatment facilities and water distribution systems. In addition to the Elkton West franchise, the following planned or likely system expansions, included in the “Likely Capacity, 2030” row of Table 6.2, will help to address potential system deficits.

[6] These concerns were raised by MDP and COC members. Correspondence between the County and MDP on this issue is included in the Water Resources Element Appendix.

[7] Artesian believes that these concerns are not well-founded. See the 17 July 2008 letter in the Water Resources Element Appendix.

- As described above, Artesian will initially provide 3 MGD of water for Elkton West, with plans to expand water production for this area up to 5 MGD.
- An interconnection to Artesian's Elkton West system will allow the Town of Elkton to draw 1 MGD of water (in addition to the supply committed for Elkton West). This should enable Elkton to meet its 2030 demand.
- The Mountain Hill Water Company (Not listed in Table 6.2), also an Artesian subsidiary, serves the Principio Business Park, the Charlestown Crossing mixed use development, and the surrounding area. Artesian plans to increase the current 287,000 gpd capacity of this system to 1 MGD, a net gain of approximately 0.7 MGD. This system expansion would likely serve expansion in the Principio business park, but could also serve Charlestown's water needs.
- The Town of Perryville will upgrade its water pumping, sedimentation, filtration, and storage capacities to increase its water production capacity from 0.8 MGD to 2.0 MGD (a net gain of 1.2 MGD)—matching the Town's current withdrawal limit from the Susquehanna River.
- The Town of Port Deposit will withdraw up to 1.5 MGD from the Susquehanna River, due to a successful petition to the Susquehanna River Basin Commission. This withdrawal will serve the long-term buildout of the Bainbridge development.
- The Town of North East will upgrade its water system to at least 2.0 MGD, from the current 1.2 MGD capacity.

**The Susquehanna River is a drinking water source for western portions of Cecil County.**

- The Town of Chesapeake City will purchase as much as 0.4 MGD of water (while retiring its two water treatment plants) from Artesian Water Delaware.

After these system expansions are complete, as shown in Table 6.2, the public water systems in the Towns of Cecilton, Charlestown, and Rising Sun will have insufficient capacity to serve projected growth through 2030, and several other systems will approach their capacities by 2030.

To address these needs, the Town of Rising Sun is investigating connections to drinking water sources and suppliers in Pennsylvania, including Chester Water Authority to provide future capacity. One option for Charlestown may be an interconnection to the nearby North East public water system or the Mountain Hill Water Company, both of which may have excess capacity in 2030. For other systems beyond 2030, new or expanded water supplies will be needed. Section 6.4.4 outlines options for such new supplies.

## Water Quality Concerns[8]

The quality of groundwater in Cecil County is generally acceptable. Salinity may be a problem in shallow wells adjacent to the estuaries of the Chesapeake Bay. Reports have shown that wells drilled to over 500 feet in the sedimentary rocks in the southern portion of the county have encountered brackish water where the salinity approaches one thousand parts per million or more.

[8] Source: Water and Sewer Master Plan

### Fluoridation

Cecil County children have higher rates of tooth decay than other children in other Maryland jurisdictions. Fluoridation of community water supplies should be encouraged as a safe and accepted public health practice to promote oral health. The Town of North East began fluoridation of its water supply in August 2009.

### Drought Management

The 2009 Hazard Vulnerability Analysis lists drought as a medium hazard risk (see Chapter 8, the Community Facilities Element). Cecil County has no drought management policy related to public drinking water systems. This is particularly important, considering the degree to which public systems in Cecil County rely on out-of-state water sources. Establishing a Countywide drought management policy (in conjunction with municipalities and private water providers) could help to manage water supplies during drought.

## *6.4.4 Potential New Water Supplies*

After the upgrades and expansions described in Section 6.4.3, most major public water systems will have adequate capacity to meet projected 2030 demands. Beyond 2030, however, public systems in Cecil County (including municipalities) will require as much as 10 MGD of additional capacity to meet drinking water demand at buildout.[9] This section describes potential sources that can help meet the County's long-term drinking water needs.

In most cases, these new sources are not immediate needs before 2030. However to ensure the availability of these water sources beyond 2030, the County, its municipalities, and its private water providers must take actions before 2030. These entities must identify and secure funding, permits, and the land necessary to implement these new sources. In particular, it will be necessary to acquire or reserve the land necessary for new drinking water reservoirs and wells (including wellhead protection areas).

### Potential New Groundwater Supplies

Coastal Plain aquifers in Cecil County have historically been adequate to serve public systems and individual wells. Indeed, for Cecilton, increased groundwater withdrawals appear to be the most likely source of additional drinking water. However, the cumulative impact of development throughout the Delmarva Peninsula on these aquifers is the subject of increasing concern. The US Geological Survey (USGS) reports that "withdrawals from Maryland Coastal Plain aquifers have caused ground-water levels in confined aquifers to decline by tens to hundreds of feet from their original levels. Continued water-level declines could affect the long-term sustainability of ground-water resources in agricultural areas of the Eastern Shore."[10] In most cases, the recharge areas for these aquifers are not necessarily found on the Eastern Shore, and are thus not within the control of the people and governments that use this water.

To more specifically define the ultimate capacity of the Coastal Plain aquifer system, the Maryland Department of the Environment (MDE), the Maryland Geological Survey (MGS), and the US Geological Survey (USGS) have begun work on a Coastal Plain Aquifer Study. The County should use the data and recommendations of the Coastal Plain Aquifer Study (once completed) to shape its own water use policies. However, the County also recognizes the need for and supports the development of broader regional water policies to protect Coastal Plain groundwater supplies.

The most significant potential groundwater supplies for the northern rural areas of Cecil County (areas north and west of Elkton) are under the Elk Neck peninsula. Aquifers in these

[9] For more information, see "Evaluation of Water Resources at Buildout" in the Water Resources Element Appendix.

[10] Source: USGS. 2006. Sustainability of the Ground Water Resources in the Atlantic Coastal Plain of Maryland. USGS Fact Sheet 2006-3009

locations may be productive enough to serve a significant portion of the Growth Area, particularly the Elkton area.

Individual wells provide drinking water for thousands of homes and businesses across the County, totaling approximately 3.8 MGD in 2000 (see Table 6.3). Groundwater resources within and to the north of the I-95/US 40 corridor are less consistent than in the Coastal Plain, due to the underlying fractured rock formations, and the ability of Piedmont formations to support significant amounts of future growth is not well understood. The issue is not necessarily quantity of water. Application of the Water Balance methodology, as described in *Models and Guidelines 26*, MDP's official guidance for preparing the WRE, shows that the northern rural area receives as much as 26 MGD of groundwater recharge. However, not all of this water is accessible, due to the fractured nature of the water-bearing formation and seasonal variations in water availability.

### Potential New Surface Water Supplies

Several opportunities exist to meet Cecil County's long-term water supply needs with surface water. The most promising options are listed below.

- Withdrawals from the Susquehanna River. The Susquehanna River Basin Commission (SRBC), a regional governing body, handles requests for additional withdrawals from the river. In recent years, the SRBC has been reluctant to grant withdrawals that would result in interbasin transfer of water (e.g., from the Conowingo and Lower Susquehanna watersheds to other parts of Cecil County). However, some additional withdrawal may be available to serve public systems in western portions of the County.

**A view of the potential reservoir area on Principio Creek north of Theodore Road.**
2006 Reservoir Feasibilty Study

- Surface water impoundments. Cecil County's 2006 Surface Water Supply Study evaluated the potential to create new surface water impoundments to supply public water systems. The two most promising potential impoundments were:
    - A reservoir site on Principio Creek, north of Theodore Road, which could supply as much as 0.32 MGD to the North East area.
    - A reservoir site adjacent to the mouth of Principio Creek (south of the Amtrak line on the east side of the creek and including part of Stancills' quarry), which could supply as much as 2.3 MGD to the North East area.
    - Elk Mills Quarry, adjacent to Big Elk Creek. Once extraction activity ceases on this site (after approximately 2068), this source could provide as much as 13.2 MGD of water supply to the Elkton area.

## *6.4.5 Additional Considerations*

### Water Conservation and Reuse

Water conservation is an often-overlooked, but critically important element of water supply. Cecil County bases its current planning on the assumption that one household uses an average of 250 gallons per day (gpd) of drinking water. If, through water conservation

education and installation of water-efficient appliances and fixtures, average water use could be reduced to 225 gpd per household, the County would reduce its water demand in public systems in 2030 by nearly 1 MGD (more than 10 percent of year 2030 demand from public systems). The County's Flow Reduction Program requires low flow fixtures for all new and upgraded structures. Regular audits of the water distribution system to minimize system water loss can also help to conserve water.

In some jurisdictions, water from tertiary treatment wetlands (see the discussion of Public Sewer Systems in Section 6.5.3) meets potable water standards, and can be reused as drinking water. Safety concerns would be the paramount issue in such reuse, but this option may be viable in the long term (see Section 6.5.3).

Another option for residents and individual businesses may be the use of cisterns to collect and re-use rain water. The County currently has no regulations regarding the design and maintenance of cisterns.

#### Desalination (Beyond 2030)

The Cecil County Department of Public works has suggested that desalination, coupled with withdrawals from the tidal Elk River and other tidal river mouths in the Chesapeake Bay may be required in order to meet the County's long-term drinking water needs. Although very expensive at the present time, it is not unreasonable to assume that the costs of desalinization will drop over time, as more and more communities in the US and around the world begin to rely on such systems. Supplies of brackish water are presumed to be substantial, although treatment to remove pollutants could also add expense to the process. While not a primary strategy at this time, the County should nonetheless continue to examine desalination as a long-term option for water supply.

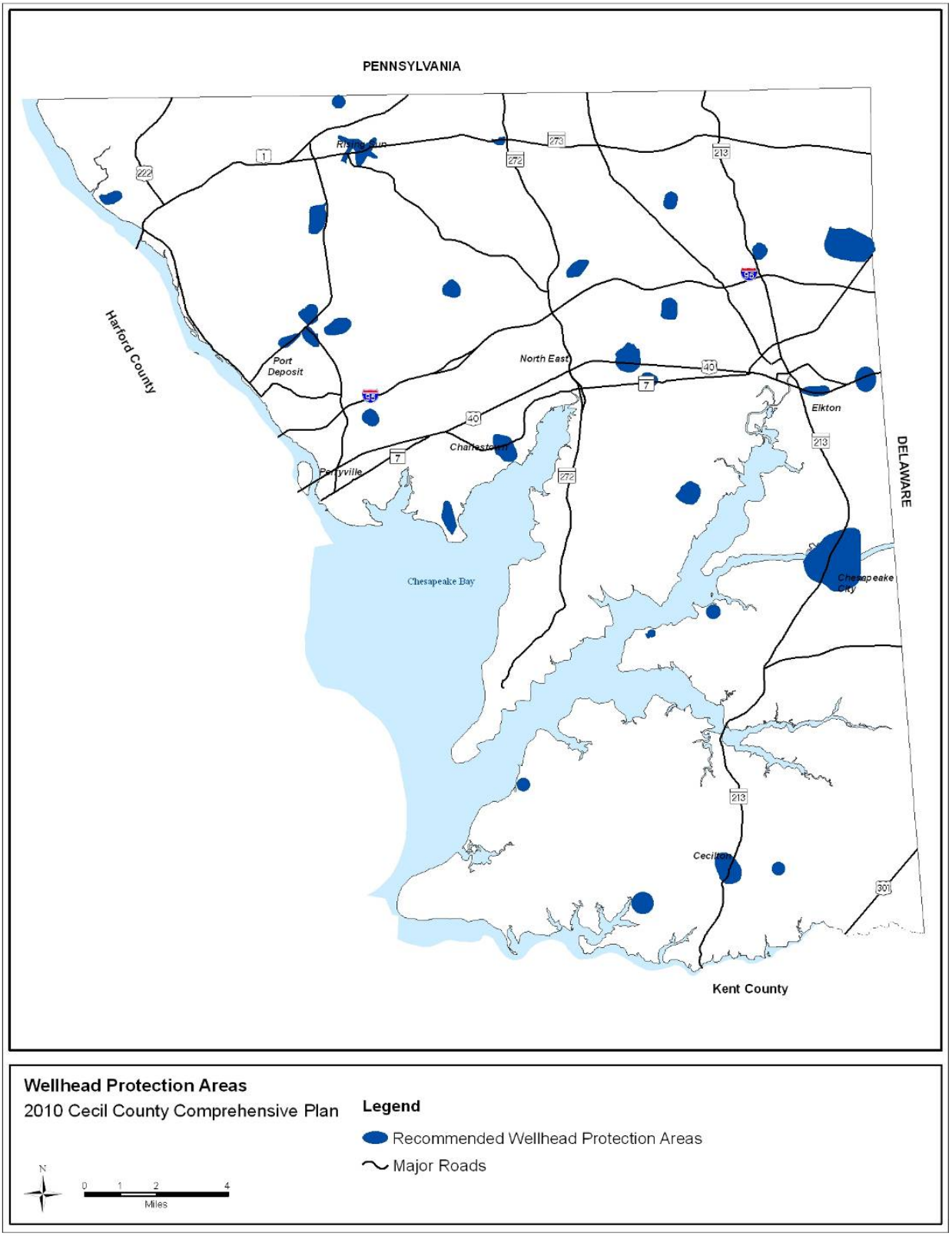
#### Capital Costs

The majority of this section has focused on available quantities of drinking water. However, the costs of transporting water are important. To meet the County's needs at buildout, interconnection of water systems may become necessary. Interconnection may also be prudent to ensure redundancy in case of system damage or failure. For example, the 13.2 MGD of water from a future Elk Mills Quarry Reservoir may be needed in North East, or even Rising Sun, rather than Elkton itself. Interconnected water systems would be expensive to install, but would give the County the flexibility it needs to maintain safe and adequate water supplies while directing growth and development according to the Future Land Use Plan.

### *6.4.6 Wellhead Protection*

Wellhead Protection is a strategy designed to protect public drinking water supplies by managing the land surface around a well where activities might affect the quality of the water. In 2000, Maryland Department of the Environment (MDE) conducted a Source Water Assessment in Cecil County delineating wellhead protection areas, indentifying potential sources of contamination, and developing management strategies to protect water supplies for public systems. MDE's proposed wellhead protection areas in Cecil County are shown in Map 6.3.

## Map 6.3 Proposed Wellhead Protection Areas




*Source: MDE*

As a result of the MDE report, a wellhead protection ordinance was drafted by the County that includes specific itemization of permitted and prohibited uses. The key recommendations of the draft ordinance include:

- Up to two wellhead protection zones are established for each well serving a public system. Zone 1 is the area with a groundwater travel time of up to one year to the pump location, while Zone 2 is the area with a groundwater travel time of up to 10 years.
- Prohibited uses within wellhead protection zones include (but are not limited to) storage of hazardous materials, service stations, animal waste pits, quarrying and mining operations, and similar activities that involve storage or deposition of potential contaminants.
- Application of pesticides are permitted in wellhead protection areas, as long as their use conforms to applicable labeling and federal and state guidelines

This Comprehensive Plan recommends adoption of a wellhead protection ordinance.

## 6.5 Wastewater Assessment

This section describes existing demand for public wastewater services in Cecil County. Approximately 16,900 housing units (44 percent of the County total in 2008) are connected to public sewer systems, including systems operated by private entities. Houses and businesses not on public sewer use onsite sewage disposal systems (OSDS), commonly know as septic systems. The sewer/septic split amongst non-residential development is comparable to the residential split. Since 1998, approximately half of all new residential units built in Cecil County use private septic systems.[11]

### *6.5.1 Public Wastewater Systems*

There are 11 public or community wastewater treatment plants (WWTPs) in Cecil County. WWTP technology ranges from disinfection to Enhanced Nutrient Removal (ENR) plants. Table 6.4 summarizes the discharge locations, planned upgrades, and concerns related to the County's public wastewater systems, while Map 6.4 shows existing and planned public sewer service areas.

**Elkton Wastewater Treatment Plant is owned and operated by the Town of Elkton.**

[11] Source: Maryland Property View.

The County owns and operates the Seneca Point WWTP, which serves the Towns of North East and Charlestown. Artesian Wastewater Maryland owns and operates the Cherry Hill, Harbour View, Highlands, and Meadowview WWTPs as part of the Elkton West franchise. The remaining public WWTPs are owned and operated by municipalities.

The 66 largest WWTPs in the State are categorized as "significant" (or "major") facilities, and are eligible for financial assistance through Maryland's Bay Restoration Fund for upgrades required to attain Enhanced Nutrient Removal (ENR) technology. The three significant facilities in Cecil County are the Seneca Point, Elkton, and Perryville WWTPs. Elkton has been upgraded to ENR, while ENR upgrades at Perryville should be complete by 2010. ENR upgrades have been planned for Seneca Point, but no completion date has been set.

The remaining public WWTP's in Cecil County are considered "non-significant" (or "minor") plants, and are not eligible for funding from the Bay Restoration Fund. Upgrades to these facilities are not required unless the WWTP cannot achieve its permitted pollution discharge limits. Although it does not discharge to the Chesapeake Bay Watershed, the Meadowview WWTP is also being upgraded to ENR.

**Table 6.4: Public Sewer System Characteristics**

| Sewer System | Discharge Location | Existing Treatment Technology[1] | Upgrades or Expansions, and Other Issues |
|---|---|---|---|
| Cecilton | Duck Creek | Lagoon | Correction of Inflow and Infiltration (I/I)[2] |
| Chesapeake City (North and South) | C&D Canal | Disinfection | New 0.3 MGD BNR WWTP planned |
| Elkton WWTP | Big Elk Creek | ENR | None |
| Harbour View | Elk River | Disinfection | Upgrade to BNR/ENR, 0.22 MGD |
| Cherry Hill | Little Elk Creek | Disinfection | Retirement, connection to Meadowview WWTP |
| Highlands | Christina River | Lagoon | |
| Meadowview | Christina River | BNR | Upgrade to ENR, 2.3 MGD |
| Seneca Point | North East River | ENR | Phased expansion to 5 MGD |
| Perryville | Mill Creek | BNR | ENR upgrade; system extensions; correction of I/I |
| Port Deposit | Susquehanna River | Package WWTP | New 1.0 MGD ENR WWTP |
| Rising Sun | Stone Run | Lagoon | Correction of I/I, potential WWTP upgrade/expansion |

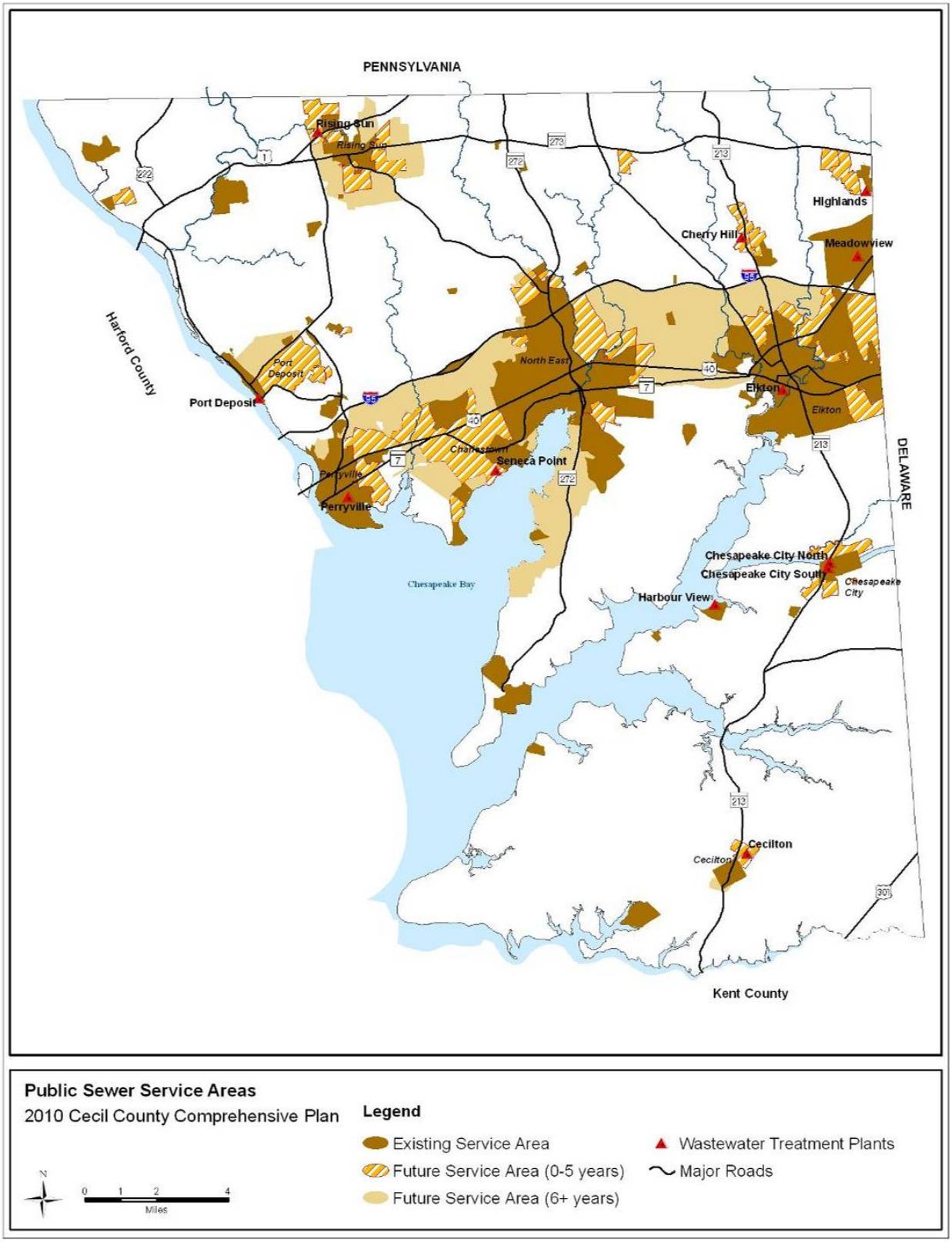
Notes:

1: Biological Nutrient Removal (BNR) is an advanced type of wastewater treatment that can typically achieve nutrient loads of 8 mg of nitrogen and 2 mg of phosphorus per liter of discharged effluent. Enhanced Nutrient Removal represents the limits of current treatment technology, and can typically achieve 3 mg/L nitrogen, 0.3 mg/L phosphorus.

2: Inflow is water from storm events entering the system through roof drains, sump pumps, foundation drains, and similar sources. Infiltration is groundwater entering the system through leaking pipes, manholes, and other elements. I/I takes up sewer capacity that should be reserved only for wastewater, effectively limiting the system's overall capacity.

Table 6.5 shows the existing (2008) and projected future wastewater flows, permitted discharge capacities, and net available capacity for public sewer systems in Cecil County. These wastewater systems are described in detail in the WRE Appendix. All public systems currently have excess capacity, although a few, such as Chesapeake City and Port Deposit, are close to their limits, and Rising Sun is constrained by a consent order. Without expanded discharges, public water systems in Cecilton and Rising Sun will be unable to support projected growth through 2030. Section 6.5.3 describes options for obtaining additional capacity.

## Map 6.4 Sewer Service Areas in Cecil County




*Source: Cecil County Water and Sewer Master Plan, Municipal WREs and MGEs.*

**Table 6.5: Wastewater Flow and Treatment Capacity**

| | | Cecilton | Chesapeake City North* | Chesapeake City South* | Elkton* | Cherry Hill | Highlands | Meadowview | Perryville* | Port Deposit* | Rising Sun | Harbour View | Seneca Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Existing Treatment Capacity[1] | gpd | 100,000 | 75,000 | 88,000 | 3,200,000 | 250,000 | 50,000 | 1,000,000 | 1,650,000 | 90,000 | 275,000 | 65,000 | 2,000,000 |
| | ERU | 400 | 300 | 352 | 12,800 | 1,000 | 200 | 4,000 | 6,600 | 360 | 1,100 | 260 | 8,000 |
| Current Average Daily Flow | gpd | 60,305 | 54,650 | 73,650 | 1,490,000 | 125,000 | 44,000 | 460,000 | 720,000 | 85,000 | 216,100 | 31,000 | 1,000,000 |
| | ERU | 241 | 219 | 295 | 5,960 | 500 | 176 | 1,840 | 2,880 | 340 | 864 | 124 | 4,000 |
| **Current Available Capacity** | **gpd** | **39,695** | **20,350** | **14,350** | **1,710,000** | **125,000** | **6,000** | **540,000** | **930,000** | **5,000** | **58,900** | **34,000** | **1,000,000** |
| | **ERU** | **159** | **81** | **57** | **6,840** | **500** | **24** | **2,160** | **3,720** | **20** | **236** | **136** | **4,000** |
| Total New Demand through 2030[2] | gpd | 63,200 | 137,031 | | 1,237,500 | | | 879,750 | 840,000 | 502,000 | 245,592 | 4,950 | 1,380,000 |
| | ERU | 253 | 548 | | 4,950 | | | 3,519 | 3,360 | 2,008 | 982 | 20 | 5,520 |
| Total projected demand, 2030 | gpd | 123,505 | 265,331 | | 2,727,500 | | | 1,508,750 | 1,560,000 | 587,000 | 461,692 | 35,950 | 2,380,000 |
| | ERU | 494 | 1,061 | | 10,910 | | | 6,035 | 6,240 | 2,348 | 1,847 | 144 | 9,520 |
| Future Capacity[3] | gpd | 100,000 | 300,000 | | 3,200,000 | | | 2,300,000 | 1,650,000 | 1,000,000 | 275,000 | 65000 | 5,000,000 |
| | ERU | 400 | 1,200 | | 12,800 | | | 9,200 | 6,600 | 4,000 | 1,100 | 260 | 20,000 |
| **Net Available Projected Capacity, 2030** | **gpd** | **(23,505)** | **34,669** | | **472,500** | | | **791,250** | **90,000** | **413,000** | **(186,692)** | **29,050** | **2,620,000** |
| | **ERU** | **(94)** | **139** | | **1,890** | | | **3,165** | **360** | **1,652** | **(747)** | **116** | **10,480** |

*Source: Cecil County Department of Public Utilities, Municipalities*. * Indicates municipalities whose Water Resources and/or Municipal Growth Elements provided data. Note that 2008 wastewater flows in municipalities are based on Equivalent Residential Units (ERU), and may not match the housing unit data in Table 2.1 because public sewer service areas are not necessarily coterminous with municipal boundaries, and because ERUs include nonresidential development.

1: Indicates the more restrictive of the WWTP's discharge permit or its physical capacity.

2: Includes new demand from residential and nonresidential development, as well as system extensions to existing development.

3: Incorporates ongoing, planned, and recommended capacity and technology upgrades.

### Elkton West Franchise Agreement

In August 2008, Cecil County and Artesian Wastewater Maryland, Inc. (Artesian) signed a franchise agreement that transferred most County-owned wastewater assets to Artesian. By terms of the agreement, Artesian will provide water and wastewater service to the Elkton West area (areas to the west and north of Elkton). The transfer of assets includes the Cherry Hill, Harbour View, Highlands, and Meadowview wastewater systems and their related collection systems. Artesian's intent is to retire the Highlands and Cherry Hill systems, and to pump their effluent to an expanded and upgraded Meadowview WWTP.

The County will provide oversight for Artesian's extension of public sewer service in the Elkton West service area. During development of the Comprehensive Plan, concerns were raised that Artesian's priorities for sewer service extensions may differ from the County's priorities, as expressed by the Future Land Use plan and other Comprehensive Plan priorities.[12] Close County oversight of Artesian's operations, as established in the franchise agreement, is required to ensure consistency between development policy and the provision of sewer infrastructure.

## *6.5.2 Point Source Nutrient Loads and Measures of Assimilative Capacity*

Nitrogen and phosphorus (more generally referred to as "nutrients") from WWTPs, stormwater, and other sources are the primary contributors to degraded water quality in the Chesapeake Bay and its tributaries. Excess nitrogen and phosphorus in an aquatic ecosystem causes a wide range of problems, including algal blooms, loss of oxygen in the water, fish kills, and the loss of aquatic vegetation. In the Chesapeake Bay area, eutrophication[13] is a widespread problem that can be remedied by decreasing input rates of nitrogen and phosphorus into the water.

To address nutrient discharges into the Bay, water and sewer planning must take into account the "assimilative capacity" of a receiving body of water—the mass of nutrients that the stream can receive while still maintaining acceptable water quality. The majority of Cecil County is in the Chesapeake Bay Watershed. This section describes the key limits on assimilative capacity as they apply to the County's WWTPs (some of these measures also apply to nonpoint nutrient sources, as described in Section 6.7). In cases where multiple measures of assimilative capacity apply to the same point source, the more stringent standard applies.

### Total Maximum Daily Load (TMDL)

One measure of assimilative capacity is the Total Maximum Daily Load (TMDL), required under the Federal Clean Water Act. A TMDL is the maximum amount of pollutant that a water body, such as a river or a lake, can receive without resulting in impaired water quality. In essence it quantifies an upper threshold for pollutants or stressors. Whereas point source caps only address WWTPs and other point sources, a TMDL accounts for all sources of the given pollutant, including point sources and non-point sources (such as stormwater, agricultural runoff, or discharges from septic systems). Water bodies are classified as "impaired" when they are too polluted or otherwise degraded to support their designated and existing uses. The impaired waters list is called the 303(d) list, in reference the section in the Clean Water Act that establishes TMDLs.[14]

TMDLs have been established for nutrients for four of the Cecil County's watersheds, as summarized in Table 6.6. In addition, MDE has determined that the Conowingo

[12] These concerns were raised by MDP and some COC members. Correspondence between the County and MDP on this issue is included in the Water Resources Element Appendix.

[13] Eutrophic waters are rich in mineral and organic nutrients, promoting a proliferation of plant life, especially algae. This reduces the dissolved oxygen content and often causes the extinction of other organisms.

14 Center for Watershed Protection. *A Users Guide to Watershed Planning in Maryland, Chapter 2.*December 2005. http://www.dnr.state.md.us/watersheds/pubs/planninguserguide/UserGuideChapter2.pdf

Dam/Susquehanna River, Back Creek, Lower and Upper Elk River, and Upper Chesapeake Bay are impaired by nutrients.

While nutrients from new development will impact water quality in all watersheds, the nutrient impairments in the Bohemia, Sassafras, and Lower Elk Rivers are likely tied to agricultural sources of nitrogen and phosphorus. Thus, development-related nutrient concerns are highest in the Northeast River, Furnace Bay, Upper Elk River, and Back Creek, where much of the County's future development will occur.

## Point Source Caps

To address nutrient loads from point sources such as WWTPs, the state has established Chesapeake Bay Tributary Strategy point source caps. These caps are numerical limits on the amount of nitrogen and phosphorus that WWTPs can discharge to the Bay and its tributaries (expressed as pounds per year of nitrogen and phosphorus). Nitrogen and phosphorus point source caps have been established for the Elkton, Perryville, and Seneca Point WWTPs.

**Table 6.6: Nutrient TMDLs for Cecil County Watersheds**

| Watershed | Impairing Nutrient | Point Source TMDL (lbs/year) | Nonpoint Source TMDL (lbs/year) |
|---|---|---|---|
| Bohemia River[1] | Nitrogen | No annual standard established. Expressed as lbs/month during summer (low-flow) months only. | |
| | Phosphorus | | |
| Northeast River[1] | Nitrogen | 84,268 | 74,749 |
| | Phosphorus | 7,906 | 3,763 |
| Sassafras River[1, 2] | Phosphorus | 6,824 | 6,839 |
| Christina River[1] | Nitrogen | 21,323 | Not specified in TMDL |
| | Phosphorus | 2,132 | |

Notes:

1: The TMDL referenced in this table applies only to the Maryland portion of the watershed.

2: Approximately 36 percent of the Maryland portion of the watershed is in Cecil County. All significant point sources in the Maryland portion of the watershed are in Kent County.

Table 6.7 shows current and projected future nutrient discharges from public wastewater systems in Cecil County, compared to relevant Point Source Caps or TMDLs. All plants except for Seneca Point and Elkton are over the limit for total phosphorus (TP). The Cherry Hill, Cecilton, and Harbour View WWTPs currently exceed their point source caps for total nitrogen (TN).

## Antidegradation

Maryland's antidegradation policy significantly limits new discharge permits and expansions of existing discharge permits that would degrade water quality in Tier II (high quality) waters, as defined by the US Environmental Protection Agency (EPA). In these areas, new nutrient discharges can be permitted as long as they do not degrade existing water quality. Cecil County's Tier II waters include segments of Basin Run, Little North East Creek, Principio Creek, Mill Creek, Big Elk Creek, and Gramies Run, as shown on Map 6.5. None of Cecil County's public WWTPs discharge to Tier II waters, nor are any of these facilities upstream from Tier II waters.

**Table 6.7: Point Source Nutrient Loads**

| System | | Cecilton | Chesapeake City North | Chesapeake City South | Cherry Hill[1] | Highlands[1] | Meadowview | Perryville | Port Deposit | Harbour View | Seneca Point | Rising Sun | Elkton |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Existing Technology | | BNR | Secondary | | Secondary | Secondary | BNR | BNR | Package | Secondary | ENR | Lagoon | ENR |
| Existing Demand | MGD | 0.06 | 0.05 | 0.07 | 0.13 | 0.04 | 0.46 | 0.72 | 0.09 | 0.03 | 1.00 | 0.22 | 1.49 |
| Existing Nutrient loading (lbs/year) | TN | 1,468 | 7,118 | | 6,844 | 2,409 | 11,194 | 17,521 | 4,654 | 1,697 | 12,168 | 11,832 | 18,130 |
| | TP | 308 | 2,372 | | 2,281 | 803 | 2,799 | 4,380 | 1,551 | 566 | 913 | 3,944 | 1,360 |
| Nutrient Load Cap (lbs/year)[2] | TN | n/a | n/a | | n/a | n/a | n/a | 20,101 | n/a | n/a | 24,364 | n/a | 37,156 |
| | TP | n/a | n/a | | n/a | n/a | n/a | 1,508 | n/a | n/a | 1,827 | n/a | 2,787 |
| **Net Available Discharge, 2008 (Overage)** | **TN** | **n/a** | **n/a** | | **n/a** | **n/a** | **n/a** | **2,580** | **n/a** | **n/a** | **12,196** | **n/a** | **19,026** |
| | **TP** | **n/a** | **n/a** | | **n/a** | **n/a** | **n/a** | **(2,872)** | **n/a** | **n/a** | **914** | **n/a** | **1,427** |
| 2030 Technology | | BNR | BNR | | Retired | Retired | ENR | ENR | ENR | ENR | ENR | ENR[3] | ENR |
| Projected Demand, 2030 | MGD | 0.12 | 0.27 | | 0.96 | | | 1.56 | 0.59 | 0.04 | 1.99 | 0.42 | 2.73 |
| Future Cap[4] | TN | 2,466 | 3,650 | | 21,323 | | | 20,101 | 8,223 | 460 | 24,364 | 15,076 | 37,156 |
| | TP | 411 | 274 | | 2,132 | | | 1,508 | 1,371 | 77 | 1,827 | 2,513 | 2,787 |
| Nutrient Discharges, 2030 (lbs/year) | TN | 3,006 | 6,457 | | 11,708 | | | 18,982 | 7,142 | 437 | 24,268 | 5,131 | 33,187 |
| | TP | 751 | 1,614 | | 878 | | | 1,424 | 536 | 33 | 1,820 | 385 | 2,489 |
| **Net Available Discharge, 2030 (Overage)** | **TN** | **(540)** | **(2,807)** | | **9,615** | | | **1,119** | **1,081** | **23** | **96** | **9,945** | **3,969** |
| | **TP** | **(340)** | **(1,340)** | | **1,254** | | | **84** | **835** | **44** | **7** | **2,128** | **298** |

Notes:

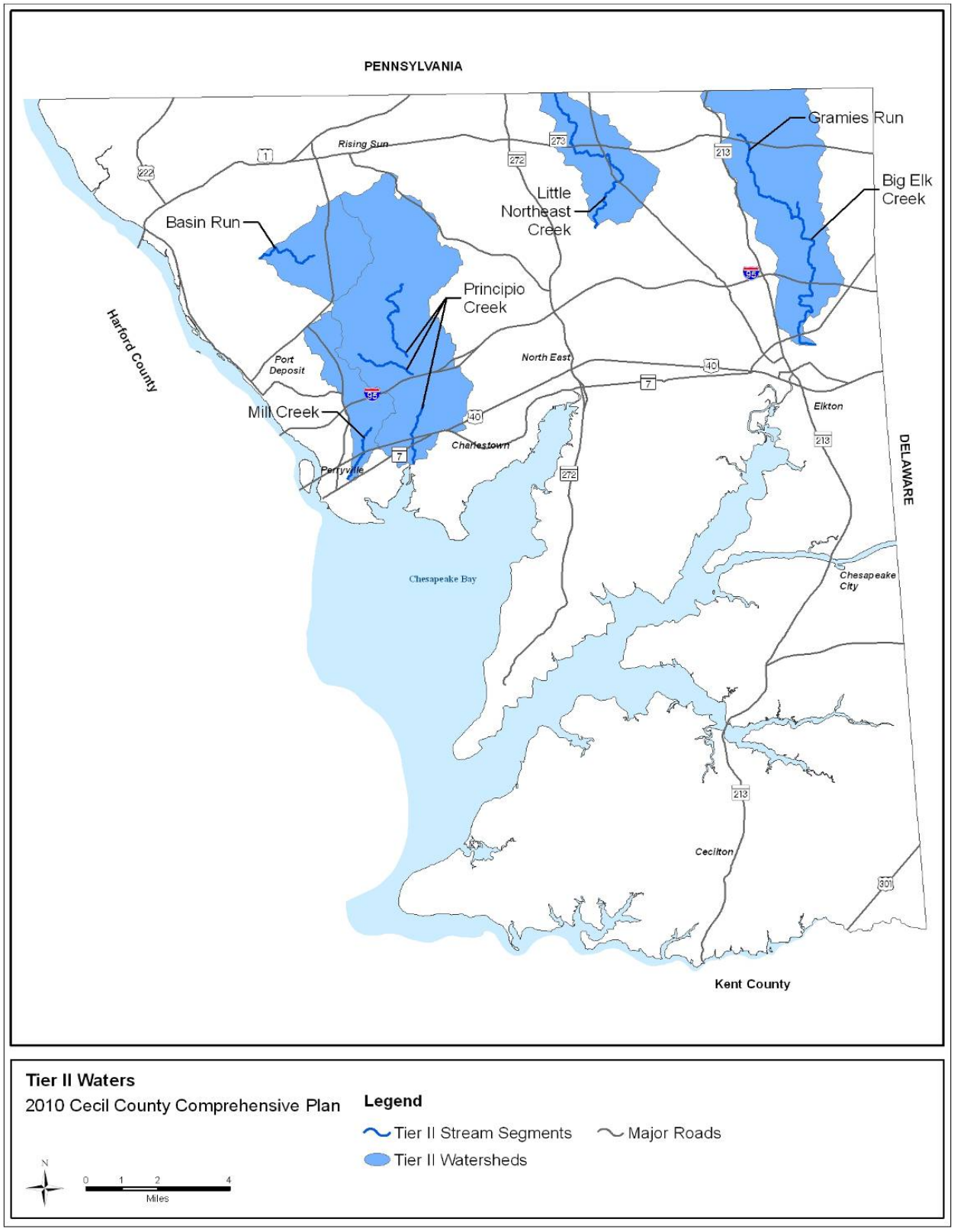
1: WWTP to be closed and effluent pumped to Meadowview WWTP

2: Indicates the Tributary Strategy Point Source Cap for major facilities. To be updated with nutrient cap data for minor facilities, when provided by MDE.

3: Assumes upgrade-in-place, or retirement of Rising Sun WWTP and transfer to Seneca Point WWTP (not yet planned)

4: Assumes existing caps where available. For new/expanded facilities, likely future caps reflect the facility's proposed size at 4 mg/L nitrogen, 0.3 mg/L Phosphorus. To be updated with nutrient cap data for minor facilities, when provided by MDE.

## Map 6.5 Tier II Waters in Cecil County




*Source: MDE*

### 6.5.3 Future Wastewater Disposal Options

While most public sewer systems will be able to meet new demand through 2030, there are concerns about system capacity beyond 2030. After the upgrades and expansions described below, Cecil County would still require as much as 14 MGD of additional wastewater treatment capacity to meet wastewater treatment demand at buildout.[15] This section describes some strategies that can help meet the County's 2030 and long-term sewer system needs.

In most cases, these new discharges are not immediate needs before 2030. However to ensure the availability of discharge capacity beyond 2030, the County, its municipalities, and its private wastewater service providers must take actions before 2030. It is likely that a combination of upgrades, expansions, nutrient trading, land application, tertiary treatment wetlands, and wastewater reuse will be necessary to address the County's long-term wastewater capacity needs. To ensure adequate discharge capacity after 2030, the County, together with wastewater service providers, must identify and secure funding, permits, and the land necessary to implement these new disposal options.

#### Upgrades and Expansions

In addition to the Elkton West franchise, the following planned or likely system expansions, included in Table 6.5, will help to address potential system deficits.

- The Meadowview WWTP will be upgraded to Enhanced Nutrient Removal (ENR) technology, and will be expanded to a capacity of 2.3 MGD, with long-term expansion to 4.0 MGD planned. At the same time, the Highlands and Cherry Hill WWTPs will be retired, with their flows transferred to Meadowview. Meadowview discharges to the Delaware Bay via the West Branch of the Christina River. Artesian (which will own and operate the facility), believes that 4.0 MGD of discharge is within the limits of that watershed's nutrient TMDL.
- Port Deposit will upgrade its WWTP to a 1.0 MGD ENR facility. Discussion is also underway between the County and the Town regarding the potential to convey the Town's wastewater to the Seneca Point WWTP.
- Chesapeake City will replace its two existing WWTPs with a new 0.3 MGD BNR facility.
- After ENR upgrades are complete, and using various nutrient trading approaches (see below), the Seneca Point WWTP will conduct phased expansions to 5.0 MGD. The County plans to eventually expand the WWTP to 11.3 MGD. However, such increased volumes cannot be discharged without additional nutrient trades or offsets from other areas

In addition to these expansions, a solution will be needed for the Rising Sun WWTP. That facility is under a consent order due to effluent violations, and also experiences significant inflow and infiltration. Without upgrades, the Rising Sun WWTP also will not be able to accommodate future flows. The Town lacks the fiscal resources to upgrade the facility without placing financial burdens on its citizens. Another option for addressing the Rising Sun WWTP's deficits could include interconnection to one of the County's other ENR facilities, or other alternative treatment options. An interconnection would involve considerable expense for new sewer lines, but might ultimately be a valid solution. The County could also obtain nutrient credits (see below) for such a connection.

#### Nutrient Trading

Under the state's Policy for Nutrient Cap Management and Trading,[16] nutrient discharges can be traded between one point source (e.g., a WWTP) and another within the same trading basin (for Cecil County, this includes the entire Chesapeake Bay Watershed except for the Potomac and Patuxent basins). In such a scenario, an existing WWTP outside of Cecil County (likely in Maryland, but trades from Pennsylvania could also be considered) would agree to forego a certain amount of development in exchange for payment, and then send or "trade" that excess

[15] For more information, see "Evaluation of Water Resources at Buildout" in the Water Resources Element Appendix.
[16] Information available at: http://www.mde.state.md.us/Water/nutrientcap.asp

treatment capacity to one of the County's WWTPs. The receiving WWTP would then be allowed to expand beyond its current permitted capacity (as long as its discharges would not exceed the limits set by a TMDL).

Nutrient credits can be accrued through other methods:

- Upgrading an existing minor WWTP (in Cecil County, this is a WWTP other than Elkton, Seneca Point, or Perryville) to Biological Nutrient Removal (BNR) or ENR technology;
- Retiring an existing minor WWTP after connecting its flow to an ENR facility; or
- Retiring existing On Site Disposal Systems (OSDS or septic system) by connecting to an ENR facility.

The County's WWTPs are already pursuing some of these opportunities, particularly the Elkton West plan to retire the Cherry Hill and Highlands WWTPs and divert their flows to the Meadowview WWTP. In addition, retirement of existing OSDS (those in use as of approximately 2007) has already been mentioned as one strategy for increasing capacity in the Seneca Point WWTP. Under the state policy, Seneca Point or any other WWTP could receive the following nutrient credits for each type of OSDS retired:

- OSDS in the Chesapeake Bay Critical Area: approximately 5.3 EDU per OSDS.
- OSDS within 1,000 feet of any perennial surface water: 3.3 EDU per OSDS.
- Any other OSDS: 2 EDU

A study conducted for the Seneca Point WWTP found that there were approximately 1,690 septic systems in the WWTP's service boundary.[17] Using the OSDS retirement formula described above, extension of public sewer to these residences and businesses could generate as much as 1.76 MGD of capacity credits for the Seneca Point facility. Extension of sewer service to the Carpenters Point area (a known area of failing or inadequate septic systems) is underway and could generate credits for as much as 7,398 lbs per year of nitrogen, or 0.81 MGD.

There are a total of approximately 3,000 residential units on septic systems in the Critical Area in Cecil County. By connecting half of those units to a WWTP (assuming that the other half are too far from the WWTP to extend service), the County's WWTPs could gain approximately 2 MGD of capacity.

MDE and the Maryland Department of Agriculture (MDA) are developing guidelines that would allow trades between nonpoint sources (such as agriculture) and point sources.

## Land Application of Treated Wastewater

The application of treated wastewater effluent directly to the soil can allow pollutants to be absorbed before the effluent reaches receiving streams. Land application would not count toward nutrient caps. Spray irrigation is the most common form of land application, although other options (such as drip irrigation or subsurface discharge) can also be considered.

Factors such as slope, soil depth and granularity, water table depth and behavior, and buffers from streams and developed areas are important in determining true suitability of sites for land application. While site-specific studies are necessary to determine the feasibility of land application, the Piedmont portion of Cecil County may not be appropriate for land application, due to the underlying fractured geology and the risk of contamination of groundwater. Areas south of the Fall Line are more likely to be appropriate for land application.

Other important considerations include effluent storage and seasonal restrictions; land application systems typically require large storage lagoons capable of holding several months' worth of effluent. Land application may not be permitted during winter months, when frozen soil cannot accept effluent, or during other months when water tables rise.

[17] Source: Northeast Advanced Wastewater Treatment Plant Feasibility Study, 2008.

Those caveats notwithstanding, there does appear to be an opportunity for public sewer systems in Cecil County to utilize land application as an alternative or enhancement to surface water discharge. A significant amount of land would need to be reserved for land application. A desktop analysis presented to the Comprehensive Plan Water Resources Subcommittee in August 2008 showed that, within approximately five miles of the Seneca Point WWTP, there were more than 1,600 acres of land that was potentially suitable for land application.[18] This amount of land could accommodate disposal of as much as 4.4 to 5.8 MGD of wastewater effluent.

In other Maryland jurisdictions, land application is also frequently used for the disposal of WWTP sludge (the material that remains after nutrients have been removed from wastewater effluent). This practice is not common in Cecil County, in part because the County does not have a policy regarding agricultural land application of WWTP sludge. Cecil County disposes of its WWTP sludge in the County landfill, and is developing a composting facility at the landfill to dispose of sludge. The County should consider developing a policy regarding agricultural land application of WWTP sludge.

## Tertiary Treatment Wetlands

In this system, effluent is treated at a BNR or ENR WWTP and then discharged into a series of constructed, vegetated wetlands. These wetlands purify the effluent to the point where the eventual discharge meets or exceeds water quality standards. A WWTP paired with a tertiary treatment wetland could potentially increase its discharges without violating nutrient caps or TMDLs. In addition to providing wastewater treatment, the wetlands can also provide habitat for wetland-dwelling species.

**Tertiary treatment wetlands reduce the amount of nutrients discharged into local waterways.** *Photo presented to the Water Resources subcommittee, 2008.*

The best-known application of this technology occurs in Clayton County, Georgia. In this system (which treats 9.3 million gallons of wastewater per day), the wetland-treated effluent is pure enough to be used for drinking water.[19] Other smaller applications of tertiary treatment wetlands can be found in other parts of Maryland. These facilities are typically used at schools and other institutional facilities. Implementation of such a facility for large-scale public use would depend heavily on soil characteristics and other site-specific conditions.

The designers of the Clayton County tertiary treatment wetland system estimate that 15 acres of land are needed for each MGD of wastewater treated. Depending on individual site, soil, and vegetation conditions, the entire remaining 14 MGD sewer capacity deficit in the County (at buildout) could be met through the use of tertiary treatment wetlands covering perhaps 300-400 acres (including buffers, and other site considerations).

## Wastewater Reuse

Treated wastewater can also be reused to sustain landscaping, or in industrial processes. The latter is the case at the Mattawoman WWTP in Charles County. The vast majority of treated effluent from that plant is pumped to the Panda Co-Generation Station (power plant) in Brandywine, MD, where it is used as cooling water. Within Cecil County, up to 450,000 gallons

[18] Included in the Water Resources Element Appendix.
[19] For more information, see http://www.ccwa1.com/operations/water.reclamation.aspx

per day of treated effluent from the Meadowview WWTP will be used for seasonal dry weather conditions to irrigate the Newark Country Club golf course off of Appleton Road.

In some cases, treated wastewater effluent can also be used to recharge groundwater aquifers. In such a system, effluent is treated to potable (or better) standards before being injected into the aquifer. One such large-scale system is in place in Orange County, California.[20] In that system, treated effluent is used not only to recharge the drinking water aquifer, but also to halt and even reverse saltwater intrusion from the Pacific Ocean into the aquifer. This technique is not typically used in Maryland.

## 6.6 Programmatic Assessment of Stormwater Policies

Non-point source pollution is a significant source of nutrient deposition in Cecil County's rivers and streams. Non-point sources consist of agricultural run off, sediments and erosion from development, stormwater runoff that contains pollutants from roads, streets, residential areas (particularly pet wastes and lawn fertilizer), subsurface nutrients from septic systems, chemicals and fertilizers from golf courses, and other similar sources. These nutrient loads are called non-point because they come from widely dispersed origins, and are difficult to measure and correct. This section characterizes County policies that address stormwater and nonpoint source pollution.

### *6.6.1 The Maryland Stormwater Design Manual*

The 2000 Maryland Stormwater Design Manual, Volumes I & II is incorporated by reference into the Cecil County Stormwater Management Ordinance, and serves as the official guide for stormwater principles, methods, and practices.

In 2007, the Maryland General Assembly passed the Maryland Stormwater Management Act, which mandates substantial revision of the Stormwater Design Manual. The most notable provision of the Stormwater Management Act of 2007 is the requirement that new development use Environmental Site Design (ESD) techniques, which are intended to "maintain pre-development runoff characteristics" on the site.[21] MDE has completed the revisions to the Maryland Stormwater Design Manual, and the County is currently revising its Stormwater Management Ordinance as necessary to incorporate these revisions.

### *6.6.2 Watershed Planning*

Planning at the watershed level is an important tool in ensuring and improving water quality. The watershed is the most appropriate geographic scale within which to assess and provide policy guidance to manage pollution and degradation of the County's waterways. This approach can help to prioritize capital expenditures and enforcement efforts in portions of the County where water quality is most threatened. It can also make the County eligible for funding resources, such as Section 319 funds through the Clean Water Act.

Cecil County does not have a comprehensive watershed-based planning framework. Developing such a framework (typically developed at the 8-digit level, although such an approach is valid for smaller geographies) would give the County the policy basis for land use, environmental, and other decisions that have the potential to impact water quality. As described in Chapter 7, the Sensitive Areas Element, a watershed planning approach can also provide guidance on decisions with the potential to impact the County's key natural resources.

This Comprehensive Plan compiles many of the elements of watershed planning, particularly those that relate to water quality. The 303(d) list of impaired waters and the resultant TMDLs described in Section 6.5.2 are one source of water quality data and policy recommendations, as are the forthcoming requirements of SB 276 (Section 6.7.4). This section describes other sources of watershed-based water quality information.

[20] For more information, see http://www.gwrsystem.com/

[21] Source: MDE. http://www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/swm2007.asp

## Maryland Clean Water Action Plan

The Clean Water Action Plan envisions a joint effort among federal, state, and local governments, the private sector, and the public to restore watersheds that fail to meet water quality goals under the Clean Water Act. Maryland's Clean Water Action Plan (1998) assesses water quality, habitat, and other factors in each of the state's 8-digit watersheds and assigns each watershed to one of three categories:

**Category 1:** Watersheds not meeting clean water and other natural resource goals and needing restoration. Ten of Cecil County's watersheds fall into this category, including the Back Creek, Bohemia River, Conowingo Dam, Furnace Bay, Little Elk Creek, Lower Elk River, Lower Susquehanna River, Northeast River, Sassafras River, and Upper Elk River.

**Category 2:** Watersheds currently meeting goals that need preventive actions to sustain water quality and aquatic resources. Three of Cecil County's watersheds fall into this category, including Big Elk Creek, Christina River, and Octoraro Creek.

**Category 3:** Pristine or sensitive watersheds that need an extra level of protection. Some watersheds may be designated Category 3 as well as either Category 1 or Category 2. The Category 3 watersheds in Cecil County are Back Creek, Big Elk Creek, Bohemia River, Conowingo Dam, Furnace Bay, Lower Elk River, Lower Susquehanna River, Northeast River, Octoraro Creek, and Upper Elk River.

For each watershed, the state's goal is to develop a Watershed Restoration Action Strategies (WRAS) for each Category 1 and Category 3 watershed.

## Green Infrastructure Plan

The Cecil County Green Infrastructure Plan was completed in 2007. The Green Infrastructure Plan examines the relationship between land cover, impervious surface, and water quality and found a strong correlation between the presence of green infrastructure and higher water quality. In particular, water quality was highest in watersheds with larger amounts of forest cover and lower levels of impervious surface (see Section 6.7.3, and Chapter 7).

**The Green Infrastructure Plan recommends the protection of riparian forests, like this one along Mill Creek, to maintain water quality.** *Photo Courtesy of The Conservation Fund.*

In addition to the documents and programs described above, the Maryland Department of Natural Resources (DNR) and MDE conduct annual water quality sampling at several locations in Cecil County. County residents also participate in the state's Tributary Strategy Teams to monitor water quality and implement nonpoint source Best Management Practices (BMPs). The County relies on DNR water quality sampling, and does not conduct regular sampling of its own.

### *6.6.3 Other Nonpoint Source Policies and Considerations*

In addition to the Maryland, Stormwater Design Manual, Cecil County uses zoning tools to protect the water supply and preserve open space. These include a Critical Area Overlay Zone that limits development near the Chesapeake Bay and the tidal portions of its tributaries, 60 percent open space requirements in the NAR and SAR zoning districts, a 110 foot buffer around perennial streams, and a 25 foot buffer around all non-tidal wetlands.

To promote water conservation, the County has implemented the flow reduction program, which requires the use of low-flow appliances, fixtures, and other measures in new construction and

upgrades to existing construction. The County also uses a Purchase of Development Rights program and a Transfer of Development Rights program to promote land conservation.

The County has also invested in the ASIST Stormwater Database Management Systems software that is used to inventory and track County-owned stormwater assets as well as to document County inspections and work orders associated with that infrastructure. As the County compiles data related to stormwater permit compliance activities and associated expenditures, this data will be used to provide annual fiscal analyses specific to the implementation of the Stormwater Management Program[22].

## Land Preservation, Parks, and Recreation Plan

Cecil County's 2005 Land Preservation, Parks, and Recreation Plan (LPPRP) was adopted as an amendment to the Comprehensive Plan, and contains numerous goals, policies, and implementation actions, many of which address issues similar to those analyzed as part of this WRE. Key LPPRP goals, policies, and implementation strategies that support the policies in this WRE are listed below.

- Continue to protect recreational open space and resource lands at a rate that equals or exceeds the rate that land is developed at a statewide level.
- Adopt recommended revisions relating to natural resources into the Comprehensive Plan, [such as] to watershed protection, groundwater resources, rural legacy areas, greenways, and smart growth.
- Incorporate small area and watershed-based planning into the County's comprehensive planning program.
- Complete protection of the County's two rural legacy areas – Sassafras and Fair Hill.
- Integrate greenways and the State's Green Infrastructure concepts more comprehensively into the County's planning and development review processes.
- Incorporate small area and watershed-based planning into the County's comprehensive planning program. Based on the State's Clean Water Action Plan, the primary candidate watershed in Cecil County would be the Upper Elk River.

## Failing Septic Systems

There are several areas of failing or inadequate septic systems exist in Cecil County. Notable communities include Carpenter's Point, Crystal Beach, Hack's Point, Holloway Beach, Locust Point, Cara Cove, Red Point and North East Point/Hance's Point. A sewer extension from Seneca Point WWTP is underway for Carpenter's Point. The County should work with the municipalities and private sewer providers to evaluate ways to address these and other areas of failing septic systems, either by connection to public sewer systems, or through the alternative wastewater disposal options discussed above. The County could also consider new wastewater collection and treatment systems, tied to land application (or another alternative disposal method) to address failing septic systems.

A separate but related category of potential nonpoint source pollution involves the Indian Acres campground, south of Cecilton. This campground is intended for temporary use, but is often occupied year-round. Sewage is collected in holding tanks that must be pumped out. Public input into the Comprehensive Plan indicates that Indian Acres is not the only example of such a facility. The County should work with municipalities, and private service providers to address potential wastewater concerns.

In many jurisdictions, public sewer lines that serve areas of failing septic systems and similar public health concerns (including water lines that serve areas of failed or contaminated wells) are designated "denied access" infrastructure; homes and businesses along the path of the new

[22] Cecil County Stormwater Management Program, May 2009.

sewer line cannot connect to it unless a public health problem (e.g., a failing septic system) exists. The County designates "denied access" lines on a case-by-case basis, depending largely on the distance from the WWTP. The County may wish to consider making "denied access" the default designation for all such public health-related sewer extensions, to avoid potential confusion on the part of property owners near these lines.

## Septic Denitrification

Nitrogen removal (or denitrification) units can reduce the nitrogen loading from septic systems by approximately 50 percent. Maryland Senate Bill 554 (from the 2009 legislative session) now requires all new septic systems in the Chesapeake Bay Critical Area to include Best Available Technology (BAT) for nitrogen removal (as defined by MDE).[23] Septic denitrification is one approach to meeting TMDL requirements.

The County does not currently require denitrification units for new or replacement septic systems, but should consider the State recommendation in other areas, such as near perennial waterways or in watersheds that are impaired by nitrogen. In addition to the State's Critical Area requirements, this Plan encourages all new septic systems to use nitrogen removal at the discretion of the owner. The County should also encourage denitrification retrofits for existing septic systems – including obtaining nonpoint-to-point source nutrient credits for such retrofits, if applicable under forthcoming nutrient trading guidance (see Section 6.5.3).

## Agriculture

Agriculture is important to the economy and character of the County, but runoff from cropland, feedlots, and pastures can carry nutrients and pollutants from manure, fertilizers, ammonia, pesticides, livestock waste, soil, and sediment into waterways. Across the Chesapeake Bay basin, agriculture is one of the largest contributors of nitrogen and phosphorus to the Bay and its tributaries. However, this impact can be reduced through the application of agricultural Best Management Practices (BMPs) such as planting cover crops, judicious use of fertilizer (especially animal manure), and maintaining appropriate buffers along rivers and streams. The County should continue to work with the agricultural community to ensure that agricultural BMPs are implemented to the greatest degree feasible.

## Stormwater Retrofits

Stormwater retrofits can help to reduce nonpoint source pollution, particularly in more densely developed areas built prior to stormwater management requirements. The County should identify locations where such retrofits could address concentrations of nonpoint source pollution ("hot spots"), or where retrofits can help to protect environmentally sensitive areas. Future retrofit funds and implementation activities should be targeted to these priority areas.

## Sedimentation and Erosion

Sedimentation and other impacts resulting from construction activity are also a potential threat to water quality. Most new non-agricultural development in Cecil County requires a grading permit and a sedimentation and erosion control plan that is approved by the Cecil County Soil Conservation District.

## Open Section Roads

Outside of Growth Areas and other areas where pedestrian facilities are a priority, new roads in the County should continue to be developed with open sections, to better disperse stormwater.

[23] More information is available at: http://www.mde.state.md.us/Water/CBWRF/osds/brf_bat.asp

## 6.7 Total Nutrient Loads

This section characterizes the combined effect of point source and non-point source nutrient loads in Cecil County.

### *6.7.1 Nonpoint Source Loading*

Table 6.8 summarizes existing and projected (2030) nutrient loading from non-point sources in Cecil County. Nonpoint source nutrient loads (including septic systems) were estimated using methodology developed by the Maryland Department of the Environment, as modified by the County to reflect revised nutrient loading rates. More detail on the nonpoint source evaluation methodology is presented in the WRE Appendix.

Future nutrient loads would decrease significantly in all watersheds, compared to current levels. This is due largely to the nonpoint source model's assumption[24] that nutrient-reducing BMPs for urban stormwater and agricultural runoff would be more widely implemented by 2030.

Agriculture—including cropland, pastures, orchards, and feeding operations—occupies more than forty percent of the County's land, and is by far the largest contributor of both nitrogen (approximately 64 percent of existing and 50 percent of projected discharges) and phosphorus (approximately 78 percent of the existing and 68 percent of projected discharges). Septic systems contribute approximately 10 percent of existing nitrogen loads and 15 percent of projected nitrogen loads. The actual septic load only increases moderately through 2030, but the drop in overall nonpoint source nitrogen loads leaves septic systems with a larger share of the total by 2030.

Based on these data, neither of the established nonpoint source TMDLs would be met by 2030. Given the magnitude of the difference between existing/projected nutrient loads and nonpoint source TMDLs, the nonpoint source model used for this Comprehensive Plan may not be the best measure of progress toward TMDLs.[25] The County should continue to work with MDE, MDA, and other appropriate agencies to reduce nonpoint source nutrient loads in impaired watersheds, and to further clarify the actual and projected loadings in these watersheds.

### *6.7.2 Total Nutrient Loading*

Table 6.9 shows the total combined point and nonpoint source discharge in each 8-digit watershed in Cecil County. This table combines the information in Tables 6.7 and 6.8. As with the nonpoint source loadings alone, total nutrient loadings would drop significantly compared to existing levels.

### *6.7.3 Impervious Surface*

Impervious surfaces are primarily human-made surfaces which do not allow rainwater to enter the ground. Impervious cover creates runoff that causes stream bank erosion, sediment deposition into stream channels, increases in stream temperatures, and degradation to water quality and aquatic life. The amount of impervious surface in a watershed is a key indicator of water quality. Water quality in streams tends to decline as watersheds approach seven to ten percent impervious coverage, and drops sharply when the watershed approaches 15 percent impervious coverage.[26] Countywide, impervious surface currently covers about four percent of total land area, and is projected to rise to more than five percent. In Cecil County's most developed watersheds, impervious surface coverage is somewhat higher, as shown in Table 6.10.

[24] The model uses loading rates from the Chesapeake Bay Program Watershed Model, Phase 4.3.

[25] However, the nonpoint source model used in this WRE is recommended by MDE for use in Comprehensive Plans.

[26] Center for Watershed Protection Watershed Protection Techniques 1(3): pp. 100-111

## Table 6.8: Cecil County Nonpoint Source Nutrient Loading

| (all data in lbs/year) | Existing (2007) | | | | | | | | Projected (2030) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TN | | | TP | Nonpoint Source TMDL | | Available Assimilative Capacity (Overage) vs. TMDL[1] | | TN | | | TP | Available Assimilative Capacity (Overage) vs. TMDL[1] | |
| | *Septic* | *Nonpoint* | *Total* | **TP** | TN | TP | TN | TP | *Septic* | *Nonpoint* | *Total* | **TP** | TN | TP |
| **Christina River** | 7,736 | 69,364 | 77,100 | 5,634 | | | | | 11,603 | 39,911 | 51,514 | 5,571 | | |
| **Furnace Bay** | 12,707 | 136,900 | 149,607 | 11,263 | | | | | 12,974 | 81,904 | 94,878 | 7,607 | | |
| **Northeast River** | 42,183 | 412,346 | 454,529 | 32,841 | 74,749 | 3,763 | (379,780) | (29,078) | 33,298 | 261,600 | 294,898 | 23,421 | (220,149) | (19,658) |
| **Lower Elk River** | 29,543 | 234,594 | 264,137 | 19,239 | | | | | 27,921 | 133,099 | 161,020 | 12,469 | | |
| **Upper Elk River** | 31,268 | 165,928 | 197,196 | 11,536 | | | | | 38,639 | 115,648 | 154,287 | 8,493 | | |
| **Big Elk Creek** | 8,355 | 111,294 | 119,649 | 9,406 | | | | | 8,873 | 65,171 | 74,044 | 6,228 | | |
| **Little Elk Creek** | 24,750 | 179,071 | 203,821 | 14,644 | | | | | 22,848 | 107,130 | 129,978 | 9,711 | | |
| **Back Creek** | 8,846 | 90,680 | 99,526 | 7,814 | | | | | 9,315 | 50,975 | 60,290 | 5,046 | | |
| **Bohemia River** | 11,314 | 345,270 | 356,584 | 31,504 | | | | | 10,569 | 177,697 | 188,266 | 20,023 | | |
| **Sassafras River** | 5,689 | 212,837 | 218,526 | 19,050 | | 6,839 | | (12,221) | 6,778 | 112,194 | 118,972 | 12,138 | | (5,299) |
| **Lower Susquehanna** | 25,136 | 144,659 | 169,795 | 4,292 | | | | | 41,695 | 123,496 | 165,191 | 4,067 | | |
| **Conowingo Dam** | 5,401 | 38,056 | 43,457 | 1,266 | | | | | 5,746 | 26,723 | 32,469 | 1,012 | | |
| **Octoraro Creek** | 41,153 | 271,208 | 312,361 | 10,376 | | | | | 37,847 | 170,105 | 207,952 | 8,065 | | |
| **Total** | **254,082** | **2,412,207** | **2,666,289** | **178,865** | | | | | **268,105** | **1,465,055** | **1,733,160** | **131,631** | | |

Notes:

1: Reflects Load Allocation (LA) limits set by adopted TMDLs for each watershed. Where no TMDL has been adopted, or where the watershed is not impaired, no numerical standards are shown.

**Table 6.9: Cecil County Total Nutrient Loading**

| | Existing (2007) | | | | | | Projected (2030) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Nonpoint* | | *Point* | | *Total* | | *Nonpoint* | | *Point* | | *Total* | |
| (all data in lbs/year) | *TN* | *TP* | *TN* | *TP* | *TN* | *TP* | *TN* | *TP* | *TN* | *TP* | *TN* | *TP* |
| **Christina River** | 77,100 | 5,634 | 13,603 | 3,602 | 90,703 | 9,236 | 51,514 | 5,571 | 11,708 | 878 | 63,222 | 6,449 |
| **Furnace Bay** | 149,607 | 11,263 | | | 149,607 | 11,263 | 94,878 | 7,607 | | | 94,878 | 7,607 |
| **Northeast River** | 454,529 | 32,841 | 12,168 | 913 | 466,697 | 33,754 | 294,898 | 23,421 | 24,268 | 1,820 | 319,166 | 25,241 |
| **Lower Elk River** | 264,137 | 19,239 | 1,697 | 566 | 265,834 | 19,805 | 161,020 | 12,469 | 437 | 33 | 161,457 | 12,502 |
| **Upper Elk River** | 197,196 | 11,536 | | | 197,196 | 11,536 | 154,287 | 8,493 | | | 154,287 | 8,493 |
| **Big Elk Creek** | 119,649 | 9,406 | 18,130 | 1,360 | 137,779 | 10,766 | 74,044 | 6,228 | 33,187 | 2,489 | 107,231 | 8,717 |
| **Little Elk Creek** | 203,821 | 14,644 | 6,844 | 2,281 | 210,665 | 16,925 | 129,978 | 9,711 | | | 129,978 | 9,711 |
| **Back Creek** | 99,526 | 7,814 | 7,118 | 2,372 | 106,644 | 10,186 | 60,290 | 5,046 | 6,457 | 1,614 | 66,747 | 6,660 |
| **Bohemia River** | 356,584 | 31,504 | 1,468 | 308 | 358,052 | 31,812 | 188,266 | 20,023 | 3,006 | 751 | 191,272 | 20,774 |
| **Sassafras River** | 218,526 | 19,050 | | | 218,526 | 19,050 | 118,972 | 12,138 | | | 118,972 | 12,138 |
| **Lower Susquehanna** | 169,795 | 4,292 | 22,176 | 5,932 | 191,971 | 10,224 | 165,191 | 4,067 | 26,124 | 1,959 | 191,315 | 6,026 |
| **Conowingo Dam** | 43,457 | 1,266 | | | 43,457 | 1,266 | 32,469 | 1,012 | | | 32,469 | 1,012 |
| **Octoraro Creek** | 312,361 | 10,376 | 11,832 | 3,944 | 324,193 | 14,320 | 207,952 | 8,065 | 5,131 | 385 | 213,083 | 8,450 |
| **Total** | **2,666,289** | **178,865** | **95,036** | **21,278** | **2,761,325** | **200,143** | **1,733,160** | **131,631** | **110,318** | **9,929** | 1,843,478 | 141,560 |

The Little Elk Creek, Lower Susquehanna River, and Upper Elk River watersheds are all at or above the seven-to-ten percent impervious threshold (although Christina River watershed is also above this threshold, the portion of the Christina watershed within Cecil County is only a very small portion of the broader Christina River watershed, most of which is in Delaware and Pennsylvania). Not surprisingly, these watersheds are home to Elkton, Perryville, and Port Deposit, the County's largest municipalities.

The use of Environmental Site Design (ESD) for new development, and targeted stormwater retrofits can help to mitigate some of the impacts of impervious surfaces. In addition, as existing development is replaced with new homes and businesses, that redevelopment will, under the Maryland Stormwater Management Act, use ESD. Thus, future impervious surface rates for different development types may be lower than the constant loading rates included in the nonpoint source model used for this analysis.

**Table 6.10: Impervious Coverage**

| Watershed | Total Acres[1] | Impervious Surface | | | |
|---|---|---|---|---|---|
| | | *Existing* | | *2030* | |
| | | *Acres* | *Percent* | *Acres* | *Percent* |
| Christina River | 5,313 | 468 | 8.8% | 644 | 12.1% |
| Furnace Bay | 13,598 | 339 | 2.5% | 538 | 4.0% |
| Northeast River | 40,371 | 1,969 | 4.9% | 2,831 | 7.0% |
| Lower Elk River | 25,413 | 453 | 1.8% | 487 | 1.9% |
| Upper Elk River | 19,895 | 1,653 | 8.3% | 2,005 | 10.1% |
| Big Elk Creek | 10,947 | 484 | 4.4% | 625 | 5.7% |
| Little Elk Creek | 15,693 | 915 | 5.8% | 1,304 | 8.3% |
| Back Creek | 8,761 | 228 | 2.6% | 314 | 3.6% |
| Bohemia River | 26,545 | 238 | 0.9% | 274 | 1.0% |
| Sassafras River | 17,136 | 182 | 1.1% | 235 | 1.4% |
| Lower Susquehanna | 12,198 | 1,062 | 8.7% | 2,066 | 16.9% |
| Conowingo Dam | 4,834 | 91 | 1.9% | 112 | 2.3% |
| Octoraro Creek | 22,210 | 931 | 4.2% | 1,074 | 4.8% |
| **Cecil County Overall** | **222,911** | **9,015** | **4.0%** | **12,509** | **5.6%** |

Existing based on 2007 Land Use/Land Cover. 2030 based on the Future Land Use Plan.

Notes:

1: Excludes areas of open water within the County's boundaries.

## *6.7.4 Choice of Land Use Plan*

A major purpose of the WRE is to evaluate the water resources impacts of projected land use and development trends, and to provide input into the Comprehensive Plan's recommended future land use pattern. Ideally, the WRE should use measures of assimilative capacity, such as completed TMDLs for nutrients, to guide direction of growth and land use patterns within the County. Because TMDLs have not been completed for all of County's impaired 8-digit watersheds, particularly the Elk River and the Chesapeake Bay, it is difficult to identify "appropriate" receiving waters for the County's point and nonpoint source nutrient loads, or to direct future growth toward those appropriate receiving waters.

Because full TMDL implementation is likely to be years away, the WRE must make recommendations based on the best available data. The Future Land Use Plan in Chapter 3 reflects multiple rounds of evaluation of different land use scenarios, each of which used water resources as key evaluation criteria. As shown in Table 6.9, the Future Land Use Plan, coupled with implementation of nonpoint source BMPs (including ESD) and upgrades to public wastewater treatment plants, could result in a substantial reduction in total nutrient loads to the Chesapeake Bay and its tributaries.

Although the relationship between the County's nutrient TMDLs and the nonpoint source model used in this WRE is questionable, it is clear that development in the Northeast River watershed (and, to some degree the Sassafras River watershed) has the potential to threaten the County's ability to meet the nonpoint source TMDL. While this might imply that the Northeast River watershed is not an appropriate location for development, much of the watershed is in the Designated Growth Area, and has been since at least 1990. There is significant potential to concentrate growth in or near already-developed land, in a way that provides opportunities for stormwater management facilities to treat urban runoff more efficiently. Development in the Northeast River watershed should proceed carefully, and stormwater management retrofits should be targeted here to reduce nonpoint source nutrient loading. The County and state should also work with their counterparts in Pennsylvania to address nutrient loads in the Pennsylvania portion of the Northeast River watershed (and other Cecil County watersheds that cross state boundaries).

### Relationship to Local Land Use Goals

In 2009, Senate Bill 276 was signed into law. The new law amends Article 66B, requiring the establishment of a statewide goal for increasing the amount of development within PFAs and decreasing development outside of PFAs. As part of this law, jurisdictions must also establish (beginning in 2011) local land use goals for the amount of development inside of PFAs. The Future Land Use Plan will result in progress toward the statewide (and eventually the local) land use goals by directing development to PFAs and employment centers. Indeed, the Future Land Use Plan represents an effort to significantly increase the amount of development targeted to PFAs, and therefore strongly supports the state land use goal.

## 6.8 Policies and Actions

### Priority Projects and Ordinance Updates

1. Aggressively pursue development of water resources infrastructure in the Growth Corridor. While Low Growth areas are eligible for sewer service, providing service to these areas is a lower priority compared to other growth areas. High priority actions include, but are not limited to:

    - Expand the water distribution system in the Elkton West service area.
    - Combine and upgrade wastewater collection and treatment systems in the Elkton West service area. This includes retirement of the Cherry Hill and Highlands WWTPs and expansion of the Meadowview WWTP.
    - Upgrade and expand the Seneca Point WWTP and collection system to a capacity of at least 5 MGD by 2030. This expansion will require nutrient credits. Therefore, the County should utilize MDE's Nutrient Cap Management and Trading policy for point sources, and forthcoming regulations for nonpoint source trading, and identify nutrient reduction strategies that could provide credits to the Seneca Point WWTP.

2. Amend the County's land development and other related ordinances as follows:

    - Revise the County's stormwater management regulations to implement 2007 Maryland Stormwater Management Act. Under the Act, the County must do this by May, 2010.
    - Adopt the draft wellhead protection ordinance, described in Section 6.4.6, or a similar ordinance whose purpose is to protect public drinking water sources through land use and other limitations.
    - Outside the Critical Area, all new development that is not connected to public sewer systems to use best available pollution reducing technologies for controlling pollutants, as defined by MDE, at the discretion of the owners. Elsewhere, consider requiring nutrient credits (similar to those established under the state Nutrient Cap Management and Trading policy) for subdivisions built using septic systems..

- Consider developing a Denied Access policy that designates all public health-related extensions of water and sewer service into rural areas as Denied Access (with provisions to remove Denied Access status where appropriate).
- Consider developing a County policy and/or regulations regarding agricultural land application of sludge from County wastewater treatment plants.

3. Incorporate water and sewer information from this Comprehensive Plan into the next revision of the County's Water and Sewer Master Plan.
4. As a part of the next Comprehensive Plan review, update and refine the non-point source loading analyses (including point source data) used for this WRE.

## Drinking Water

5. Closely monitor the extension of water and sewer service by Artesian to ensure that water and sewer infrastructure is developed in accordance with the County's land use and growth priorities.
6. Design and implement a rigorous water conservation education program. As part of this program, conduct routine system-wide water use audits to minimize water loss through leaks.
7. Working cooperatively with the municipalities, create and implement a drought management policy for public water systems.
8. Work with municipalities, private water suppliers, MDE, and DNR to secure new surface water sources within the county to meet long-term (post-2030) needs, including (but not limited to):
    - New surface water impoundments, particularly on or alongside Principio Creek and at Elk Mills Quarry.
    - New surface water withdrawals from the Susquehanna River, coordinated with Susquehanna River basin Commission and municipalities, as necessary.
    - Additional groundwater wells on Elk Neck Peninsula (coordinating with the Maryland Department of Natural Resources, for well locations on State Forest land), and elsewhere throughout the County.
    - Water desalination.
9. Encourage fluoridation of all community water systems, and seek State funding for these improvements.
10. Investigate options for a program to encourage the use of cisterns, including regulations and requirements for the design and maintenance of these facilities.

## Wastewater

11. Continue to identify and eliminate sources of inflow and infiltration (I/I) to free up additional capacity at treatment plants.
12. Identify areas in the County suitable for treated wastewater land application techniques (such as spray irrigation) and tertiary treatment wetlands. Land should be acquired or reserved before 2030 to meet the County's longer term wastewater disposal needs.
13. Continue to actively pursue the abatement of failing septic systems—particularly those identified in the 2004 County Water and Sewer Master Plan—through connection to public sewer systems, where appropriate. Work with MDE to ensure that the County receives nutrient credits for such actions.
14. Promote the re-use of stormwater and treated wastewater for purposes such as on-site irrigation, non-potable process water (industrial activities), and other uses, where appropriate.

## Watershed Planning

15. Incorporate watershed-based planning into the County's comprehensive planning program, with the goal of managing watersheds and making day to day decisions in ways that protect, conserve, and restore water quality.
16. In conjunction with the annual land use reporting requirements of Maryland's 2009 Smart, Green, and Growing legislation (specifically Senate Bill 276), monitor water quality and the amount of impervious surface at the 8 digit watershed level. Use this information to guide development decisions in a way that protects water quality, especially in watersheds that approach critical thresholds.
17. Work with counterparts in Pennsylvania and Delaware to address nutrient impairments in watersheds that cross state boundaries.

# 7 Sensitive Areas

Cecil County is located at the north end of the Chesapeake Bay and extends easterly from the Susquehanna River to the Delaware line and south to the Sassafras River. The County's land area is shaped by several peninsulas formed by the Susquehanna, Northeast, Elk, Bohemia, and Sassafras Rivers. Cecil County is divided into two major physiographic regions along the "fall line", which lies just north of the I-95/US 40 corridor.

The southern two-thirds of the County, south of the fall line, are in the Atlantic Coastal Plain. Generally this land shows little relief; its streams are small and sluggish and marshes and wetland areas are common. Underlying sediments are easily eroded, and wave action from the Chesapeake Bay, in addition to surface runoff, has created local areas of steep slopes and bluffs from 20 to nearly 100 feet in height.

The northern third of Cecil County lies within the eastern Piedmont, and is characterized by an uneven, hilly terrain punctuated by small-scale gorges, cliffs, and ridges. The northeastern portion of the County is moderately hilly, with the greatest relief provided by the gorges of the major stream valleys. The north-central section of the County is only slightly hilly with wide valleys and large-scale undulations in the terrain. The northwest section of the County provides the most varied topography. Near Port Deposit along the Susquehanna River, for example, are granite cliffs. Further north, the Octoraro and Conowingo Creeks form deep gorges as they flow to the Susquehanna. This region has the highest elevation in the County; 535 feet above sea level near Rock Springs.

Maryland State planning law requires each comprehensive plan to establish goals and policies related to sensitive environmental areas, specifically addressing:

- Steep slopes,
- Streams, wetlands, and their buffers,
- 100-year floodplains,
- Habitats of threatened or endangered species,
- Agricultural and forest land intended for resource protection or conservation, and
- Other areas in need of special protection.

This chapter, in conjunction with other chapters of this Plan, especially Water Resources and Land Use, updates the County's policies to regarding sensitive areas.

## 7.1 Goals and Objectives

The County's sensitive areas goals and objectives are to:

1. Protect environmentally sensitive resources and natural features in all areas of the County, comprising steep slopes, streams, wetlands, floodplains, and habitat including the habitats of threatened or endangered species.
2. Protect 80 percent of the remaining undeveloped land in the designated Priority Preservation Area.
3. Conserve agricultural and forest resource land, with special focus on the County's Priority Preservation Area.
4. Develop a systematic approach to protect the County's green infrastructure resources.
5. Manage watersheds in ways that protect, conserve and restore their hydrologic and water quality functions.

## 7.2 Description of Sensitive Areas

### *7.2.1 Steep Slopes*

Steep slopes are inherently unstable landforms that become susceptible to increased soil erosion when disturbed. The adverse effects of steep slope disturbance are more significant where the slope is adjacent to a stream or other water body because erosion can decrease water quality and cause negative impacts to riparian plant and animal species.

In Cecil County, steep slopes are most extensive along the Susquehanna River near Port Deposit, along the major stream valleys in the Piedmont and also along the shoreline of the Chesapeake Bay, where the Coastal Plain sediments are eroded into bluffs.

The County Zoning Ordinance[1] regulates new development on steep slopes as follows:

- Development on slopes[2] greater than 25 percent is prohibited.
- Development on slopes between 15 and 25 percent is restricted and must use good engineering practices.
- Additional regulations apply in the Chesapeake Bay Critical Area which adjoins the shorelines generally to the head of tide.

### *7.2.2 Streams and Buffers*

Cecil County has streams and rivers ranging from first-order headwater streams to large water bodies like the Susquehanna, Bohemia and Sassafras rivers (larger streams and rivers are shown in Map 7.1). The County's streams provide water supplies for household use and agriculture and serve as habitat for fish and other aquatic organisms.

Stream buffers, strips of land at the edges of rivers and streams, have multiple benefits. They help to control flooding and reduce the volume and speed with which pollutants and sediments enter the water. This, in turn, helps to protect water quality, not only in the sections of streams in Cecil County but also downstream on the Christina River and in the mainstem of the Chesapeake Bay itself. Stream buffers also provide habitat and a source of food for aquatic organisms.

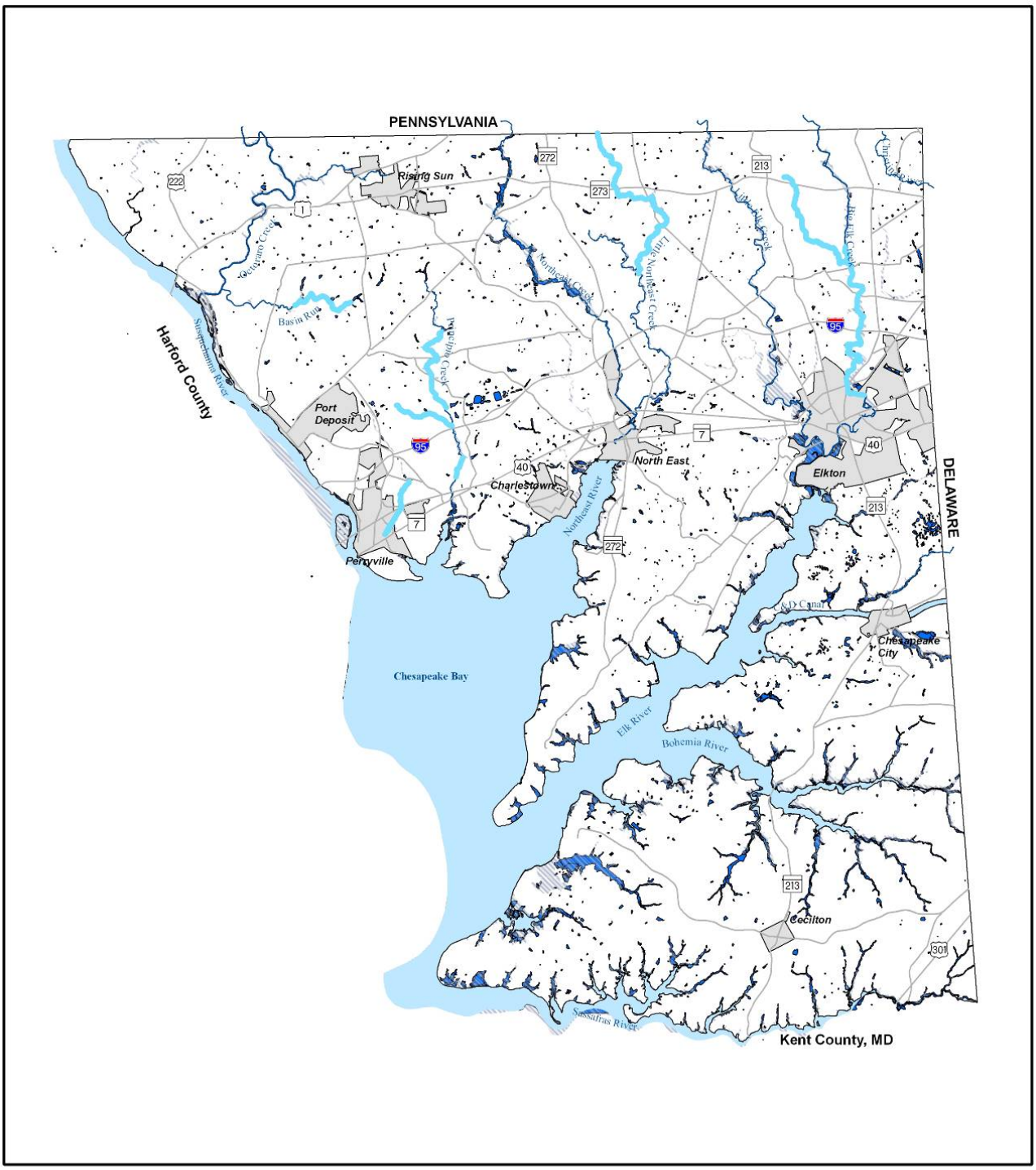
The Zoning Ordinance requires stream buffers of 110 feet from a perennial stream, and 25 feet from an intermittent stream (50 feet in forest conservation/retention areas[3]). The 110 foot –buffer is expandable to 160 feet if associated with hydric or highly erodible soils and slopes greater than 15 percent. Dedication to the County is required if land is designated on County's Greenways Plan (a greenways map is included in the Land Preservation Parks and Recreation Plan).

[1] Most of the environmental standards, including steep slopes, are in Section 174 of the zoning ordinance.

[2] Covering a contiguous area of 10,000 square feet or more.

[3] Cecil County Forest Conservation Regulations.

## Map 7.1 Streams, Wetlands and Floodplains




**Sensitive Areas**
2010 Cecil County Comprehensive Plan

**Legend**

- Wetland
- 100-year Floodplain
- Municipalities
- Major Roads
- Major Streams
- Tier II Stream

N
0 1 2 4
Miles

### 7.2.3 Wetlands

Wetlands are saturated soils that have enough moisture to support vegetation adapted to wet conditions. Wetlands provide habitat for plants, fish, and wildlife; maintain water quality (by collecting sediment and pollutants and slowing their distribution into waterways), act as ground water recharge areas, and help to control flooding and erosion. Wetlands also provide recreational and educational opportunities.

In Cecil County, low-lying wetlands are concentrated along the Chesapeake Bay and its tributaries and include swamps, marshes, bogs and other hydric soils areas. Wetlands occur along the shoreline as tidal wetlands, in the floodplains of streams, at the heads of drainageways, and in isolated depressions (Map 7.1).

Wetlands are generally more extensive in the Coastal Plain than in the Piedmont area, though steeper slopes limit the extent of these wetlands in comparison with lower Eastern Shore nontidal wetlands south of Cecil County.

Tidal wetlands are not extensive in Cecil County, due to the generally steep slopes of the major rivers. The largest vegetated tidal wetlands are found along the tributaries of the Elk and Northeast rivers. Due to the width of the streams in these areas, MDE found that these areas would likely be some of the most effective at stabilization of shoreline sediments.[4]

The County Zoning Ordinance (Section 174) requires a 25-foot setback from non-tidal wetlands except as permitted by the U.S. Army Corp of Engineers and the State. This Comprehensive Plan recommends that additional analysis be performed to study in detail the benefits of expanding the non-tidal wetland buffer and if warranted, determine the appropriate buffer (see below under issues).

**Wetland along a Principio Creek tributary.**
*Photo Courtesy of The Conservation Fund.*

The Maryland Department of the Environment (MDE) regulates development with the potential to impact wetlands through regulations implementing the Non-Tidal Wetlands Protection Act.[5] In some cases (typically where a proposed development involves large amounts of wetlands), the U.S. Army Corps of Engineers must issue permits for development.

Maryland gives special regulatory attention to "Wetlands of Special State Concern (WSSC)," wetlands with rare, threatened, or endangered species, or other unique attributes. Additional regulatory protections apply to WSSCs, such as sediment controls and specific types of stormwater management practices. The State has designated 12 WSSCs in Cecil County, including Octoraro Slopes, Roaring Woods, Cecil Bog, and Whitaker Swamp.

### 7.2.4 Floodplains

Floodplains are relatively low, flat areas adjoining rivers, streams, and other bodies of water. They are usually naturally formed and are subject to partial or complete flooding on a periodic basis. Floodplains store and moderate the speed and impact of floodwaters, and, in

4 Prioritizing Sites for Wetland Restoration, Mitigation, and Preservation in Maryland. May 18, 2006 - Maryland Department of the Environment

5 COMAR Title 26, Subtitle 23

conjunction with wetlands (many of which are found in floodplains), help to maintain water quality and to recharge groundwater.

Cecil County has both tidal and non-tidal floodplains. Most non-tidal flooding occurs in August and September as a result of high intensity rainfall. Most tidal flooding is attributed to tidal surges and high coastal waters due to strong winds associated with hurricanes, tropical storms and major thunderstorms.

Floodplains are typically described in terms of the frequency of flooding that they experience. The 100-year floodplain is the area that has a one percent chance of being flooded in any given year. Cecil County's 100-year floodplains are mostly found near the County's rivers, lakes, streams and wetlands (Map 7.1).

The zoning ordinance (Floodplain Overlay District, Sections 224 to 244) limits most development and disturbance in the 100-year floodplain. Occupied areas of residential structures must be entirely outside of the floodplain or on land least susceptible to flooding. Non-residential structures in the floodplain must be flood-proofed, and fill is discouraged.

### 7.2.5 Habitats of Rare, Threatened, and Endangered Species

The Federal and state government maintain lists and maps of the habitats of rare, threatened, and endangered (RTE) species, including plants and animals. Cecil County has 14 state-listed RTE animal species (two of which are also federally listed endangered species), and 143 state-listed RTE plant species.[6]

The Maryland Department of Natural Resources (DNR) has designated two Natural Heritage Areas (NHA) in Cecil County: the Grove Neck NHA along the Sassafras River and the Plum Creek NHA in Elk Neck State Forest. NHAs are designated for special protection, pursuant to state regulations.

The Susquehanna Flats form another important environmental and habitat area at the mouth of the Susquehanna River where the sediments carried down by the River drop out of suspension in the calmer waters at the Top of the Bay (but not within the Plum Creek NHA), creating a rich habitat for fish and other aquatic species.

**The Bald Eagle is one of the 14 RTE species found in Cecil County.**

The U.S. Fish and Wildlife Service regulates development with the potential to impact the habitats of federally-listed RTE species, while DNR regulates development with the potential to affect state-listed RTE species. Under the zoning ordinance (Section 174) RTE species designated in MD DNR's Natural Heritage Program are protected.

### 7.2.6 Agricultural and Forest Land

As noted in Chapter 3, Cecil County is rich in natural resource lands with approximately 75 percent of the County in agricultural and forest land as of 2007 (Table 3.1, Map 3.1).

[6] Source: Department of Natural Resources, 2004. State mapping of RTE species habitat does not indicate which individual species is associated with a particular habitat extent. See http://www.dnr.state.md.us/wildlife/rte/rte07ceci.pdf for a complete listing of RTE species with habitat in Cecil County.

Most of the County's agricultural lands are in two broad areas: one north of the I-95 corridor, running east-west across the width of the County, and the other south of the Chesapeake and Delaware canal. The southern agricultural area is at the northern end of a roughly 400,000-acre area known as the "Agricultural Security Corridor". This area of the Eastern Shore includes portions of five counties, and is defined by the presence of high quality agricultural soils, a concentration of agricultural infrastructure, and extensive agricultural easements.

Forested areas occur throughout the County and include large contiguous, state-owned blocks on the Elk Neck peninsula: Elk Neck State Forest and Elk Neck State Park. Another large forested area is located between the towns of Perryville and North East along the I-95/US 40 corridor.

Approximately 36,400 acres in Cecil County are protected agricultural and forest lands (Table 7.1, Map 7.2.)

### Table 7.1: Protected Agricultural and Forest Lands

| | Acres | Percent |
|---|---|---|
| **Total Agricultural and Forest Lands** | **36,368** | **100%** |
| **Agriculture** | **21,938** | **60%** |
| Maryland Agricultural Land Preservation Foundation (MALPF)* | 13,750 | 63% |
| Other easements (see note)* | 5,148 | 23% |
| Rural Legacy* | 2,582 | 12% |
| Cecil County Purchase of Development Rights Program* | 458 | 2% |
| **Forest** | **14,430** | **40%** |
| Fair Hill** | 5,613 | 39% |
| Elk Neck State Forest** | 3,500 | 24% |
| Elk Neck State Park** | 2,218 | 15% |
| Other (Wildlife Management Areas, Hunting Areas)** | 2,167 | 15% |
| Forest Legacy Easement* | 854 | 6% |
| Susquehanna State Park** | 78 | 1% |

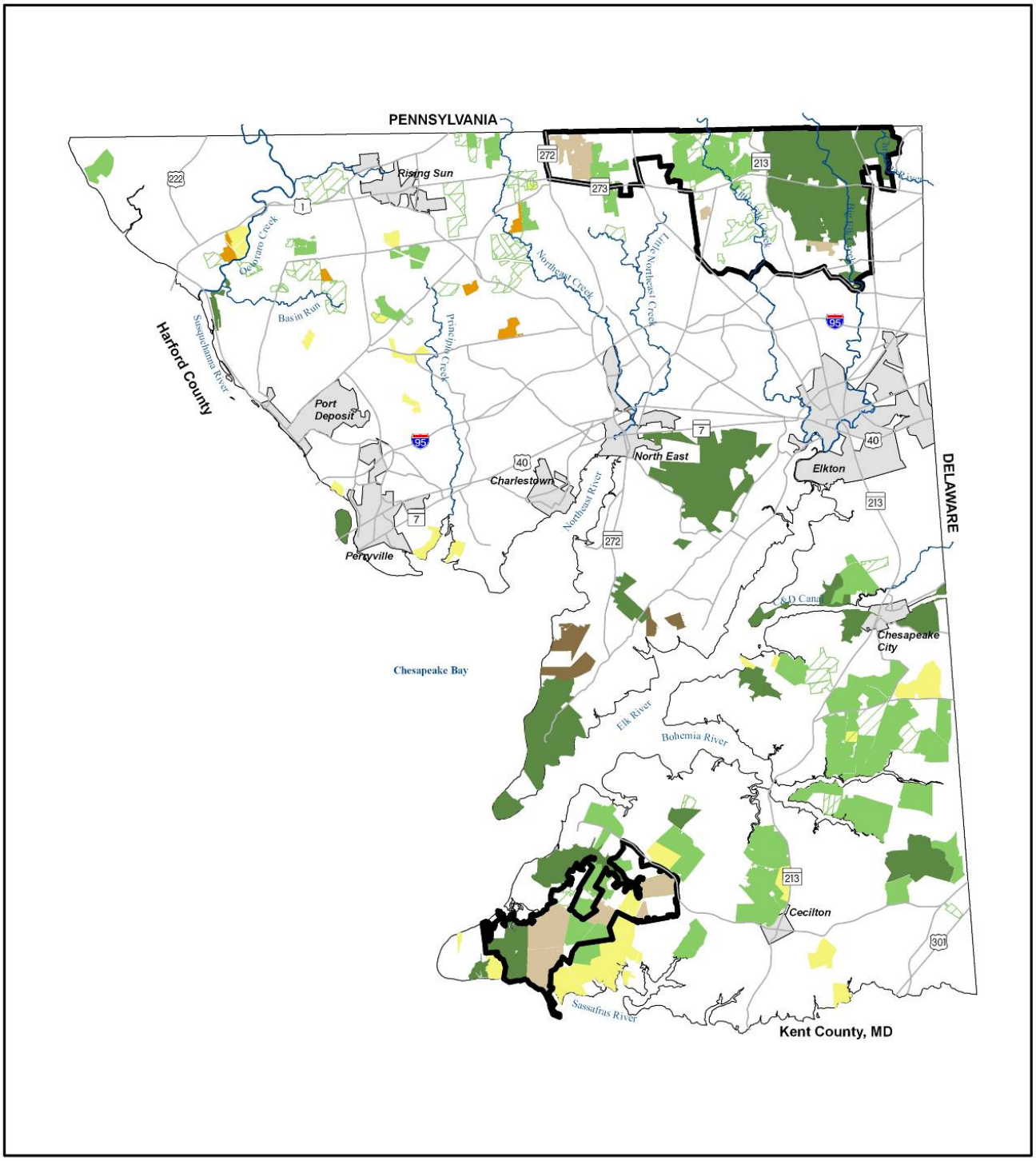
Notes:
Other easements: Maryland Environmental Trust, Cecil Land Trust, Nature Conservancy, Natural Lands Trust, North American Land Trust, Eastern Shore Land Conservancy.
Some forest land such as Fair Hill, Elk Neck State Park, and Wildlife Management Areas include recreation land and some non-forested areas.
*Sources:* Cecil County Office of Planning and Zoning, Protected Land Report April 2009; **LPPRP 2005*

The largest category of agricultural protected land is easements is the Maryland Agricultural Land Preservation Foundation (MALPF) (13,750 acres), followed by easements donated or acquired from a number of sources (see table note for the list). Close to 2,600 acres have been protected by the Maryland Environmental Trust, Cecil Land Trust and Eastern Shore Land Conservancy through the state's Rural Legacy program.

The Rural Legacy Program, administered by DNR, involves delineating geographic areas of a county in need of focused land conservation and acquiring easements from willing landowners within those areas. The goals are to protect large, contiguous tracts of land and other strategic areas from sprawl and to enhance natural resources, agricultural, forestry and environmental protection through cooperative efforts among state and local governments and land trusts.

Cecil County and the state have designated two Rural Legacy Areas (RLA) in Cecil County: the Sassafras RLA, established in 1998, and the Fair Hill RLA, established in 2002. The Sassafras RLA features prime agricultural land and productive farming operations. More than 75 percent of the area contains prime agricultural soils. Fair Hill is another highly productive agricultural region, that also includes the 5,600-acre state-owned Fair Hill Natural

## Map 7.2 Protected Agricultural and Forest Land




**Protected Agricutural and Forest Land**
2010 Cecil County Comprehensive Plan

Legend

- Rural Legacy Areas
- Rural Legacy Easements
- State & Federal Land
- Forest Legacy Area
- County PDR Easements
- MALPF Easements
- MALPF Districts
- Other Easements (see text)
- Municipalities
- Major Roads
- Major Streams

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Resources Management Area and the Farm Museum and Conservation Education Center, an 84-acre property acquired by Cecil County in 2002 (See Map 7.2).

In 2005, Cecil County adopted a Purchase of Development (PDR) program with annual funding of approximately $500,000. As of 2009, 458 acres had been protected through this program

Protected forest land totals approximately 14,400 acres. Some of these lands include recreation land and some non-forested areas. The largest areas are Fair Hill, Elk Neck State Forest and Elk Neck State Park.

As of 2009, more than $40 million has been spent to protect land in Cecil County. More detail on protected lands is in the County's 2005 *Land Preservation Parks and Recreation Plan* (LPPRP), which is incorporated by reference into this Comprehensive Plan. The County will work to maintain its Agricultural Certification.

### *7.2.7 Chesapeake Bay Critical Area*

The Chesapeake Bay Critical Area contains approximately 25,800 acres of sensitive shoreline areas, approximately 12 percent of the County's land area, and is subject to regulatory controls in the zoning ordinance and subdivision regulations regarding land use, development, and natural resource disturbance.

**Oak heath forest in Elk Neck State Forest.**
*Photo Courtesy of The Conservation Fund.*

## 7.3 Discussion of Issues

### *7.3.1 Future Growth and Development*

The potential encroachment of future development on sensitive environmental, agricultural, and forest resources is an important issue facing the County. Development in rural areas – where most of these resources are - increases their fragmentation which, in turn, threatens their long-term viability. As discussed in Chapter 3, Land Use, more than 3,500 new residential permits were issued in the County's Comprehensive Plan-designated rural areas between 1997 and 2008, representing half of the residential development (in terms of permits) in Cecil County during this period.

The County has taken steps to reduce development in rural areas. As noted in Chapter 3, in 2006, the County reduced residential densities in the Northern and Southern Agricultural Residential zoning districts (NAR and SAR), from one dwelling unit per five acres to one unit per 10 acres in the NAR, and from one dwelling unit per eight acres to one unit per 20 acres in the SAR. The County also adopted a transfer of development rights (TDR) and a purchase of development rights (PDR) program.

This Comprehensive Plan projects that approximately 20 percent of the County's population growth by 2030 will occur in rural areas (Table 2.1). This figure represents a reduction in the percentage of growth that would occur in rural areas compared to recent trends. However, even under this projection, more than 4,500 housing units could be added to rural, non-growth areas of the County over the next 20 years.

To address the impacts of future development this Comprehensive Plan builds on steps the County has already taken with a series of land use policies including (see Chapter 3 for detail):

- Directing most future growth to growth areas.
- Facilitating development in growth areas by, for example, creating mixed use zoning districts, and allowing Planned Unit Developments easier to develop in desired locations.
- Policies to encourage the provision of infrastructure and incentives that will enable growth areas to develop as attractive, well-designed places to live, work and play.
- A growth management policy to ensure that development in rural areas does not exceed a desirable share of overall county development.
- Review of the Transfer of Development Rights (TDR) program, including the sending and receiving rates, to incentivize its use to the greatest degree possible.

To supplement these policies the following sections discuss Agricultural and Forest Land Intended for Protection and Green Infrastructure.

### *7.3.2 Agricultural and Forest Land Intended for Protection*

In 2000, the Cecil County Board of County Commissioners adopted a farmland preservation goal of 55,000 acres by 2025: 30,000 acres in the Resource Protection district and 25,000 acres in the Rural Conservation district. The 2005 *Land Preservation Parks and Recreation Plan* (LPPRP) noted that, based on average annual funding of $1.5 million between 2000 and 2004, it would take 49 years to achieve the farmland preservation goal, but that based on the rate of farmland loss, some time around 2025 the County would not have a pool of farmland sufficient to meet the goal. Farmland loss appears to have stabilized somewhat based on the 2007 Census of Agriculture (see Table 4.5), giving the County a window to increase preservation efforts.

#### Priority Preservation Area

Maryland House Bill 2, passed in 2006, requires counties whose agricultural land preservation program is certified by the State to include a Priority Preservation Element in their Comprehensive Plans. A Priority Preservation Area (PPA) is an area that:

- Contains productive agricultural or forest soils, or is capable of supporting profitable agricultural and forestry enterprises where productive soils are lacking;
- Is governed by local policies that stabilize the agricultural and forest land base so that development does not convert or compromise agricultural or forest resources;
- Is large enough to support the kind of agricultural operations that the County seeks to preserve; and

- Is accompanied by the County's acreage goal for land to be preserved through easements and zoning in the PPA equal to at least 80 percent of the remaining undeveloped areas of land in the area.

PPAs can also include forestland being preserved for its environmental values. In these areas the emphasis is on forest conservation rather than forest production[7]

The proposed Cecil County PPA is in three parts; northern rural area, southern rural area, and Elk Neck Peninsula (Map 7.3). In all, the PPA includes approximately 125,800 acres or 57 percent of the County's land area. The PPA includes some protected lands but excludes large protected land areas such as Elk Neck State Forest and State Park and Fair Hill[8].

The land preservation goal within the PPA is approximately 79,000 acres (80 percent of the undeveloped land in the PPA), of which approximately 53,600 acres are not yet protected (Table 7.2). The PPA contains some developed areas. Creation of the PPA would not affect these areas, and some additional development would be expected to occur in the PPA, provided it was consistent with the 80 percent preservation goal.

The PPA acreage preservation goal is aggressive and exceeds the current County goal of 55,000 acres – though that goal relates to agricultural land preservation, whereas the PPA goal is broader, and would include, for example productive forest land.

During preparation of the Comprehensive Plan a number of comments were received regarding the size of the PPA and whether certain parts of the County should be included in the PPA. State certification of the PPA, and any refinement to the area and the acreage preservation goal, would occur when the County applies for recertification of its agricultural land preservation program.

### Table 7.2: Priority Preservation Area Goal

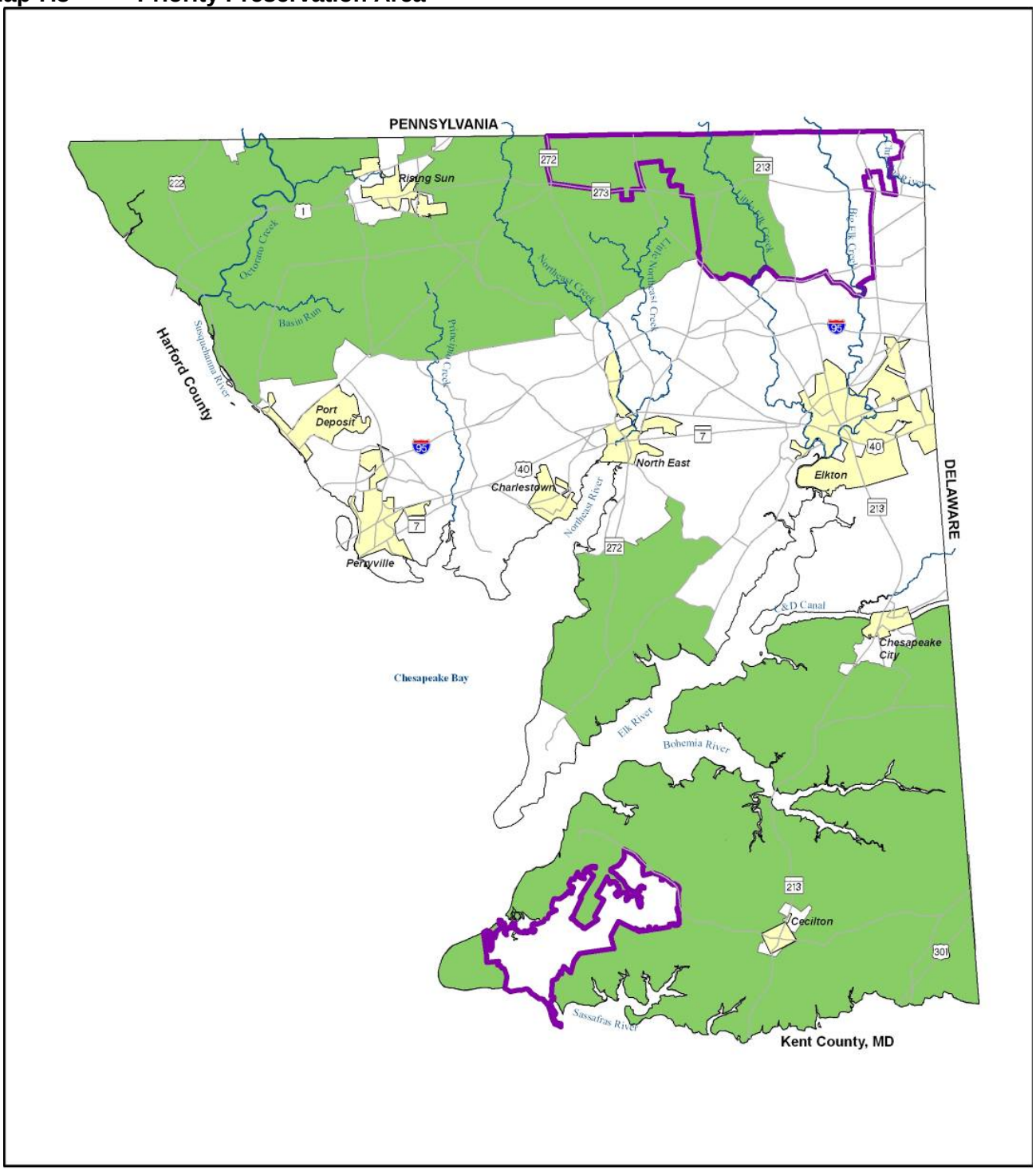
| | | *Acres* | | | |
|---|---|---|---|---|---|
| | | **Northern** | **Elk Neck** | **Southern** | **Total PPA** |
| 1 | Priority Preservation Area (overall size) | 56,734 | 10,483 | 58,558 | 125,775 |
| 2 | Developed* | 14,127 | 2,844 | 10,040 | 27,011 |
| 3 | Undeveloped (1 minus 2) | 42,607 | 7,639 | 48,519 | 98,765 |
| 4 | Preservation Goal (80% x 3) | 34,086 | 6,111 | 38,815 | 79,012 |
| 5 | Protected Lands ** | 5,732 | 2,211 | 17,489 | 25,432 |
| 6 | Remaining Protection Goal (4-5) | 28,354 | 3,900 | 21,326 | 53,580 |

*Includes developed land and proposed major subdivisions
**Includes easements; state, federal, county owned lands; and common space. The Southern PPA's protected lands total includes the recent 1,003 acre State of Maryland acquisition from the Roman Catholic Clergymen.
Source: Cecil County July 10, 2009

[7] Planning Guidance Bulletin, Sensitive Areas Element Volume 1 Number 1, Maryland Dept. of Planning, November 2007.

[8] Comments were made, however, that excluding these areas may have inadvertently also excluded valuable unprotected lands in the vicinity of Fair Hill, for example.

## Map 7.3 Priority Preservation Area




**Priority Preservation Area, Rural Legacy Areas**
2010 Cecil County Comprehensive Plan

**Legend**
- Rural Legacy Areas
- Priority Preservation Area
- Municipalities
- Major Roads
- Major Streams

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## Forests

Preserving contiguous forest stands, increasing the amount of forest retention and encouraging reforestation in developed areas can help to maintain forest cover which is important for such ecosystem services as habitat, air quality, water quality and flood control. As part of the Strategic Forest Lands Assessment (SFLA), DNR identified forests in Maryland according to their ecological significance (including impacts on water quality, sensitive species, and other factors), and according to their vulnerability to conversion to non-forest uses.[9] Maps 7.4 and 7.5 show the economic ranks and vulnerability and of the County's forests, according to the SFLA.

The County has not adopted a specific numeric goal for forest conservation, though the PPA does include several of the County's larger forested areas and its acreage goal will include forest land.

Much of the high-value, medium-risk forest land in the County is located in the Growth Area. This land, much of which lies between Perryville and North East, needs to be carefully considered in the County's assessment of its green infrastructure, see next section.

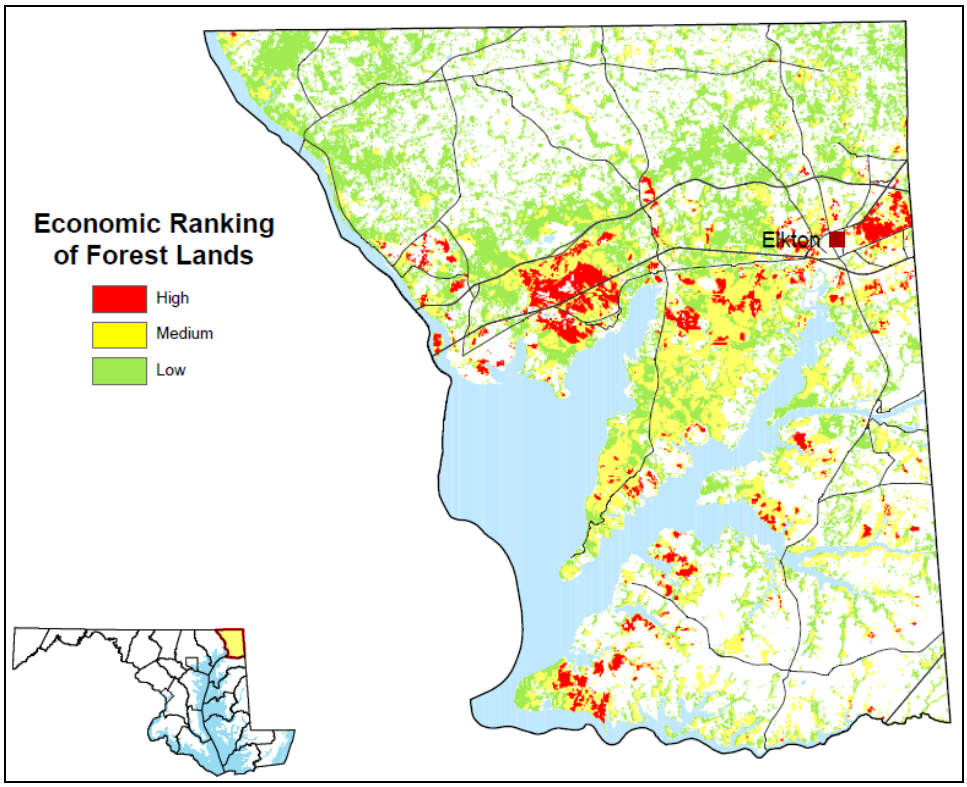
**Priority preservation areas aim to preserve productive agricultural land.** *Photo courtesy of Cecil Soil Magazine.*

Much of the County's forest has low or medium economic ranks, as well as medium to high risks for conversion to non-forest uses. Much of the medium value forest land on the Elk Neck Peninsula is in the proposed PPA.

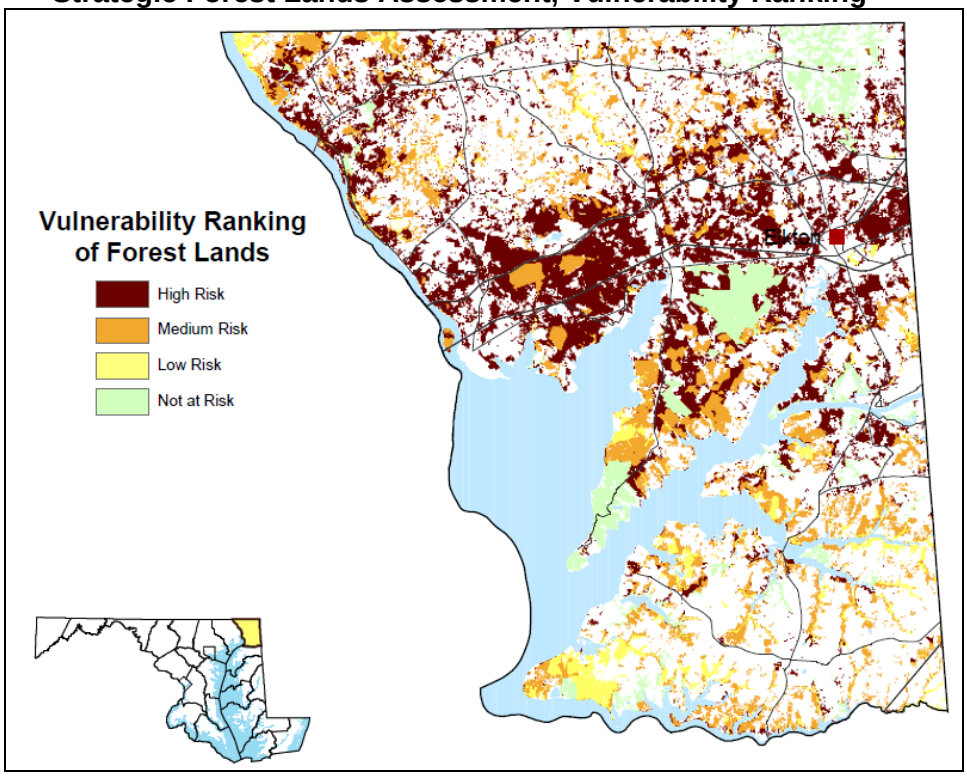
Forest Legacy funds are available through the State to identify and protect environmentally important forestlands through the use of perpetual conservation easements between willing sellers and willing buyers. Approximately 850 acres have been protected using Forest Legacy funds (Table 7.1). The County should consider creating a county-level forest conservation program that would allow participation by property owners whose parcels are not large enough to qualify for state programs such as the Forestry Stewardship Plan. A county-level program might only apply where the parcel adjoins an area that is already in Forestry Stewardship, or is in a high priority area, such as the PPA.

[9] *Source: DNR State Forest Lands Assessment, http://www.dnr.state.md.us/forests/conferences/sfla/index.htm*

**Map 7.4 Strategic Forest Lands Assessment, Economic Ranking**




**Map 7.5 Strategic Forest Lands Assessment, Vulnerability Ranking**




*Source: DNR State Forest Lands Assessment,*

### 7.3.3 Green Infrastructure

During preparation of the Comprehensive Plan there was considerable discussion regarding "green infrastructure". There are a number of different definitions of green infrastructure. In 2006 the County commissioned a Green Infrastructure plan from the Conservation Fund. The resulting *Cecil County Green Infrastructure Plan,* completed in 2007, defines green infrastructure as:

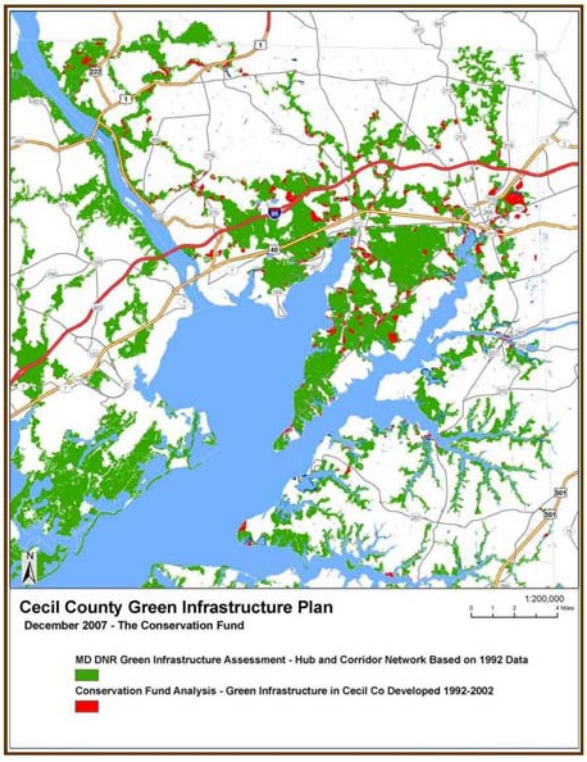
> "an interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife."

The particular value of green infrastructure as a concept is that it looks at natural resources at the big picture landscape level, considering the values of and interconnections between natural areas across watersheds and other boundaries. The purpose of the *Green Infrastructure Plan* was to identify and protect the County's critical green infrastructure.

The *Green Infrastructure Plan* was presented to the Board of County Commissioners but the Board did not formally adopt it as County policy. The plan includes a green infrastructure hub and corridor network, a water quality analysis, identification of ecosystem services provided by the green infrastructure network, and implementation recommendations (Figure 7.1). The hub and corridor network updates for Cecil County, a statewide network first identified by the Maryland Department of Natural Resources in 2000, and which was incorporated into the 2005 LPPRP.

The *Green Infrastructure Plan* identifies the County's largest green infrastructure hubs as on the Elk Neck peninsula (including Elk Neck State Park, Elk Neck State Forest, and Plum Creek Natural Heritage Area), along the Northeast River, west and north of Charlestown, Fair Hill, and along the larger streams (for example, Octoraro Creek, Northeast Creek, Bohemia River, and Sassafras River). The plan also identifies "gaps" in the green infrastructure network for land that is in development, agriculture, or is barren.

**Figure 7.1 Hubs and corridors**



Several COC subcommittees discussed green infrastructure in detail and made many recommendations for consideration in the Comprehensive Plan including adopting the Green Infrastructure Plan, protecting green infrastructure wildlife corridors, creating a "natural resources district" to apply to priority natural resource areas, and identifying and designating "restoration focus watersheds" where water quality enhancement would be encouraged.

Significant potential conflicts exist between these recommendations and the recommendations for growth and development in Growth Areas, and, possibly, the recommendations for the agricultural industry in rural areas. There was consensus among the COC about the need to protect sensitive areas throughout the County, including in Growth Areas. However, there were different opinions concerning what lands should be considered sensitive, the extent to which they were already protected by federal, state or local regulation, what the objectives of a County-approved Green Infrastructure Plan should be, and what additional measures or protections need to be put in place to achieve these objectives.

Therefore, further discussion and evaluation will be needed, potentially through a broad-based committee that would study and evaluate the *Green Infrastructure Plan's* recommendations in relation to this Comprehensive Plan and identify steps the County can take to implement a green infrastructure plan in ways that will support and not conflict with the Comprehensive Plan's other goals, objectives, policies, and actions.

#### Watershed planning

Watershed planning is closely related to green infrastructure in that it is focused on water quality which is one of the many ecosystem services provided by a green infrastructure network. Indeed the Green Infrastructure Plan identified conservation focus watersheds and restoration focus watersheds based on different criteria. Chapter 6 of this Comprehensive Plan discusses watershed planning in the context of water resources.

The committee recommended to evaluate the *Green Infrastructure Plan* should also consider watershed-based planning considerations into its evaluation. For example, the County should consider ways to track and monitor natural resource areas in a form of clearinghouse along with the data sources described in Chapter 6 (water resources). This information would support the County's land use and sensitive areas goals, help inform land use decisions, and target areas for restoration and/or additional protection. Controlling the spread of invasive species in forested and reforested areas and the need to encourage the use of native plant species in landscaping plans submitted as part of development plans were brought up as specific concerns during preparation of the Comprehensive Plan.

### *7.3.4 Wetlands*

As noted above (section 7.2.3) the County Zoning Ordinance currently requires a 25-foot setback from non-tidal wetlands. This Comprehensive Plan recommends that additional analysis be performed to study in detail the benefits of expanding the non-tidal wetland buffer.

Wetland buffers protect the water quality of wetlands by preventing the buffer area from serving as a source of pollution, as well as by processing pollutants that flow from upland areas. Vegetation and deep permeable soils in the buffer slow down surface flow, allow for infiltration before runoff reaches wetlands, and inhibit the formation of channelized flow, improving removal of sediments and nutrients. Wetlands also provide habitat for many plant and animal species.

Depending on site conditions, much of the sediment and nutrient removal may occur within the first 15 to 30 feet of the buffer, but buffers wider than 30 feet remove pollutants more consistently. Larger buffers are more effective over the long run because buffers can become saturated with sediments and nutrients, gradually reducing their effectiveness, and because it is much harder to maintain the long-term integrity of small buffers.

Non-tidal wetlands are extensive in Cecil County. This Comprehensive Plan recommends that additional analysis be performed to study in detail the benefits of expanding the non-tidal wetland buffer.

### *7.3.5 Other Regulations*

During preparation of the Comprehensive Plan a number of recommendations were made to improve the protection of sensitive areas at the site specific level and the connections between sensitive areas on adjacent sites. These included:

- Increase percentage of forest retention, afforestation and reforestation for different types of development
- Consider requiring that forest stand delineations evaluate adjoining land parcels to preserve contiguous forest stands.
- Maintain large areas of contiguous habitat to avoid fragmentation of these areas.
- As land is subdivided ensure the subdivision regulations preserve useful and sustainable open spaces.
- Ownership and management by third parties of large open space areas set aside during the development process in order to better protect and manage these areas for natural resource purposes.

These recommendations should be considered as part of the development regulations update which will occur after adoption of the Comprehensive Plan.

## 7.4 Policies and Actions

### Priority Preservation Area

1. Refine the Priority Preservation Area map and acreage goals as part of the recertification of the County's agricultural land preservation program
2. Review the Transfer of Development Rights program (see Chapter 3). Aggressive use of the TDR program will be critical to preserving the PPA especially in the Rural Conservation area, which has less protective zoning than the Resource Protection area.
3. Continue to participate in land preservation programs including the Maryland Agricultural Land Preservation Foundation, Program Open Space, Rural Legacy, and Forest Legacy, and with land trusts and other land preservation organizations.
4. Continue to fund the County's Purchase of Development Rights (PDR) program and seek to increase funding.

   In 2009, the General Assembly enacted the Smart Growth Goals, Measures, and Indicators and Implementation of Planning Visions Act requiring local planning commissions to submit annual reports that include specific smart growth measures and indicators. One of the measures is the number of acres preserved using local agricultural land preservation funding.
5. Consider other types of land preservation including PDR by parties other than the county or state, and cluster subdivisions with a high open space preservation requirement (higher than the current 60 percent requirement in the NAR and SAR zoning districts).

### Green Infrastructure/ Watershed Planning

6. Consider appointing a broad-based Committee to i) study and evaluate the 2007 Green Infrastructure Plan's recommendations in relation to the newly adopted Comprehensive Plan and ii) identify steps the County can take to implement a green infrastructure plan in ways that will support and not conflict with the Comprehensive Plan's other goals, objectives, policies, and actions.
7. Incorporate watershed-based planning into the County's comprehensive planning program (see Chapter 6). Develop the capacity to track and monitor natural resources

areas in a way that informs land use decisions with natural resource and renewable resource-based industry priorities, and targets areas for restoration and/or additional protection.

## Other

8. Perform additional analysis to study in detail the benefits of expanding the non-tidal wetland buffer.
9. Review other environmental standards, such a forest conservation and habitat protection, as part of the development regulations update which will occur after adoption of the Comprehensive Plan (see section 7.3.5).
10. Consider creating a county-level forest conservation program that would allow participation by property owners whose parcels are not large enough to qualify for under state programs. A county-level program might only apply where the parcel adjoins an area that is already protected, or is in a high priority area, such as the PPA.

# 8 Community Facilities

This chapter describes community facilities and services in Cecil County, including educational facilities, public safety (police, fire and emergency services), solid waste, health care, and arts and culture. Parks and recreation facilities also are addressed in the 2005 Cecil County Land Preservation, Parks and Recreation Plan (LPPRP), which is incorporated by reference into this Comprehensive Plan.

## 8.1 Goals and Objectives

The following goals and objectives apply to all community facilities:

- Provide facilities and services to support growth and community needs, particularly in growth areas, but also in rural areas.
- Locate new facilities in or convenient to existing population centers and growth areas.
- Establish funding and growth management mechanisms to ensure facilities are provided concurrent with growth and demand.
- Incorporate energy efficiency components in the design and construction of public facilities.

## 8.2 Primary and Secondary Education

### *8.2.1 Organization*

Cecil County Public Schools (CCPS) is the County's public school system. The Cecil County Board of Education consists of seven elected members and is responsible for the:

- establishment of public schools;
- delineation of geographical attendance areas;
- reception and administration of funds;
- acquisition of sites and the construction of school buildings;
- appointment and compensation of school employees;
- prescription of curriculum guides and programs of instruction; and
- establishment of local school policy.

**Bayview Elementary School in North East**

### *8.2.2 Facilities*

Cecil County has 28 schools with a total enrollment of 16,128 as of the 2008-09 school year, including 17 elementary schools (serving kindergarten through fifth grade), six middle schools (grades 6-8), and five high schools (Map 8.1). Facilities include 39 buildings and 60 relocatable classrooms with more than two million square feet of building space. The average age of buildings is 50 years and most schools are considered to be in "good" or better condition.[1]

As of the 2008-09 school year, nine schools were over capacity (Calvert Elementary, Conowingo Elementary, Gilpin Manor Elementary, Kenmore Elementary, North East Middle, Bohemia Manor High, North East High, and Rising Sun High). CCPS has an overall school utilization rate of 92 percent.

[1] Cecil County Public Schools 2010 Educational Facilities Master Plan

Programs for students with disabilities are available as needs dictate. Six elementary schools offer programs supported by Title I funds. These funds are allocated based on the percent of poverty as determined by the number of students receiving free or reduced price meals. Pre-kindergarten programs for 4-year-olds operate at 13 elementary schools.

Additional educational facilities include the Cecil County School of Technology and the Providence School. The Cecil County School of Technology is a specialized trade school that includes programs in carpentry, allied health, culinary arts, webmaster technology, and automotive technology, among others, for 11th and 12th grade students who attend for part of the school day. The Providence School offers an alternative training program for at-risk children and other students who have been removed from their home schools due to behavioral problems and who will eventually transition back to regular middle and high school classes.

Figure 8.1 shows elementary and middle schools and what percentage of student enrollment feeds into high schools.

### *8.2.3 Enrollment Projections and Facility Needs*

#### Enrollment Projections

CCPS prepares an *Educational Facilities Master Plan* that identifies the facility improvements needed to support projected enrollment increases and addresses other facility needs. The ten-year plan is updated every year. The most recent plan looks at facility needs to the year 2019 based on the enrollment projections for that school year.

Public school enrollment in Cecil County has grown about one percent per year for many years, and this trend is expected to continue through 2019. CCPS projects enrollment is projected to increase by 12 percent between 2008-09 and 2018-19, to 18,069 students (Table 8.1), or a little more than one percent per year. The largest percentage increase would occur at the elementary level (15 percent). Enrollment also is projected to increase nine percent at the middle schools and eight percent at the high schools.

To quantify the impact of the County's projected growth on CCPS to the horizon of this Comprehensive Plan, staff worked with CCPS to project school enrollment to 2030 using a statewide model. This projection estimates that CCPS will have an enrollment of 22,570 students in 2030, an increase of approximately 6,400 students, or 40 percent over current enrollment, a significant increase over CCPS' current projections (Table 8.1).

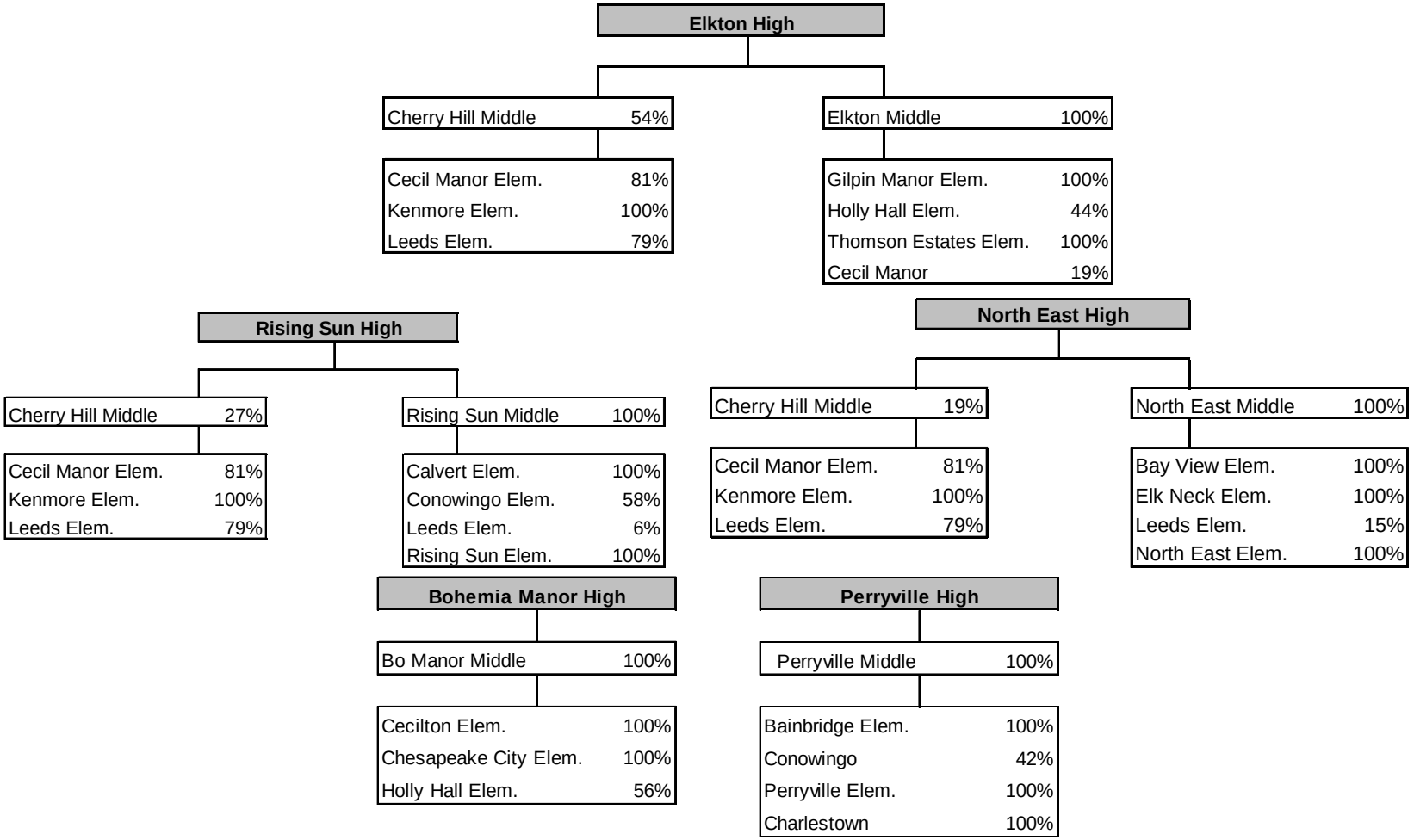
**Table 8.1: Cecil County School Capacity and Enrollment**

| | *Schools* | *Capacity*[2] | | *Enrollment* | | | | |
|---|---|---|---|---|---|---|---|---|
| | Number[1] | Current[3] | Planned[4] | Current | Projected | | | |
| Year | 2009 | 2008-09 | 2018-19 | 2008-09[5] | 2018-19[6] | % Change 2009-2019 | 2029-30[7] | % Change 2009-2030 |
| Elementary | 17 | 8,112 | 8,112 | 7,518 | 8,644 | 15% | 10,510 | 39% |
| Middle | 6 | 4,478 | 5,178 | 3,656 | 4,001 | 9% | 5,110 | 40% |
| High | 5 | 4,879 | 5,719 | 5,044 | 5,444 | 8% | 6,950 | 42% |
| **Total** | **28** | **17,469** | **19,009** | **16,218** | **18,089** | **12%** | **22,570** | **40%** |

[1] Number equals the total number of CCPS schools operating in 2008-09.
[2] Capacity equals the total state rated capacity of all schools in CCPS.
[3] Current capacity is the total state rated capacity of all 28 CCPS schools in 2009.
[4] Planned capacity equals the 2009 capacity plus the CTE High School and one additional middle school of 700 students.
[5] Current enrollment is the count as of September 2008.
[6] Projected enrollment is the official CCPS projection for 2018-19 as identified in the FY 2010 Educational Facilities Master Plan.
[7] Projected enrollment in 2030 was calculated by ERM based on the Comprehensive Plan's population projections for 2030 and the State of Maryland's long-range model for projecting school enrollment.

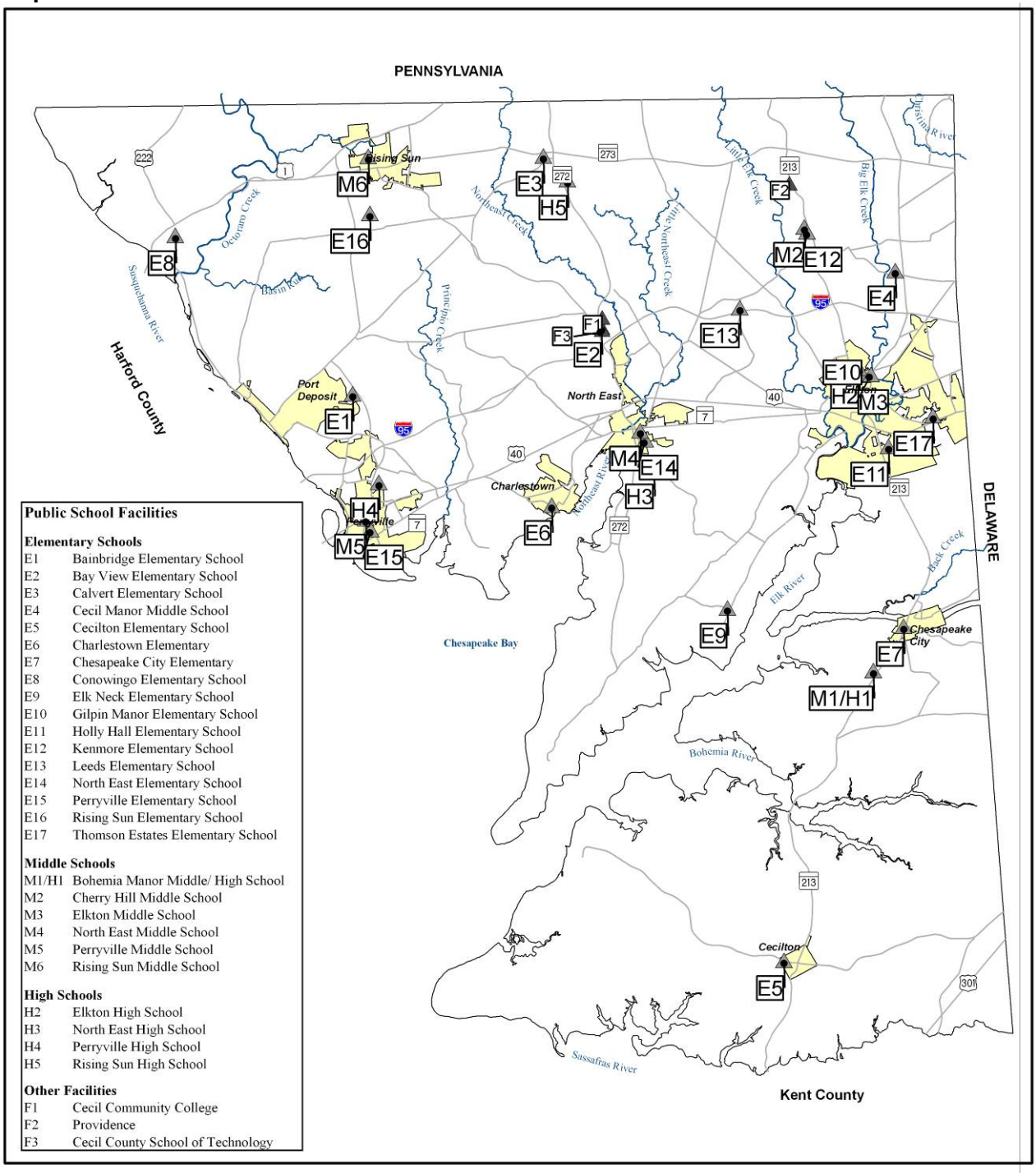
*Sources: ERM, Cecil County Public Schools*

**Figure 8.1: CCPS Feeder System**




*Source: Cecil County Public Schools Educational Facilities Master Plan*

## Map 8.1 Educational Facilities



## Facility Needs

The *2010 Educational Facilities Master Plan* includes two projects that would increase CCPS' capacity: the Comprehensive Career and Technology (CTE) High School, scheduled to open in 2013 with a programmed enrollment of 940 students, and a new middle school scheduled to open in 2015 to address facility and growth needs at Bohemia Manor Middle and High School. CCPS's policy is for new middle schools to accommodate up to 700 students.

These projects would increase the County's inventory to 30 schools and total enrollment capacity to 19,009 students (Table 8.2). With these planned improvements, CCPS's schools would have an overall utilization rate of 95 percent in 2018-19 (based on a capacity of 19,009 and a projected enrollment of 18,089).

The projected enrollment in 2030 is about 3,600 students above CCPS' planned 2019 capacity of 19,009, including about 2,400 at the elementary grades and 1,200 at the high schools (Table 8.2). Of the enrollment growth projected between 2008 and 2030 (approximately 6,400 additional students), almost 70 percent is projected to occur between 2019 and 2030.

### Table 8.2: Future School Needs, 2030

| Grade Level/Year | Maximum School Size (CCPS policy) | Planned Capacity | Projected Enrollment | Additional Capacity Needed | Schools Needed |
|---|---|---|---|---|---|
| | | 2019 | 2030 | 2030 | 2030 |
| Elementary | 600 | 8,112 | 10,510 | 2,398 | 4 |
| Middle | 700 | 5,178 | 5,110 | -68 | 0 |
| High | 1,200 | 5,719 | 6,950 | 1,231 | 1 |
| **Total** | | **19,009** | **22,570** | **3,561** | **5** |

*Source: Cecil County Public Schools*

Based on CCPS new school sizes of 600 students per elementary school, 700 per middle school and 1,200 at the high school level, Cecil County would need four elementary schools and one high school by 2030, in addition to the two schools already planned. This level of growth and amount of construction would be almost unprecedented in Cecil County, which has not built more than four schools in a decade since the 1950s.

Because enrollment projections and facility needs are updated every year, CCPS will be able to track growth closely and plan for facility improvements. As concept subdivisions are presented to the County for approval, CCPS should review the capacities of schools that would affected by the development. If the schools will be over capacity when the development will occur (taking into account new or renovation/addition projects in the Capital Improvement Plan), then CCPS should work with the County on measures to provide the necessary capacity.

Although exact locations have not been identified, the four elementary schools needed by 2030 likely would be needed in the Elkton area south of US 40, in or around Perryville and Port Deposit, and between Elkton and North East. .

## Funding

With an average current cost of $20 million per elementary school and $60 million per high school, funding five schools will be challenging. In Maryland, state and local governments share the responsibility of planning and funding school construction. Projects funded with state resources require that local governments and school districts justify the need for new buildings and expansions based upon projections using three-year enrollment averages and local birth rates. Anticipated residential growth alone is not a justification for state funding. The State allocates construction funds based on need, and projects must compete statewide for funding. The funding process can take about four years from concept through construction.

Local governments in Maryland typically fund the local costs of school construction through the sale of bonds. Jurisdictions can opt to pay for school construction projects without or in anticipation of state support. This approach, known as "front funding," can accelerate the school construction process and is most often used during periods of rapid growth. If growth occurs as rapidly as projected, Cecil County will need to consider this approach, as well as other funding mechanisms, to support the construction of school facilities in a timely manner (see also, Chapter 11, Implementation).

## 8.3 Higher Education

Cecil College is the only higher education facility in Cecil County, offering two-year associate degrees and providing opportunities for students to earn credits for transfer to four-year colleges.

Cecil College is the fastest growing community college in Maryland. Enrollment of credit students grew more than 20 percent between 2005 and 2009, to 3,175 (Table 8.3), and has more than doubled since 2000. In addition, the college had 4,700 non-credit students in 2009 in workforce training, certification and personal enrichment programs.

### Table 8.3: Cecil College Enrollment, 2005-09

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| Credit Students | 2,630 | 2,669 | 2,737 | 2,956 | 3,175 |
| Non-Credit Students | 5,368 | 5,371 | 5,265 | 4,661 | 4,700 |
| **Total** | **7,998** | **8,040** | **8,002** | **7,617** | **7,875** |

*Source: Cecil College; 2009 FY figures are projected*

Cecil College has created partnerships with seven universities, arrangements that offer students the opportunity to complete baccalaureate degrees. Students can transfer credits to these universities and attend classes on these campuses in some cases.

Partnerships have been established with Drexel University (for nursing), Salisbury University (social work), the University of Maryland-Baltimore County (biotechnology), University of Delaware (nursing), University of Maryland-Baltimore (dental hygiene), University of Wisconsin-Green Bay (nursing) and Wilmington University (leadership and management).

The College is developing additional partnerships with Drexel University (engineering) and Wilmington University (teacher education), as well as Arcadia University (physician assistant), Johns Hopkins University (business administration) and Lakeland Community College (nuclear engineering technician). These partnerships expand the number of degree choices students have to complete their studies while maintaining their residence within the county.

**Cecil College is the fastest growing community college in Maryland. The main campus, shown left, is in North East and there is a satellite campus in Elkton, shown to the right.**

Cecil College is based in North East. Existing campus facilities include the Community Cultural Center (library wing), Community Cultural Center (theatre wing), Arts and Sciences Building, Technology Center, and the Physical Education and Activities Building.

The College developed Elkton Station in downtown Elkton in 2005 to replace a former facility on Railroad Avenue in the town. The 52,000-square foot facility provides continuing education and credit course offerings and partners with area businesses and the Cecil County Public Schools on other programs.

The College plans to continue to expand enrollment at its campuses in North East, Elkton and add a future facility on 10 acres at Bainbridge in Port Deposit. At the North East campus construction of a new physical education complex is underway and an engineering and math building is in design. Other proposed projects include:

- Community Cultural Center Theatre Wing Addition
- Student Center
- Academic Building
- Conference Center
- Day Care Center
- Facilities Management and Receiving Building
- Concessions Building.
- Future Parking Deck/Covered Entry to Theatre
- Future "Student Village"

## 8.4 Parks and Recreation

As of 2005, Cecil County had approximately 1,500 acres of park and recreation land, and open space, including land owned and managed by the Cecil County Public Schools and the eight incorporated towns. This acreage includes 16 community parks, 14 mini-parks, 8 sports complexes, 7 special use areas and 9 undeveloped parks.

The State of Maryland manages nearly 5,800 acres of recreation land at Elk Neck State Park, Elk Neck State Forest and Susquehanna State Park. Fair Hill, also State-owned, with 5,600 acres, is classified as a Natural Resources Management Area and provides extensive passive recreation opportunities. The County also includes more than 2,800 acres of federal land, including approximately 500 acres of managed hunting areas. Other federal land serves as dredge disposal sites and wildlife management areas.

**There are approximately 1,500 acres of park and recreation land in Cecil County, including Perryville Community Park, shown here.**

The Land Preservation, Parks and Recreation Plan (LPPRP), updated every six years, is the County's detailed policy plan for parks, recreation, and land preservation. The 2005 LPPRP included an analysis that evaluated the supply of recreation facilities against current demand. The analysis found sizable deficits for several types of recreational facilities, including baseball/softball diamonds, indoor basketball courts, multipurpose fields for team sports, hiker/biker trails, and recreational fishing opportunities.

The plan also looked at how park and recreation needs were distributed. The demand for recreational land was found to be highest in the North East, Elkton and Rising Sun areas.

Highlights of the long-range park acquisition and development program in the LPPRP include:

- Acquisition of 250 to 410 acres of park and recreation lands.
- Development of a regional park of 100 to 200 acres in the I-95/US 40 corridor.
- Development of a community park between 75 to 100 acres in the Town of Elkton or in the Elkton/Fair Hill area.
- Building an indoor sports complex or recreation center in Elkton.
- Developing two community parks of approximately 25 to 50 acres in the Rising Sun and North East areas.
- Creating additional access points to the Chesapeake Bay and other water bodies.

The LPPRP recommends that the County consider expanding its role in funding for recreation and parks. The County relies on the state's Program Open Space (POS) program for most recreational facilities. As POS funding has declined, other options will be needed to develop these facilities.

The County has begun an update of the LPPRP that is expected to be complete in 2010.

## 8.5 Cultural Facilities

Cultural facilities and programs are important contributors to quality of life in a community and, as such, can influence residential and business locational decisions.

Cecil County is home to a number of cultural facilities, organizations, resources and attractions. The Community Cultural Center at Cecil College is the leading performing arts theater in northeast Maryland, featuring programs in theater, music, dance and art.

Cultural attractions include a summer concert series along the banks of the Chesapeake and Delaware Canal, the annual county fair, the Cecil County Farm Museum, the Historical Society of Cecil County, and more than 14 art galleries. The county also has many restaurants and lodging facilities, including waterfront dining, country inns, authentic crab houses, and family fare.

The Cecil County Arts Council (CCAC) serves as a local clearinghouse for information on the arts. The CCAC is a non-profit organization that offers exhibitions, art education workshops, musical performances, literary arts programs, and special events to the community. CCAC awards scholarships to students pursuing degrees in the arts and grants to local non-profit organizations and schools presenting art programs. The CCAC is funded, in part, by the Maryland State Arts Council and Cecil County government.

## 8.6 Fire, Rescue, and Emergency Medical Services

### *8.6.1 Existing Services and Staffing*

Fire and rescue services in Cecil County are provided through nine volunteer fire companies and one career company (Map 8.2). Cecilton, Chesapeake City, Elkton (Singerly), North East, Charlestown, Perryville, Port Deposit (Water Witch), Rising Sun (Community Fire Company), and Hack's Point have volunteer fire companies. The only career fire company is at the Perry Point VA Medical center in Perryville.

The volunteer companies operate 18 stations throughout the County. Each fire company has a defined first response area. Extensive mutual aid agreements among the companies and fire companies in adjacent counties and states provide additional resources when an incident exceeds local capabilities

Emergency Medical services (EMS) are provided through a partnership between the volunteer fire companies and Cecil County Department of Emergency Services (CCDES, formerly known as Emergency Management and Civil Defense). CCDES is the agency

responsible for 911 PSAP, the emergency medical services system, emergency management, hazardous material response, electronic services, and training and education. CCDES personnel are responsible for training, coordination, and response of all County emergency operations center staff. The director of emergency services serves as the sworn emergency manager and staffs the division with a full time emergency readiness manager and a part-time emergency planner.

Each of the volunteer companies provides EMS services for their first response areas, while CCDES operates thee paramedic stations. Some volunteer companies estimate a ratio of one EMS call for every 10 residents, and EMS calls account for more than 75 percent of all calls for most volunteer companies. The majority of these calls occur in the daytime, when volunteer availability is at its lowest.

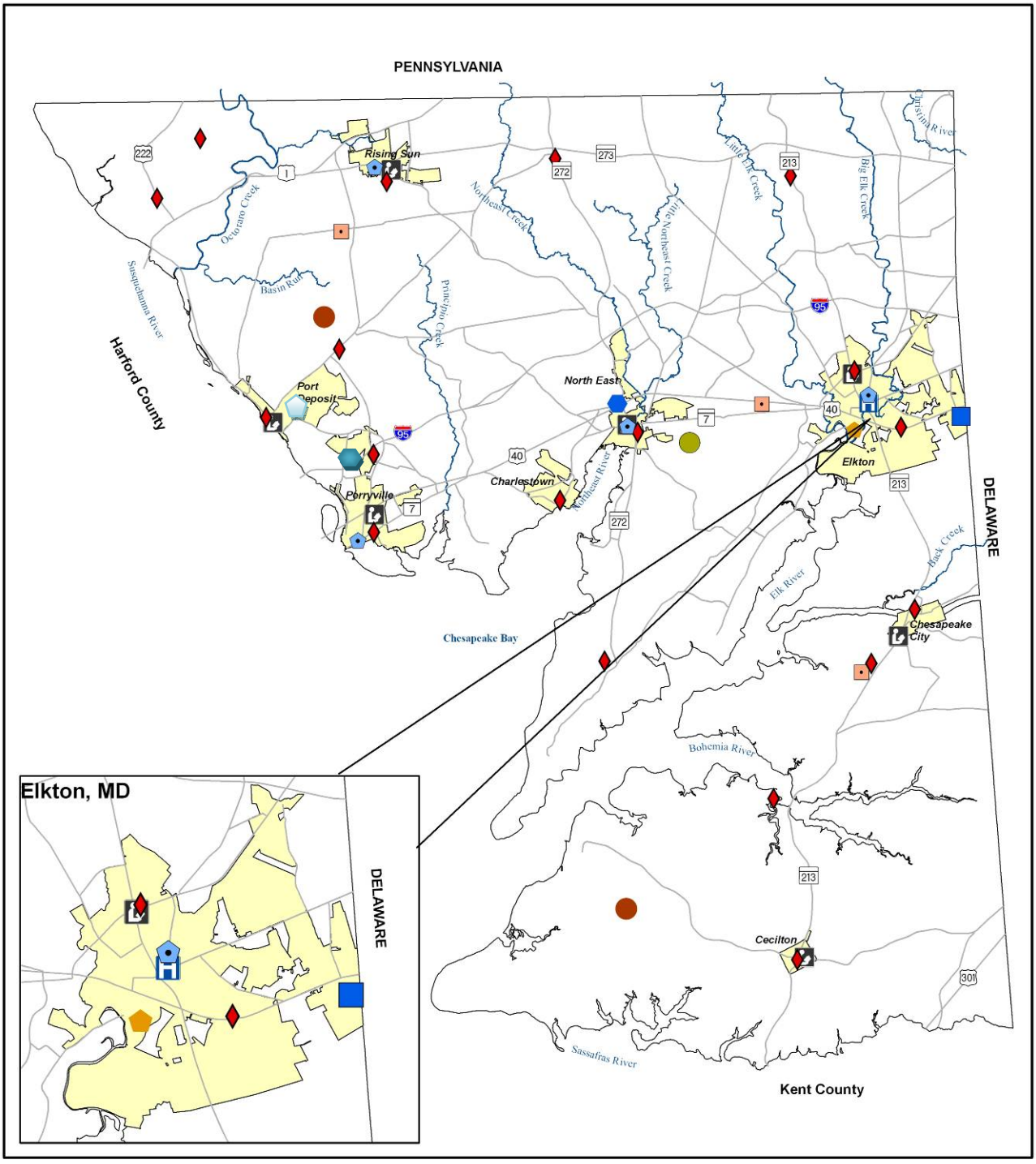
CCDES has established three strategically located paramedic stations near Rising Sun, between Elkton and North East, and near Chesapeake City. A CCDES paramedic unit is dispatched on every EMS call in the county. Depending upon the situation, the paramedic unit may be cancelled if the volunteer ambulance is closer and fully staffed. The unit may respond to the scene to provide assistance, or the paramedic unit may supplement the volunteer ambulance crew.

Staffing needs vary significantly among the nine volunteer companies because of different first response area populations and call volumes. Volunteers have significant training requirement. Two volunteer companies have hired personnel to supplement volunteers. The others continue to operate with volunteers only, but increasing daytime incidents strain their ability to respond promptly.

Areas without water service rely on tanker trucks from volunteer companies for suppression in place where holding tanks and dry hydrants have not been installed. The water carried by tanker trucks often runs out before a fire is controlled. Although installation of tanks and hydrants is not required, the Planning Commission often recommends that infrastructure be installed as a condition of approval during the development process. Encouraging the further development of this infrastructure would improve fire protection in rural areas.

**Perryville Fire Company building on MD 222 near I-95**

## Map 8.2 Community Facilities




**Community Facilities**
2010 Cecil County Comprehensive Plan

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**Legend**

- Municipalities
- Fire Department
- Paramedic Station
- Cecil County Detention Center
- Union Hospital
- Police Department
- State Police Barrack
- Cecil County Sheriff's Office
- Library
- Transfer Station
- Central Landfill
- Major Roads
- Major Streams

### 8.6.2 Funding

The costs of providing fire, rescue, and emergency medical services are significant. Equipment, fuel and insurance account for much of the costs, which have been rising steadily. Fundraising requirements are a major strain on the volunteer fire service.

In 2006, the Cecil County Board of Commissioners established the Apparatus Replacement Fund, wherein the County makes $1 million available annually to replace fire and EMS equipment. This program has been successful but has not met all of the need. Equipment due to be replaced or scheduled for replacement in fiscal year 2010, for example, exceeded funding by 150 percent.

Cecil County funds several fire and EMS programs, including workers' compensation insurance. Although these costs are significant, they are less than what the County would face with a career department. On average, more than 85 percent of the cost of a career fire department is personnel related.[2] Other than workers compensation and a recognition program, the county has no personnel costs and thus enjoys a significant savings compared to the cost of a career fire department.

### 8.6.3 Facility Needs

Cecil County is developing a long-range EMS plan to address the County's needs over the next 10 years. Potential projects include a new EMS station in the Perryville area, replacing the North East station with a site on the Cecil College campus, expanding the 911 call center, and establishing an EMS headquarters which would also expand paramedic career advancement and recruitment opportunities.

Several of the fire stations and medic units are in need of renovations and/or expansion. Population growth will influence the location of future stations, and the need for expanded service will be centered in growth areas. As of 2010, eight of the 18 fire stations and two of the medic units are located in the Designated Growth Area. Concentrating growth in the Elkton West area will increase the demand for fire and EMS service in this area.

### 8.6.4 Emergency Services

CCDES has a primary focus on programming and planning initiatives to increase the County's response effectiveness through the four phases of disaster: mitigation, preparedness, response, and recovery. This agency has developed plans addressing the response to various types of emergencies in the county. Practice drills (mock events) are conducted regularly throughout the year in conjunction with state and federal emergency response agencies.

CCDES is responsible for the following plans:

- Hazard Mitigation Plan
- Emergency Operations Plan
- County-wide Continuity of Operations Plan
- Division Standard Operating Procedures
- Hazard Mitigation/Hazard Vulnerability Analysis
- Radiological Response Plan
- Various other hazard-specific plans

Based on a 2009 Hazard Vulnerability Analysis, the relative hazard risks for Cecil County are shown on Table 8.4. CCDES is responsible for planning for each type of emergency and coordinating large-scale response efforts through the emergency operations center. The agency also offers training and full-scale exercise opportunities to all County emergency responders.

[2] Research conducted by COC Public Services Subcommittee.

**Table 8.4: County Hazard Risks**

| High | Medium-High | Medium | Medium-Low |
|---|---|---|---|
| • Winter weather<br>• Flooding | • High wind<br>• Thunderstorms<br>• Tornado<br>• Soil movement<br>• Hazardous Materials | • Drought<br>• Hurricanes<br>• Wildfires<br>• Epidemics<br>• Dam failure | • Heat related issues<br>• Other transportation related issues<br>• Fire/explosion |

## 8.7 Law Enforcement (Police)

### *8.7.1 Responsibilities, Facilities and Staffing*

Law enforcement services in Cecil County are provided by local municipalities in Elkton, North East, Perryville, Port Deposit and Rising Sun. In addition, the Cecil County Sheriff's Office and Maryland State Police provide a variety of essential services throughout the County and in support of the local municipalities.

Collectively these law enforcement agencies provide services in the areas of traffic control and enforcement, crime prevention and investigation, court room security, and educational and support programs that benefit the community at large.

The Cecil County Sheriff's Office Law Enforcement Division is headquartered on Chesapeake Boulevard in Elkton. Programs administered by the Sheriff's Office include:

- Deputies in School
- Are You Okay? (serving the senior population)
- Child Sex Abuse Investigation and Registration
- Warrant Unit
- Patrol Services
- Traffic Control and Accident Investigation
- K-9 Patrol Unit
- DARE
- Court Room Security
- Drug Task Force
- 911 Calls for Service
- Criminal Investigations
- Civil Process Unit

The Maryland State Police have two barracks located in Cecil County. Barrack F is located at US 40 and MD 272 in North East. Barrack M is located along I 95 north of Perryville. In addition to their state duties, State Police supplement local law enforcement programs and services.

The Maryland Transportation Authority Police provide security and law-enforcement services at the Thomas J. Hatem Memorial Bridge (US 40 across the Susquehanna River). The Maryland State Police, under contract with the Authority, provide law-enforcement services along I-95.

#### Correctional Center

The Cecil County Correctional Center is located on Landing Lane in Elkton. The Sheriff is responsible for the management of the Correctional Center, which includes a Detention Center and a Community Corrections Center.

Persons held at the Detention Center are awaiting trial or have been convicted of a crime and may serve a sentence of up to 18 months. The Detention Center is a medium- to maximum-security facility.

The Community Corrections Center is a minimum security facility. The purpose of the center is to house and rehabilitate individuals who have been convicted of a crime but, in the judgment of the court and corrections officials, are able to participate in community activities such as employment and rehabilitation activities without posing a substantial danger to the

community. As such, the Community Corrections Center serves the courts as a sentencing alternative to confinement in the Detention Center.

The Correctional Center was built in 1983. It was designed to house 70 inmates in the Detention Center and 32 inmates in the Community Corrections Center. Shortly after construction, legislative initiatives authorized double bunking and the center's operational capacity increased from 102 to 204 inmates. In 2009, the combined average daily population of the Detention Center and the Community Corrections Center was 250.

In 2005, the Sheriff's Office in cooperation with the Board of County Commissioners developed a master plan to identify the county's correctional needs through the year 2030. The *Needs Assessment Study and Master Plan* recommended renovation and expansion. In cooperation with the State of Maryland, funding for the project was approved and construction is scheduled for completion in December 2011. The expansion and renovation project will result in the build-out of the Elkton site. Further expansion would require land acquisition at another location.

#### Juvenile Services

Juvenile Services of Cecil County supervises approximately 160 youth per month and receives an average of 65 referrals from law enforcement. The office includes a director, supervisor, case managers, and a family intervention specialist. The office moved to the Elktowne Centre in Elkton in 2006, and the space is considered sufficient to meet the existing demand.

### *8.7.2 Facility and Program Needs*

The County's projected growth will expand the need for law enforcement and correctional facilities. These needs include:

- A Central Booking Center serving the Sheriff's Office and municipal police departments operating 24 hours a day and seven days a week.
- The potential need to acquire a site for the further expansion of the Correctional Center. This issue should be considered during the next Comprehensive Plan process to determine if and when such an expansion would be needed and where the facility should be located.
- Expanding minimum security and alternative programs such as work release, adult drug treatment court, community service, home detention, pre-trial services, and inter-agency program development will help to reduce the need for confinement at the Detention Center.
- Identifying the need and funding for law enforcement substations near Chesapeake City, Cecilton, Rising Sun and Conowingo to supplement facilities in the growth corridor.
- Support the need to invest more money in technology to deliver efficient and effective public safety services.
- Develop a comprehensive Public Safety Master Plan.

## 8.8 Information Technology

The Cecil County Department of Information Technology manages the County's computer and information systems. The department's most recent five-year plan covers fiscal years 2008 through 2012 and includes several key action items:

- Disaster Recovery and Emergency Preparedness: Continue efforts to provide the ability to recover information in the event of a disaster or major accident.
- Focus on Energy Consumption: Continue to make energy saving recommendations that reduce the power cost to Cecil County government. Design and install all information technology architecture with low energy considerations.

- Broadband Solutions: As broadband service expands, negotiate blanket contracts with providers to allow for high-speed remote access to remote County offices (see also Chapter 4, Economic Development).

## 8.9 Health Care

### *8.9.1 Union Hospital*

Union Hospital of Cecil County, the only hospital in the County, is located in Elkton (Map 8.2). The 149-bed facility is staffed by nearly 900 staff members and 260 physicians offering outpatient, surgical and emergency services, as well as comprehensive health education programs. The six operating rooms host an average of 20 procedures a day.

**Union Hospital in Elkton is staffed by 260 physicians**

In 2007, the hospital opened a 48-bed inpatient tower in Elkton, expanding its capacity and services in patient care. The hospital's *2008-11 Strategic Plan* calls for further program development in cardiovascular, oncology, and chest diseases. The hospital also plans to focus on physician recruitment and the creation of primary care and multi-specialty group medical practices.

In support of these goals, the hospital has identified short-term strategic capital investments of $15 million to enhance its facilities. The hospital also has constructed and is planning satellite facilities to improve access to medical care in the southern and western parts of Cecil County. The hospital plans to build on the Principio Medical Campus in Perryville.

### *8.9.2 Health Department*

The Cecil County Health Department is located on Bow Street in Elkton, a facility that opened in 1990. The Department provides community health services and education related to:

- epidemiology and communicable diseases
- tuberculosis control
- sexually transmitted diseases
- adult health
- home health
- developmental disabilities
- early and periodic screening diagnosis and treatment
- adolescent pregnancy
- improved pregnancy outcome and high risk infant care
- geriatric evaluation services
- family planning
- environmental health
- community mental health
- community rehabilitation programs
- community residence programs
- alcoholism and drug abuse treatment programs and
- medical adult day care.

#### Future Needs

The Department's existing facility is too small. To meet future needs the Department envisions renovating/expanding the existing building and building a new headquarters building, approximately 40,000 square feet to house staff and support programs.

### *8.9.3 Senior Services*

The Department of Senior Services and Community Transit offers a variety of programs and services at senior centers in Elkton and Perryville. Hot meals are served Monday through Friday at the Elkton Center and Tuesday, Wednesday, and Thursday at the Perryville Center.

In 2004, Senior Services opened a Healthy Lifestyles Fitness Center in Elkton. The center is designed for adults 55 and older and offers a safe, professional environment where older adults can work on their fitness goals.

Senior Services also coordinates with the Department of Social Services to offer caretaker support, deliver meals, help residents of nursing homes and assisted living centers understand their legal rights, and provide counseling, legal assistance, a shopping service and subsidies for assisted living.

See Chapter 5, Transportation, for discussion of Community Transit.

## 8.10 Solid Waste

### *8.10.1 Waste Stream*

The Cecil County Solid Waste Management Division is the second largest operational division within the Department of Public Works. Cecil County owns and operates three facilities to manage the solid waste stream: the Central Landfill, Stemmer's Run Transfer Station and Woodlawn Transfer Station.

#### Central Landfill

The Central Landfill is on Old Philadelphia Road, west of Elkton. Forty acres of the 418-acre site have been developed for waste disposal. As of 2008, the landfill received approximately 550 tons of waste per day.

The existing permitted disposal area is expected to be at capacity by 2017. The County is considering vertical and horizontal expansions of the existing disposal area, according to the *Solid Waste Management Plan 2008 – 2017*, adopted in 2009. The Central Landfill site includes an additional area of 75 to 100 acres that could be developed for waste disposal, so that the County's long term (30 to 50 year) waste disposal needs are assured.

#### Stemmer's Run Transfer Station

Stemmer's Run Transfer Station is located on 10 acres along Stemmer's Run Road and serves residents of the Cecilton and Chesapeake City areas. The station receives about 3,200 tons of solid waste per year, not including recyclables. According to the 2008 *Solid Waste Management Plan*, the station meets the needs of its service area but vehicle congestion at peak use times creates a potential safety hazard.

#### Woodlawn Transfer Station

Woodlawn Transfer Station is located at Firetower and Waibel roads in the Rising Sun area. The 30-acre site, a former landfill, serves residents of Calvert, Fair Hill, North East, Oakwood, Port Deposit, and Rising Sun. The facility is permitted to receive 10,351 tons of solid waste per year, not including recyclables.

The site has limited space for expansion. As with Stemmer's Run, the need to modify or expand the site may be driven more by the need to reduce vehicle congestion than to expand capacity. The County has no plans to expand the facility.

### *8.10.2 Recycling*

Under the Maryland Recycling Act (MRA) of 1989, Cecil County must recycle a minimum of 15 percent of the solid waste generated within the County. The state recommends that jurisdictions strive to reach a recycling rate of 40 percent.

Cecil County exceeds this standard, recycling 57 percent of solid waste as of 2008, among the highest rates in the state. The County operates six recycling stations in addition to sites

at the Central Landfill and transfer stations. The County does not provide door-to-door or curbside collection of recyclables. Five municipalities collect yard wastes and recyclables.

The 2008 *Cecil County Solid Waste Management Plan* includes recommendations for a series of programs whereby the County and towns can enhance resource recovery programs.

### *8.10.3 Future Needs*

For environmental, conservation and economic reasons, the County continues to investigate alternatives to landfilling as the primary means of disposal. These alternatives include composting, waste reduction, reuse, recycling, incineration, and waste-to-energy programs.

With planned expansions, upgrades and improvements, the Central Landfill and two transfer stations are expected to accommodate the County's facility needs through at least 2030, though, as noted above, modifications to Stemmers Run Transfer Station may be necessary to improve service.

## 8.11 Public Libraries

### *8.11.1 Library Facilities*

The Cecil County Public Library (CCPL) is headquartered in a 25,000-square foot building in Elkton (Map 8.2). This facility serves the local population and supports the operation of six additional branch libraries in Cecilton, Chesapeake City, North East, Perryville, Port Deposit/Bainbridge, and Rising Sun).

More than 54,000 residents held active public library cards in 2009, representing more than half of the county's population. Population growth has a direct positive effect on the demand and usage of public library services and facilities. During the past 30 years, growth in library usage rates far exceeded the rate of population growth. This pattern of usage growth continues today.

**Cecil County Public Library in Elkton.**

CCPL's services include books on all subjects and in all formats (including downloadable electronic versions), audiovisuals, reference services, early literacy programs, educational programs for adults, young adults, and children, databases on science, business, health, technology, and career advancement, public high speed internet computers and Wi-Fi access, introductory computer classes, and a range of library services for small/micro businesses.

### *8.11.2 Funding*

Maryland's public libraries are created and operated under state education law and supported with county and state funds as an integral part of education services.

CCPL's operating budget is approximately 82 percent county funded, 15 percent state funded, with the remaining three percent coming from other sources, including fines, fees, and donations. CCPL's capital funding is provided by the county through general funds and from grants by the state.

### *8.11.3 Future Needs*

CCPL has identified three short-term facility needs and five long-term needs:

### Short-Term

- *North East Branch Library.* CCPL's top construction priority is to replace its 2,800 square foot branch in North East by 2014 with a new facility capable of serving the town and surrounding area.
- *Elkton Central Library.* CCPL's second priority is to replace the overcrowded library in Elkton by 2022. The small site does not allow for expansion. CCPL envisions a central library facility of 50,000 to 60,000 square feet, with parking for 200 vehicles.

  The new North East Branch and Elkton Central libraries will both be evaluated as a permanent location for the library's headquarters operations, expanding the size as needed.
- *Rising Sun Branch Library.* This branch, at 7,400 square feet, has become one of the County's busiest libraries. CCPL plans to expand this facility to a minimum of 12, 000 to 15,000 square feet by 2025.

### Long-Term

- *Cecilton Branch Library*. This branch, which opened in 1991, is 2,160 square feet, too small to meet the community's needs. CCPL is working with the Town of Cecilton to monitor and pursue opportunities for a new Cecilton branch.
- *Port Deposit/Bainbridge Branch.* This branch is located in a small rental facility. CCPL's long-term plan is to acquire a site in Bainbridge. The future library would include services for Cecil College students at its future Bainbridge center. CCPL is evaluating developments in Port Deposit and Bainbridge to determine when to move forward.
- *Chesapeake City Branch Library.* This branch is located in a new rental facility that should meet community needs until at least 2030. CCPL will work with the Town of Chesapeake City to evaluate opportunities for land acquisition for a future permanent branch.
- *Conowingo.* CCPL is evaluating opportunities to develop a Conowingo/Oakwood branch comparable to the existing Chesapeake City Branch by 2030.
- *Fair Hill*. CCPL is evaluating opportunities for a future Fair Hill branch by 2030.

## 8.12 Policies and Actions

1. Explore funding and growth management mechanisms to ensure community facilities are provided concurrent with growth and demand.

   The County's community facilities needs through 2030 are extensive and will likely challenge the County's ability to fund and provide them. Funding is discussed in Chapter 11, Implementation.
2. Focus attention on providing community facilities in convenient locations in the Growth Corridor to ensure this area is attractive to people and for development.
3. Consider co-locating and developing community facilities as joint facilities such as parks, senior centers, schools, and libraries.
4. Encourage the use of the latest environmental and energy saving technologies in community facilities buildings and site designs.

### Education

5. Adopt policies and procedures to ensure public schools have adequate capacity as new development occurs. Policies and procedures could include Adequate Public Facilities requirements, development contributions of land or facilities, excise taxes or impact fees, and "front funding" of priority CCPS projects.

6. Support infrastructure needs related to institutional growth at Cecil College, including the North East campus, Elkton station, and the future facility at Bainbridge that would provide programs and services to the western part of the County.

## Parks / Cultural Resources

7. Acquire public recreation land in accordance with the County's Land Preservation Parks and Recreation Plan.
8. Identify potential public and private partnerships and funding sources to implement the County's recreation goals.
9. Cultivate and encourage interest in the performing arts by further strengthening the relations with Cecil County Arts Council and Cecil College's Community Cultural Center.

## Public Safety/Fire/EMS

10. Support volunteer fire companies by continuing funding support for apparatus replacement.
11. Encourage the location of new/relocated fire stations into the Designated Growth Area.
12. Expand the EMS infrastructure by adding a station in the Perryville area; replacing the Colora station; and a larger, more efficient headquarters facility with an expanded 911 call center to accommodate increased call volume and activity.
13. Encourage the placement of holding tanks and dry hydrants for all new residential subdivisions in rural areas not served by community water systems or within one mile of a reasonably available water source.
14. Consider developing a central booking center serving the Sheriff's Office and municipal police departments.
15. Consider new law enforcement substations near Chesapeake City, Cecilton, Rising Sun and Conowingo.
16. Invest more money in technology to deliver efficient and effective public safety services.
17. Develop a comprehensive Public Safety Master Plan, led by CCDES and a committee to be determined..

## Health

18. Work with Union Hospital, the Health Department, the Department of Social Services and charitable organizations to coordinate care of the sick and elderly.
19. Encourage the development of satellite health facilities in areas of population growth as needed.
20. Develop a timeline to plan for future space needs/renovation/new construction of the Health Department facility in Elkton.

## Waste Management

21. Continue to reduce the growth of the solid waste stream through waste reduction and expansion of recycling programs.

## Libraries

22. Work with Cecil County Public Library to accommodate growth and demand for new or expanded facilities in Elkton, North East, and Rising Sun as well as smaller branch libraries in Cecilton, the Port Deposit/Bainbridge area, Chesapeake City, Conowingo and Fair Hill.

# 9 Housing

Cecil County's housing stock has grown significantly since the 1990 Comprehensive Plan. An estimated 6,200 housing units were built within Cecil County between 2000 and 2010, including approximately 4,000 in the unincorporated areas of the County, and 2,200 in the towns. This represents a 22 percent increase in the towns as a whole, with some variation in growth rates among the municipalities (ranging from 19 percent in Port Deposit to 33 percent in Charlestown), and a 16 percent increase in the unincorporated areas of the County, for a total increase of about 18 percent (Table 9.1).

By 2030, another 22,000 housing units are projected to be built in the County, a 54 percent increase over the 2010 total. Approximately 15,600 of these units (71 percent) would be located in the unincorporated areas of the County, resulting in a total of 62,646 units within Cecil County, of which 18,300 would be in the towns (Table 9.1).[1]

**Table 9.1: Housing Units, Cecil County and Incorporated Towns, 2000 through 2030**

| Geography | Number of Units | | | Change 2000-10 | | Change 2010-30 |
|---|---|---|---|---|---|---|
| | 2000 Census | 2010 | 2030 | Units | Percent | Number |
| **Towns** | **9,674** | **11,844** | **18,316** | **2,170** | **22** | **6,472** |
| Cecilton | 202 | 261 | 404 | 59 | 29 | 143 |
| Charlestown | 415 | 553 | 857 | 138 | 33 | 304 |
| Chesapeake City | 365 | 455 | 705 | 90 | 25 | 250 |
| Elkton | 4,731 | 5,831 | 9,007 | 1,100 | 23 | 3,176 |
| North East | 1,262 | 1,496 | 2,316 | 234 | 19 | 820 |
| Perryville | 1,548 | 1,851 | 2,864 | 303 | 20 | 1,013 |
| Port Deposit | 416 | 493 | 763 | 77 | 19 | 270 |
| Rising Sun | 735 | 904 | 1,400 | 169 | 23 | 496 |
| **Unincorporated Area of County** | **24,787** | **28,773** | **44,330** | **3,986** | **16** | **15,557** |
| **Total County** | **34,461** | **40,617** | **62,646** | **6,156** | **17** | **22,029** |

*Source: ERM, Maryland Department of Planning.*

## House Bill 1160 Workforce Housing Grant Program

This chapter is intended to meet the eligibility requirements under House Bill 1160 Workforce Housing Grant Program[2]. That bill requires the County to have a comprehensive plan with a workforce housing element that assesses workforce housing needs and contains goals, objectives and policies that preserve or develop workforce housing.

## 9.1 Goals and objectives

Cecil County's housing goals and objectives are to:

1. Accommodate residential growth by providing for and encouraging the development of a mix of housing types and densities in the Growth Corridor.
2. Concentrate mixed-use and high-density residential development in appropriate locations along major corridors and in areas that can be served by public transit.
3. Encourage the development of workforce housing, including opportunities for homeownership.

[1] The Maryland Department of Planning has projected municipal level population, household and housing units to the year 2030 holding the proportion of the each Town's growth relative to the County's constant with 2010 figures. Therefore, the growth in housing units between 2010 and 2030 is the same (at approximately 54 percent) for each of the towns in Cecil County, as shown in Table 9.1.

[2] 2006 Session.

4. Support housing options for senior adults.
5. Address the housing needs of the economically disadvantaged and the homeless by focusing the County's attention and resources on affordable housing.
6. Create attractive residential environments.
7. Encourage the use of sustainable materials and green practices in housing construction.

## 9.2 Existing Conditions

The most recent detailed data on housing at the County and town level is from the 2000 census. Of the approximately 6,800 units constructed within Cecil County (including the towns) between 1990 and 2000, approximately two-thirds, or 4,523, were single-family detached units (Table 9.2). Another 869 were townhouses and 1,539 were multi-family units[3].

As a result of the increase in multi-family units, the percentage of the County's housing stock that was single-family detached decreased slightly (from 71 percent to 70 percent between 1990 and 2000), while the number of multi-family units became a larger percentage of the County's stock (from 11 to 13 percent). The share of the housing stock that is single-family detached greatly exceeds the share for the state as a whole (51%).

In 2000, almost 68 percent of the housing units in the County were owner occupied, higher than the share for the state as a whole (62%). Close to 23 percent of the units were renter occupied, compared to 30 percent for the state as a whole. The remaining units were vacant (5 percent) or seasonal housing (4 percent).

**Table 9.2: Housing Type and Tenure, 1990 to 2000**

| | *1990* | | *2000* | | *Change 1990-2000* | |
|---|---|---|---|---|---|---|
| | **Units** | **Percent** | **Units** | **Percent** | **Units** | **Percent** |
| *Units in Structure* | | | | | | |
| 1 unit detached | 19,707 | 71.3 | 24,230 | 70.3 | 4,523 | 66.7 |
| 1 unit attached | 2,079 | 7.5 | 2,948 | 8.6 | 869 | 12.8 |
| 2 or more units | 2,910 | 10.5 | 4,449 | 12.9 | 1,539 | 22.6 |
| Mobile home, trailer | 2,960 | 10.7 | 2,834 | 8.2 | -126 | -1.9 |
| **Total** | **27,656** | **100.0** | **34,461** | **100.0** | **6,805** | **100.0** |
| *Occupancy* | | | | | | |
| Owner Occupied | 18,534 | 67.0 | 23,395 | 67.9 | 4,861 | 71.4 |
| Renter Occupied | 6,191 | 22.4 | 7,828 | 22.7 | 1,637 | 24.1 |
| Vacant | 1,416 | 5.1 | 1,739 | 5.1 | 323 | 4.7 |
| Seasonal | 1,515 | 5.5 | 1,499 | 4.3 | -16 | -0.2 |
| **Total** | **27,656** | **100.0** | **34,461** | **100.0** | **6,805** | **100.0** |

*Source: U.S. Census*
Note: Information at this detail is only available at the decennial census.

## 9.3 Housing Issues

The major housing issues facing Cecil County are the:

- Need to provide affordable workforce housing;
- Need to rehabilitate some of the older portions of the existing housing stock that are in poor condition, and
- Need to create a variety of housing options and opportunities.

[3] Using the census definition of 2 or more units in a structure.

### 9.3.1 Cost of Housing (Affordability)

Affordability is a function of income and the cost of housing. In 1999, Cecil County's median household income was $50,510, lower than that of the State as a whole $52,868. Median household income in all of the Towns in the County except Charlestown was lower than for the County as a whole (Table 9.3). In 2005, the median household income in Cecil County was estimated at $57,500, or $6,950 less than the median household income for the State ($64,450).

**Table 9.3: Median Household Income, 1999, 2005**

| Jurisdiction | 1999 | 2005[1] |
|---|---|---|
| Cecil County | $50,510 | $57,500 |
| Maryland | $52,868 | $64,450 |
| Cecilton | $38,971 | Not available |
| Charlestown | $50,563 | |
| Chesapeake City | $46,917 | |
| Elkton | $38,171 | |
| North East | $39,563 | |
| Perryville | $43,984 | |
| Port Deposit | $34,167 | |
| Rising Sun | $41,089 | |

*Sources: 2000 U.S. Census, MDP.*
[1]2005 data for Maryland and Cecil County from the Maryland Department of Planning; 2005 income data are not available for the municipalities.

An important measure of affordability is the share of income spent on housing. Generally households spending more than 30 percent of their income on housing are considered to be burdened, that is the cost of housing leaves insufficient funds for other needs such as food and transportation. Generally, people who rent pay a higher share of their income on housing than people who own their homes.

In 1999, approximately 4,100 homeowner households (21 percent of all households in the County) spent more than 30 percent of their household income on housing and more than 2,800 households (15 percent) spent more than 35 percent (Table 9.4). These percentages were slightly lower than for the State as a whole. The towns of Chesapeake City and Port Deposit had particularly high percentages of households spending 35 percent or more of their income on monthly housing costs (23 and 22 percent, respectively).

Cecil County renter households also experienced affordability issues with respect to the amount of household income spent on monthly housing costs. In 1999, about 2,400 renter households (31 percent) spent 30 percent or more of their household income on housing and more than 1,700 renter households (23 percent) spent 35 percent or more.

Four of the eight towns in Cecil County had a higher percentage of renter households spending 35 percent or more on monthly housing costs than the County as a whole, including Rising Sun, North East, Elkton and Cecilton. Elkton, in particular, has been a center of affordable housing in Cecil County, where residents earn less income, are more likely to rent their housing than to own it, are more likely to live in townhouse or multifamily housing than single-family detached housing, and spend more of their household income on housing compared with Cecil County and the state.

As noted in Chapter 4, Economic Development, (section 4.3.4), the availability of affordable and workforce housing is an economic development issue. The Base Realignment and Closure *BRAC Action Plan,* for example, stated that workforce housing is a critical component of the County's business development and growth strategy.

**Table 9.4: Monthly Housing Costs as a Percentage of Household Income, 1999**

| Jurisdiction | Total Owner Units | Owner 30% or More Units | Owner 30% or More % | Owner 35% or More Units | Owner 35% or More % | Total Rental Units | Renter 30% or More Units | Renter 30% or More % | Renter 35% or More Units | Renter 35% or More % |
|---|---|---|---|---|---|---|---|---|---|---|
| Cecilton | 110 | 22 | 20% | 12 | 11% | 66 | 23 | 35% | 17 | 26% |
| Charlestown | 273 | 66 | 24% | 47 | 17% | 95 | 14 | 15% | 7 | 7% |
| Chesapeake City | 212 | 54 | 25% | 49 | 23% | 94 | 22 | 23% | 17 | 18% |
| Elkton | 1,965 | 469 | 24% | 326 | 17% | 2,306 | 877 | 38% | 611 | 26% |
| North East | 525 | 130 | 25% | 95 | 18% | 556 | 226 | 41% | 172 | 31% |
| Perryville | 843 | 152 | 18% | 105 | 12% | 543 | 172 | 32% | 116 | 21% |
| Port Deposit | 88 | 25 | 28% | 19 | 22% | 134 | 42 | 31% | 29 | 22% |
| Rising Sun | 363 | 91 | 25% | 50 | 14% | 307 | 105 | 34% | 95 | 31% |
| Cecil County | 19,065 | 4,122 | 22% | 2,845 | 15% | 7,607 | 2,360 | 31% | 1,772 | 23% |
| **Maryland** | **1,178,779** | **269,524** | **23%** | **189,225** | **16%** | **631,986** | **220,031** | **35%** | **170,658** | **27%** |

Note: The 2000 Census reports income data for 1999.

*Source: U.S. Census, 2000 – Summary File 3, Tables H94 and H69.*

## Senior Housing

The share of income spent on housing is a particular concern for the County's senior population, because many seniors live on fixed incomes and thus have less ability to afford increasing housing costs. As the County grows, assuring a mix of housing types will address housing-related growth issues and help to meet the needs of an aging population. The State projects that the number of persons 65 and older in Cecil County will grow from 11 percent of the population in 2010 to 19 percent of the total population in 2030.

### *9.3.2 Rehabilitation: Condition/Age of Housing Stock*

In most communities the existing housing stock is an important source of affordable housing, especially for renters and first time home buyers.

## Condition

In 2000, 169 units (0.5 percent) of the total number of housing units in Cecil County lacked complete kitchen facilities and 0.6 percent of the total number of housing units in the County lacked complete plumbing facilities. These percentages were lower than the percentages of units lacking similar facilities in the State as a whole (Table 9.5).

**Table 9.5: Units Lacking Complete Kitchen and Plumbing Facilities, 2000**

| | *Units Lacking Complete Kitchen Facilities, 2000* | | *Units Lacking Complete Plumbing Facilities, 2000* | |
|---|---|---|---|---|
| | **Number** | **Percent of all units** | **Number** | **Percent of all units** |
| Cecil County | 169 | 0.5 | 188 | 0.6 |
| Maryland | 17,526 | 0.8 | 15,732 | 0.7 |

*Source: U.S. Census, 2000*

While the Census count of the number of substandard units was less than 200, many housing providers that work with substandard housing believe that the number of substandard housing units in a community is usually greater than shown in Census data, based on factors not considered by the Census such as the condition of roofs and other structural components. Rehabilitating and upgrading existing housing stock would increase the inventory of available housing for workforce families in Cecil County.




**A diversity of housing types and densities will help to serve all segments of a growing population. Left to right, top to bottom: Northwoods, between North East and Charlestown; Chesapeake Ridge near North East; Whitehall West south of Elkton; and Persimmon Creek, north of Elkton. Housing for seniors will be especially in demand.**

## Age

The median year housing structures are built is another indicator of the condition and livability of the housing stock. In 2000, the median age of owner occupied housing in Cecil County was 23 years, five years younger than the median age of owner occupied houses in the State (28 years old) (Table 9.6). The younger median age reflects the number of homes built between 1990 and 2000.

### Table 9.6: Housing Age

| Jurisdiction | Median Year Built[1] |
|---|---|
| Cecilton | 1958 |
| Charlestown | 1956 |
| Chesapeake City | 1942 |
| Elkton | 1975 |
| North East | 1981 |
| Perryville | 1981 |
| Port Deposit | 1981 |
| Rising Sun | 1970 |
| Cecil County | 1977 |
| Maryland | 1972 |

[1] All housing units

*Source: U.S. Census, 2000*

The housing in several of the County's towns was significantly older than the State, though the towns of North East, Perryville, and Port Deposit had a housing stock with a median age younger than the State's (19 years old).

Some older housing is structurally sound and can be attractively renovated to meet today's needs, but older housing can also be energy inefficient with older plumbing, electric and heating service. The cost of renovating such housing units to meet today's needs often exceeds their total value.

### *9.3.3 Housing Options*

A large, growing county needs a broad range of housing options, smaller single-family detached homes, townhouses, and apartments. Most opportunities for this type of housing will be in the land use plan's growth areas, especially in the Towns and in the Medium High and High Growth areas (Map 3.3).

Mixed-use developments, either in areas designated for mixed use on the Future Land Use Map or in Planned Unit Developments, should provide a variety of housing types and the opportunity to live near jobs and services. Architectural and design flexibility and mobility- and transit-friendly design is encouraged to allow more affordable and workforce housing to be developed. See also Section 3.6.1 – Community Character.

To date few seniors-only housing projects have been built in the County. Cecil Woods, a manufactured housing for senior ownership between Elkton and North East is one example. These types of projects are likely to continue to find a market, especially for residents who desire to continue living in the County, but in smaller homes or apartments, connected to transit where it is available.

Housing for homeless and other special needs populations will also be needed, see next section.

## 9.4 Workforce Housing Providers

This section discusses the work of programs, agencies and organizations that provide workforce housing in Cecil County.

### *9.4.1 Housing Choice Voucher Program (Section 8)*

This program is administered by the Cecil County Office of Housing and Community Development, and provides rental assistance to income-eligible families, helping families afford a better place to live or assist with paying a portion of the monthly rent where the family is living. Household income must meet federal income guidelines.

Housing complexes that accept Section 8 Housing Choice Vouchers are located in Elkton (with 15 complexes), North East (5), Perryville (4), Rising Sun (4), Port Deposit (1), Chesapeake City (1), and Cecilton (1).

### *9.4.2 USDA Rural Development*

The US Department of Agriculture (USDA) Rural Development's Rural Housing Service offers assistance to first time low-income homebuyers and renters through several loan programs:

- Single-Family Home Loan Program (Section 502): This program provides low interest loans directly from the USDA to homebuyers who would not otherwise be able to afford regular monthly mortgage payments with higher interest rates. With this loan, no down payment is required and the interest rate can be as low as one percent, depending on the size of the family.
- Guaranteed Single-Family Home Loan Program: Low and moderate income families can qualify for loans directly from a bank or mortgage company through this program. This is possible because the Federal Government guarantees the lender up to 90 percent of its losses if the homeowner defaults on the loan.

- Rural Housing Repair and Rehabilitation Loans & Grants: Very low-income rural residents who own and occupy a dwelling in need of repair can qualify for loans or grants funded directly by the Government. Funds are available for repairs to improve or modernize a home, or to remove health and safety hazards. This loan is a one percent loan that may be repaid over a 20-year period. Approximately 10 to 15 of these loans have been provided annually in Cecil County.

USDA provides an average of 14 Direct 502 Loans and 55 Guaranteed loans a year to County residents, as of 2008.

### *9.4.3 Habitat for Humanity*

Habitat for Humanity is a non-profit, volunteer organization, with local operations based in North East. The organization retrofits homes for newly disabled people, renovates damaged housing, and, when funding is available, develops affordable housing. Habitat houses are sold to low income families in need of shelter. These homes are built at no profit and families receive affordable loans and monthly mortgage payments. All mortgage payments are used to build future Habitat homes. Habitat is also planning to open a resale store that will have appliances, furniture, clothing, and housewares for sale at a reduced price.

### *9.4.4 Homelessness*

There are five main homeless shelters in Cecil County, as well as one temporary shelter and daytime facilities. A Domestic Violence Shelter in Elkton offers shelter for women who are victims of domestic violence.

Meeting Ground, a non-profit organization based in Elkton, provides emergency and transitional housing, meals, care, and many related services to persons and families experiencing homelessness through programs and facilities located throughout the County. Meeting Ground's facilities include the Settlement House, Clairvaux Farm, the Wayfarers' House, the George Porter House, and a rotating church-based winter shelter. Through these programs, Meeting Ground provided 36,098 bed nights, served over 59,000 meals, and assisted 300 persons in the transition from being homeless in 2008.

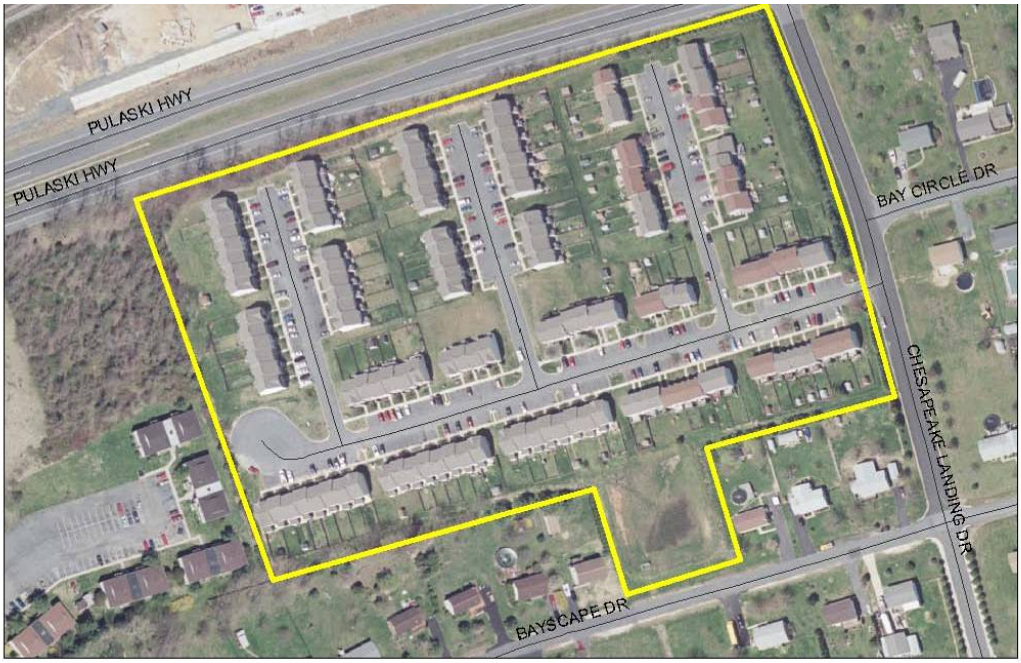
## 9.5 Affordable Housing Need

To date, no countywide assessment of affordable housing has been completed locally by Cecil County or agencies in County. The need for such an assessment has been recommended in the past, including by the Town of Elkton where many of the affordable units within the County are located.

The Governor's Commission on Housing Policy estimated a need for approximately 2,000 affordable rental-housing units in Cecil County between 2004 to 2014[4]. Based on the projections in the Comprehensive Plan, this would be approximately 20 percent of the units built in Cecil County during this period, a high percentage.

Holding the share of affordable units at 20 percent of all new units would yield a total of 4,400 new affordable or workforce housing units by 2030, given the Comprehensive Plan's growth projections. This need is unlikely to be met entirely through government programs, so the County will need to work with the private sector to encourage the development of affordable housing, especially for the senior population for whom resources are limited. This likely would involve creating incentives to build affordable units for the elderly and economically disadvantaged populations.

[4] "Workforce Affordable Housing in Maryland", Maryland DHCD and the Governor's Commission on Housing Policy, August, 2004.




**Higher density housing such as Chesapeake Landing in the Town of Perryville (11 units per acre) offers the the best opportunity for increasing the supply of affordable housing in the County**

## 9.6 Energy Efficient Housing Development

Housing, as with other forms of development, is incorporating design and technologies that increase energy efficiency. To help promote these technologies, governments can design and build public facilities using green technology and sustainable development standards. As these types of technologies become more commonplace, their use in housing development will become more common and economically feasible for developers and individual homeowners.

To encourage these technologies, the County should consider establishing energy efficiency standards, as well as a rating system for new residential development. The U.S. Building Council's Leadership in Energy and Environmental Design (LEED) rating system provides a set of standards that can be reviewed for possible application in Cecil County.

## 9.7 Policies and Actions

The following policies and actions are intended to help the County meet the need for affordable housing, and are generally in line with the recommendations in the State's Workforce Housing Plan:

1. Prepare a countywide housing needs study to include numerical housing goals and objectives. The study should address affordable housing, workforce housing, senior housing and housing for special populations such as the homeless and people with disabilities.
2. Provide opportunities in the Growth Corridor for higher density mixed-use housing that will facilitate the provision of affordable housing, especially where it can be served by local and regional transit. Coordinate with the Towns to identify similar opportunities within their borders.
3. Create incentives to encourage transit and mobility-friendly design in new communities, especially those containing workforce housing. Create incentives in support of architectural and design flexibility to allow more affordable and workforce housing to be developed.

4. Create incentives for private sector participation in the provision of affordable housing. Consider tax or other incentives for developers that build affordable housing, including affordable units in the same developments as more expensive units
5. Continue programs to rehabilitate existing substandard housing in the County. This action will increase the number of affordable housing units available to workforce families.
6. Continue programs to support the homeless and other special needs populations.
7. Encourage energy efficiency standards for new residential development.
8. Encourage county-wide sets of community character standards, consistent with respective community character.

# 10 Mineral Resources

State law (Article 66B) requires that a Comprehensive Plan include a mineral resources element that identifies undeveloped land that should be kept in its undeveloped state until the land can be used to provide or assist in providing a continuous supply of minerals and that incorporates land use policies and recommendations to balance mineral resource extraction with other land uses.

Four percent of the County's land area, or about 8,400 acres, have been designated for mineral extraction use (see Chapter 3, Land Use), and about 2,100 acres were in active mining as of 2009. The County's mineral resources are extensive, with production expected to continue for the next 40 to 100 years.

The three largest producers in Cecil County sell approximately 3.0 to 3.5 million tons of sand, gravel, and stone each year. In 2008, this sector, along with other natural resource employment, provided approximately 620 jobs, or two percent of all full-time jobs in Cecil County (see Table 4.4).

The County's primary mineral resources are aggregates, including sand, gravel, stone, as well as clay. These materials are used to build roads and houses, as well as commercial buildings and industrial facilities. Cecil County benefits from large natural deposits of these minerals, which provide the County with a source of building materials as well as a source of jobs and income.

## 10.1 Goals and Objectives

In relation to mineral resources, the Comprehensive Plan's goals are to:

- Recognize the economic resource value of sand, gravel, and hard rock deposits by protecting them from encroachment by incompatible uses until the minerals are extracted and the excavated land is stabilized and reclaimed for productive use.
- Reduce conflicts among incompatible uses by minimizing the impacts of mineral extraction operations on nearby non-extractive uses.
- Protect environmentally sensitive areas from mineral extraction operations.
- Provide for the reclamation of extracted land for other uses compatible with the surrounding area.

## 10.2 Description of Mineral Resources

Aggregates are a component of composite materials such as concrete and asphalt concrete; aggregate serves as reinforcement to add strength to the overall composite material.

According to the U.S. Geological Survey, the County's total construction aggregate production in 2007 was 7.15 million tons, valued at $52 million, or an average of $7.40 per ton (Table 10.1). Production generally grew between 2004 and 2007, although 2007 totals were less than the previous year's.

**Table 10.1: Construction Aggregate Production, 2004-2007**

| Year | Tons (000s) | Dollars (000s) | Average Unit Value |
|---|---|---|---|
| 2004 | 6,240 | $39,000 | $6.25 |
| 2005 | 6,680 | $47,500 | $7.11 |
| 2006 | 7,240 | $58,800 | $8.12 |
| 2007 | 7,150 | $52,900 | $7.40 |

*Source: Jason Willett, United States Geological Survey, email August 11, 2009*

As of 2009, 15 surface mines operated in Cecil County under permit by the Maryland Department of the Environment (MDE). Cecil County contains 11 permitted sand and gravel operations, two quarries and two sites classified as miscellaneous (a 15-acre pit on MD 272 north of North East and the Johnson Pit on MD 222 north of Principio Road). Map 10.1 shows the location of these permitted surface mines, as well as the Mineral Extraction District identified on the Future Land Use Map (Map 3.3)).

About 2,100 of the approximately 8,400 acres in the Mineral Extraction District are in active mining; the remaining land is identified for future mineral extraction. Map 10.1 does not show all of the MDE-permitted sites, as some operations are combined. The sand and gravel operations account for almost 1,500 of the 2,100 acres in active mining in Cecil County (Table 10.2).

There are three major producers of aggregates in Cecil County: Mason-Dixon Materials, Maryland Materials and ICM of Maryland. Mason-Dixon Materials, a producer of sand and light gravel, operates several locations in the western portion of the County. Maryland Materials mines 350 acres for gravel and rock near North East, a site that contains approximately 100 years of reserves. ICM of Maryland produces crushed stone at a 182-acre site in Elk Mills. On average, 3 to 3.5 million tons of sand, gravel, and stone are produced and sold annually by these three producers.[1]

**Table 10.2: Permitted Mining Operations in Cecil County, 2009**

| Type of Operation | Number of Permitted Sites | Total Acreage |
|---|---|---|
| Sand and Gravel | 11 | 1,464 |
| Quarry | 2 | 534 |
| Miscellaneous | 2 | 70 |
| **Total** | **15** | **2,068** |

*Source: Maryland Department of the Environment*

## 10.3 Discussion of Issues

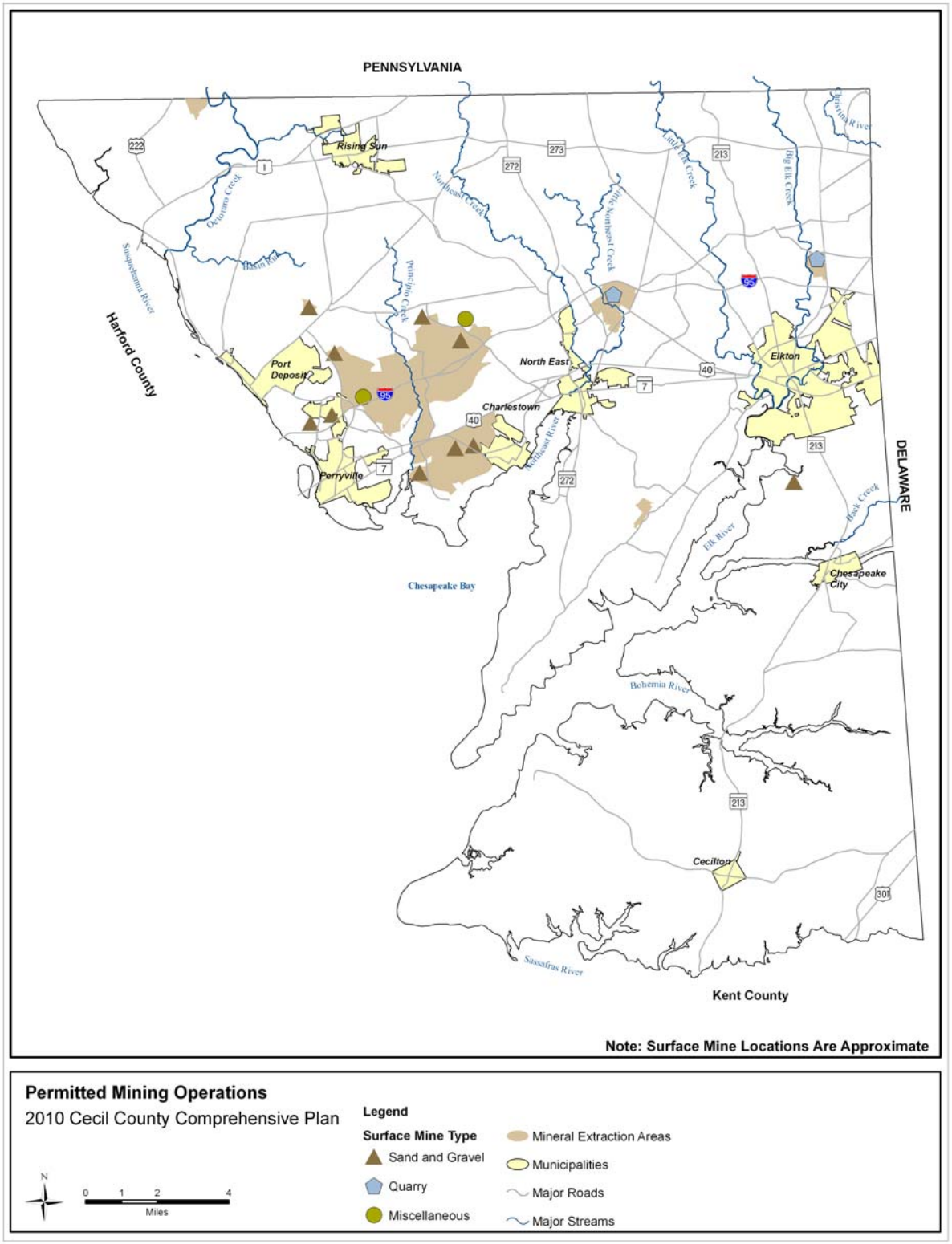
Mineral Extraction areas consist of land with known mineral deposits. These areas are primarily owned or controlled by the mineral extraction industry. Under Cecil County's zoning ordinance, mining activities may occur only in Mineral Extraction zoning districts that are mapped based on the Mineral Extraction Area on the Comprehensive Plan's Future Land Use Map.

The Mineral Extraction Area recognizes the economic resource value of sand, gravel, and hard rock deposits by protecting them from encroachment by incompatible uses. By allowing mining only in designated areas, the County is able to:

- Protect economically important mineral resources for current and future use;
- Prevent incompatible development that may directly or indirectly preclude access to the mineral resources until the resource has been removed or has been demonstrated to be economically unrecoverable; and
- Protect adjacent land uses (particularly housing and commercial uses, which are generally incompatible with extraction operations) from negative impacts that can result from mineral extraction activity.

[1] Source: Mason Dixon Materials, August 5, 2009.

**Map 10.1 Permitted Mining Operations in Cecil County, 2009**



Because mining operations can occur over many years, future land uses in Mineral Extraction areas should be determined after mining and reclamation are complete. Consistent with the County's long-standing policy and Chapter 3, Land Use, a special study and possible Comprehensive Plan amendment should determine the future use of the land after extraction is complete, taking into consideration the type and intensity of adjacent land uses and the availability of infrastructure and services. The ultimate land use of Mineral Extraction areas will be decided in the context of the comprehensive plan in effect when a change is requested.

The zoning ordinance addresses mineral extraction areas in two ways. Primary areas of mineral extraction are designated as Mineral Extraction District A (MEA), where mining is permitted by right. MEA areas generally consist of existing and future mineral extraction operations and contain few or no incompatible land uses in or adjacent to the district.

Mineral Extraction District B (MEB) is applied as an overlay in areas identified for mineral extraction between MEA areas and other, primarily residential and commercial, uses. MEB areas have potential for conflict between extraction activities and adjacent land uses. Mining activities in the MEB require a special exception from the County Board of Appeals (in addition to state permit requirements). Through the special exception review process, the Board of Appeals can condition any approval with performance measures to minimize conflicts between the extraction activities and adjacent land uses. Conditions may address measures such as hours of operation, noise, dust control, buffering, and truck routes.

## 10.4 Policies and Actions

1. Support the responsible mining of Cecil County's mineral resources.
2. Reduce conflict that could interfere with the extraction of mineral resources in mineral extraction areas by allowing other development of a type and intensity that is compatible with nearby mining activities until the mineral resources are removed or have been demonstrated to be economically unrecoverable.
3. Balance the interests of the mining industry against the interests of individuals living or working on land adjacent to areas that may be excavated in the future so that conflicts among these parties can be minimized.
4. Strictly control mineral extraction activities in environmentally sensitive areas to protect natural resources, balancing the right to extract mineral resources with the need to protect sensitive areas.
5. Continue to determine the future use of the Mineral Extraction areas after extraction is complete. Use the Comprehensive Plan as guidance for potential future uses including, for example, use of mined land for water resource uses, reservoirs or tertiary treatment wetlands, as discussed in Chapter 6..

# 11 Implementation

The success of a Comprehensive Plan can be measured in how well it is implemented. Successful implementation is tied to the ability of a jurisdiction to develop the resources it needs to carry out the Plan's policies and action items.

Rapidly growing counties, as Cecil County is projected to be, often face severe challenges in "keeping up with growth." These challenges include continuing to maintain existing services; meeting demands for higher levels of service from residents; and increasing the types and levels of services offered consistent with the demands and expectations of a larger county. With its significant growth forecast, Cecil County likely will face many, if not all, of these challenges during the next 20 years.

Property tax and municipal bonds are the traditional funding mechanisms local governments use to provide for their service, facility and infrastructure needs. In Maryland, local governments have several additional tools available to manage growth and pay for needed infrastructure and community facilities. These tools include adequate public facilities ordinances (APFOs), impact fees and financial tools such as special taxing authorities and districts.

Cecil County has considered many of these tools in the past. In fact, the 1990 Comprehensive Plan recommended that the County establish mechanisms such as impact fees, excise taxes, special taxing districts, and an APFO to manage growth and fund infrastructure improvements, but, for a variety of reasons, most of these tools were not implemented[1]. This Plan recommends that the County continue to consider these tools and work with state elected officials, as necessary, to grant the County the authority to use them.

While attention is often focused on the cost of improvements and the mechanisms used to pay for them, a broader issue at play is the County's overall capacity to address its future. Cecil County has changed in the past 20 years, and while its rural character largely prevails, portions of the County have become more urbanized. With a population over 100,000 as of 2010 and heading towards 155,000, the County will need greater organizational capacity to meet expanding and changing demands for services, facilities and infrastructure, both from existing and new residents and businesses. This will involve not only adopting new tools and funding mechanisms, but also carefully considering and reinventing how the County serves the public, so that needed services and facilities are provided effectively and cost-efficiently. The County's large new administration building, opened in 2008 is an example of how the County is planning for a larger future.

Plan implementation will see increased interest at the state level as a result of Maryland's 2009 Smart, Green and Growing Legislation which requires annual reports, beginning in 2011 on a variety of smart growth measures and indicators (see below).

**The new 83,000 square foot County Administration Building opened in 2008**

[1] Special taxing districts were authorized in 2008 in Designated Growth Areas but have not yet been implemented. Tax Increment Financing (TIF) has also been authorized but not yet used.

## 11.1 Goals and Objectives

- Establish funding and growth management mechanisms to ensure infrastructure and community facilities are provided concurrent with growth and demand.
- Assure that the County has adequate organizational, fiscal, and financial capacity to implement the infrastructure and community facilities improvements it will need as it grows.

## 11.2 Tools and Approaches to Implementing the Plan

Actions the County will need to take to implement the plan fall under three broad categories, discussed in this section: growth management, funding, and organizational capacity. Cecil County will not be able to rely on one tool to address its future needs. Rather, the County will need to pursue a range of measures to address growth and the changing character of the County, as it seeks to create a planning framework that integrates land use, transportation, sensitive areas, economic development, housing, water resources, community facilities and other important considerations identified in this Plan.

### *11.2.1 Growth Management*

Growth management has been defined as "specific regulatory policies aimed at influencing how growth occurs …. These (policies) affect density, availability of land, mixtures of uses, and timing of development. Growth management seeks to accommodate growth rationally, not to prevent or limit it."[2]

Growth management is commonly associated with smart growth, which is a set of broad goals designed to limit sprawl by reducing the outward expansion of developed areas, encouraging higher density development, encouraging mixed-use zoning, reducing travel by private vehicles, revitalizing older areas, and preserving open space.[3] Because growth tends to be regional in nature and driven by broader economic trends, managing growth, especially within a smart growth framework, also requires the coordination among jurisdictions in order to be effective.

The 2010 Comprehensive Plan incorporates smart growth goals and, in that sense, is essentially a growth management plan. The success of the Plan, then, will be tied to the successful implementation of its growth management tools, particularly those in Chapter 3:

- Facilitating development in growth areas by, for example, encouraging the provision of infrastructure, creating mixed use zoning districts, making Planned Unit Developments easier to develop in desired locations, and providing incentives that will enable growth areas to develop as attractive, well-designed places.
- Policies to ensure that development in rural areas does not exceed a desirable share of overall county development, and greater incentives to use the Transfer of Development Rights (TDR) program .

#### Infrastructure

For many years, the lack of water and sewer infrastructure in the Growth Corridor has been a major impediment to growth in this area and, arguably, has deflected growth into the rural areas. Provision of this infrastructure is a key growth management measure. Chapter 6 lists high priority actions including:

[2] "Growth Management, Smart Growth, And Affordable Housing," by Anthony Downs, Senior Fellow, Metropolitan Policy Program, Brookings Institution, Keynote speech given at Brookings Symposium on the Relationship Between Affordable Housing and Growth Management, May 2003.
http://www.brookings.edu/speeches/2003/0529metropolitanpolicy_downs.aspx

[3] Ibid.

- In the Elkton West service area, expanding the water distribution system and combining and upgrading the wastewater collection and treatment systems,
- Upgrading and expanding the Seneca Point WWTP.

As growth continues, the County will need to pay increased attention to its transportation systems ensuring, especially, that key roads the Growth Corridor (US 40. MD 213, MD 272, and MD 275) function well, and that alternative travel options, especially mass transit, are provided.

## Adequate Public Facilities

An adequate public facilities ordinance (APFO) is a tool to time and phase development with the provision of infrastructure and public facilities needed to support the Comprehensive Plan's growth needs. An APFO ties development approvals under the zoning and subdivision ordinances to specific public facility standards. The ordinance is intended to ensure that public facility improvements are made as new development creates the demand for them. In some cases, in areas of growth that lack adequate infrastructure, APFOs can delay development approvals until adequate facilities are in place or there is reasonable assurance that they will be in place.

Under an APFO, development approvals can be made contingent upon the local government's ability to provide services, or on a developer's agreement to furnish or finance the needed improvements. The standard in Maryland for development to proceed is that adequate facilities are reasonably probable of being provided in the foreseeable future.

Because most roads in Cecil County have and are projected to have adequate levels of service, an APFO for roads is unlikely to be effective in managing growth. The Comprehensive Plan does, however, identify many roads needs, so that financing tools rather than an APFO are likely to be more effective in meeting these needs.

APFOs can be developed for almost any public facility, but they are most commonly applied to schools and roads. Chapter 8 of the Plan recognizes that growth in Cecil County will result in significant school needs, and an APFO for schools may be helpful to manage growth so that the County can meet these needs in an efficient manner.

APFOs for schools are written in a variety of ways and should be tailored to local conditions. For example, Charles County has a housing unit allocation system as part of its Adequate Public Facilities requirements. School capacity must be available at elementary, middle, and high schools before final subdivision plats may be approved. If capacity is not available the development cannot move forward unless it provides school facilities or contributions to facilities through a developer agreement. In Prince George's County, a school facilities surcharge is imposed on all new student-yielding residential construction regardless of whether a subdivision passes the adequate facilities test. The surcharge is dedicated for school facilities and improvements on a countywide basis.

APFOs for Cecil County were drafted in 2005 and 2006, but agreement could not be reached on the types of facilities to be included, adequacy thresholds, and funding mechanisms and an APFO was not adopted.

**Perryville Middle School. In Cecil County adequate public facilities requirements will be most applicable to schools.**

### Developer Agreements

Under a developer agreement, a local government establishes conditions for approval of a development on the developer providing benefits to the jurisdiction. Cecil County currently enters into Public Works Agreements with developers for items related to subdivisions such as roads and recreational amenities in the common open space. Under Article 66B, Maryland's local planning enabling legislation, counties have authority to enter into "Development Rights and Responsibilities Agreements". The approval process is public and includes public hearings. Examples of benefits include road improvements, water and sewer infrastructure, land dedication, or community facilities.

This Comprehensive Plan anticipates that some of its infrastructure and community facilities needs could be provided or financed through developer agreements or impact fees, if an impact fee is enacted (see below).

## *11.2.2 Funding*

### Cost of the Plan

With Cecil County's population projected to increase by almost 50 percent by 2030 to approximately 155,000, demand for community facilities and services will increase significantly (see Chapter 8). Demand for land for some community facilities, especially for schools, and parks and recreation will be particularly acute.

Table 11-1 summarizes the costs for community facilities (including roads) anticipated to be needed to meet the 2030 population demand. A detailed table with the individual projects is provided at the end of this chapter. The tables are drawn from the FY 2010-2014 County Capital Improvement Program supplemented by input from county agencies and departments regarding their anticipated needs beyond 2014 based on the Comprehensive Plan's projected growth.

**Table 11.1 2030 Facilities and Infrastructure Needs Cost Estimate Summary**

| | Total Project Costs[1] | Cost in $ thousands Funding Through FY'10 | Future Funding Need 2011-2030[2] |
|---|---|---|---|
| **Cecil College** | $75,344 | $399 | $74,945 |
| **Public Schools** | $478,304 | 0 | $478,304 |
| **Libraries** | $53,510 | $1,500 | $52,010 |
| **Health** | $18,550 | 0 | $18,550 |
| **Social Services** | $21,875 | 0 | $21,875 |
| **EMS** | $2,390 | 0 | $2,390 |
| **Roads[3]** | $270,329 | $6,279 | $264,050 |
| **Fire** | $0 | 0 | 0 |
| **Public Safety** | $43,865 | $22,124 | $21,741 |
| **Parks** | $95,737 | 0 | $95,737 |
| **Senior Services** | $1,680 | 0 | $1,680 |
| **Information Technology** | $4,000 | 0 | $4,000 |
| **TOTAL** | $1,065,584 | $30,302 | $1,035,282 |

Notes
Table includes only projects i) where there would be some County Funding ii) with funding needs beyond FY 2010.
Table does not include Enterprise Fund Projects: Water, Wastewater, Solid Waste.
1: Costs are expressed in 2009 dollars.
2: Based on costs provided in the CIP and estimates from various sources - see sources in notes in electronic version of the table.
3 Some road construction projects are longer-range needs though the planning for them should begin before 2030. The construction portions are listed as needed beyond 2030.
*Sources: Cecil County 2010 Capital Improvement Program 4/7/09; Cecil County Public Schools 2010 Educational Facilities Master Plan; February 2009 Comprehensive Plan Public Services COC Presentation; Cecil Community College Strategic Plan 4/28/05; ERM*

The needs list is extensive and will likely challenge the County's ability to fund and provide all the facilities when needed. Total costs through 2030 are expected to exceed $1 billion (in 2009 dollars). Between FY 2007 and FY 2010 while the average annual County capital budget has been approximately $60 million, the County share was approximately $30 million, of which only approximately $10.6 million has been Paygo funding.[4]

Property taxes and use of general obligation bonds that are paid back through general fund (tax) revenues can create a burden for existing residents and businesses. Given the amount of growth forecast for Cecil County, and the projected service, facility and infrastructure needs Cecil County should consider funding mechanisms that distribute some of the costs of growth to new development, through the application of impact fees, excise taxes, and/or special taxing districts.

Taxes and fees on new development must be applied carefully as it can make new development prohibitively expensive, discouraging the growth the County would like to encourage, and can have a particularly negative effect on the provision of affordable housing.

## Impact Fees

An impact fee is imposed on new development with the intent of recovering the growth-related capital costs of facilities (or portions of facilities) needed to serve growth, thereby minimizing the capital fiscal impact of growth on existing residents and businesses. Revenues from impact fees must be tied to the actual costs attributable to the development and can only be used to fund capital improvements in the geographic area impacted by the new development. Several Maryland counties require impact fees though some have moved to excise taxes that offer more spending flexibility (see below).

Cecil County has a Commissioner form of government and would have to obtain the authority to require impact fees from the Maryland General Assembly. The County has proposed impact fees in the past but the proposal has not been supported at the state level.

## Excise Taxes

An excise tax is a tax, as opposed to a fee, with different approval, collection, and spending requirements. An excise tax is levied on building construction throughout a County, including any towns, and the funds used for the capital costs of additional or expanded public works, improvements, and facilities required to accommodate new construction or development. Unlike impact fees, revenues from excise taxes can be spent anywhere in the County, and some Maryland counties that had impact fees have moved to excise taxes, in part because of this geographic spending flexibility.

As with impact fees Cecil County would have to obtain authority from the Maryland General Assembly to levy an excise tax. In 2000 Cecil County voters defeated at referendum a proposal to authorize the County to impose an excise tax on new residential units (7,584 for; 20,314 against).

## Special Taxing Districts

Special taxing districts are typically created to provide a single service, such as a sanitary district to provide sewer and water service – this can be for new development or to provide a new service to existing development. If spending on infrastructure or community facilities were financed through bonds, the bonds could be retired through the tax revenues from a special taxing district.

In 2008 the Maryland General Assembly adopted legislation authorizing Cecil County to create special taxing districts in Designated Growth Areas as defined in the County Comprehensive Plan.

[4] Funded out of currently available funds, as opposed to bonds that are paid off over time

The 2010 Comprehensive Plan recommends special taxing districts only if other means such as impact fees or an excise tax could not be enacted for similar purposes, because the infrastructure and community facilities recommended in the Comprehensive Plan would benefit the County and its population as a whole not just the people or the area that would be subject to the special tax. In addition a special taxing district in Designated Growth Areas could be a disincentive to growth where growth is desired.

### Tax Incremental Financing

Tax incremental financing (TIF) is a financial tool directly related to the provision of infrastructure for economic development. TIF enables local governments to fund infrastructure improvements in designated areas through the sale of bonds that are paid off from the increment of tax revenue generated by the increased value of the property after it is developed or redeveloped.

TIF is usually applied in areas where the local government wants to encourage development or redevelopment. The TIF process involves identifying a project area or TIF district, calculating the existing tax base in the district, estimating the future value of the property after development or redevelopment, and selling tax increment bonds to finance the infrastructure improvements needed to develop the project. As the property values rise, the tax revenue generated from the "increment" of tax revenue generated by the project is used to retire the bonds.

Cecil County has authority to use tax increment financing but, to date, it has not been used. Most recently, TIF financing has been proposed for improvements related to the development of a gaming parlor on 36 acres west of Perryville Road (MD 222) north of Interstate 95. As noted in Chapter 4, Economic Development, this property is part of a larger site proposed as an entertainment destination. This type of development is consistent with the goals of TIF financing, and other projects could be funded through this mechanism in the future.

## *11.2.3 Organizational Capacity*

Cecil County is one of eight counties in Maryland with a "Commissioner" form of government. This means that Cecil County does not have home rule, and it has limited authority to legislate on local matters without the prior specific consent of the Maryland General Assembly. The five-member Board of County Commissioners is the County's legislative governing body. There is no County Executive.

Article 25 of the Maryland Annotated Code establishes specific duties and powers of the Board of County Commissioners. The Commissioners adopt ordinances (local laws) and resolutions to establish policies and programs to protect the health, safety, and general welfare of Cecil County residents. Article 25 states that the Commissioners are governed by express authority granted by the Maryland Legislature, which means all new legislation, other than those specifically stated in Article 25, is required to be approved and passed by the State Legislature.

Ten counties in Maryland operate as "Charter" counties under provisions of the Maryland Constitution. In these counties, voters have approved a formal charter outlining the structure of the county government, and in eight of the 10 charter counties, executive and legislative powers have been divided between an elected executive and an elected council. In two of the charter counties, an elected council that appoints an administrator/manager has retained executive and legislative powers.[5] The remaining six counties operate as "Code Home Rule" governments, where voters have approved home-rule power for the commissioners. Harford County functions as a charter government, while Kent and Queen Anne's counties are code home rule counties.

[5] Maryland Association of Counties (MACo)

In 2010, Cecil County voters will consider whether to change the County's status to a charter county. A charter form of government would give Cecil County the authority to enact excise taxes and impact fees without separate state authorization. Numerous referenda proposing charter government and Code Home rule have been defeated in the past 30 years, and a Charter Board is drafting a proposed document that would serve as the basis for the 2010 referendum.

### Inter-jurisdictional coordination

Continued coordination between the County and the towns in the County is critical to the county's future well-being and the success of this Comprehensive Plan. The towns are projected to absorb close to 30 percent of future residential growth in the County (Table 2.2), they contain most of the community facilities, and the retail/commercial areas in the County. Past coordination efforts have had mixed success due to sometimes competing interests, but need to be renewed around a common vision.

## 11.3 Smart, Green and Growing Legislation

In 2009, as part of Smart, Green and Growing Legislation, the General Assembly enacted 12 new planning visions that define the State's land use policy (see Chapter 1 of this Comprehensive Plan). Related legislation sets forth a framework to measure how local governments are implementing planning visions. The Smart Growth Goals, Measures, and Indicators and Implementation of Planning Visions bill (Senate Bill 276 and House Bill 295) requires local planning commissions to submit annual reports beginning in 2011 that include specific smart growth measures and indicators, including the:

- Amount and share of growth that is being located inside and outside the Priority Funding Area (PFA);
- Net density of growth that is being located inside and outside the PFA;
- Creation of new lots and the issuance of residential and commercial building permits inside and outside the PFA;
- Development capacity analysis, updated once every three years or when there is a significant zoning or land use change;
- Number of acres preserved using local agricultural land preservation funding.

The bill also establishes a statewide land use goal to increase the percentage of growth within the PFA and decrease the percentage of growth outside the PFA (the bill does not specify the percentage).

Recognizing that the 12 planning visions will not be realized unless local jurisdictions set their own goals, the legislation requires local jurisdictions to develop a percentage goal toward achieving the statewide goal. The annual report also must also include: a local goal; a timeframe to achieve the local goal; the resources local governments need for infrastructure inside the PFA and land preservation outside the PFA; and any incremental progress the jurisdiction has made toward achieving the local goal.

The policy in Chapter 3 of this Comprehensive Plan to ensure that development in rural areas does not exceed a desirable share of overall county development is related to the goal required in the Smart Growth Goals, Measures, and Indicators legislation and provides the basis for the County's local land use goals in response to the new requirements. As noted in Chapter 3, the Priority Funding Areas in the County are not contiguous with the future land use districts, so refinements to the PFAs and the County's share of development goal may be necessary after the Plan is adopted to make them consistent.

## 11.4 Policies and Actions

1. Review the County's ability to provide and pay for the public services and facilities needed support future growth; schools, roads, transit, parks, police, fire and emergency services, health care libraries, water and sewer, and solid waste.
2. Determine the degree to which the plan's recommendations are fiscally achievable. Prioritize plan recommendations for implementation as may be constrained by periodic fiscal conditions. Examine the feasibility of impact fees, excise taxes, special taxing districts, and/or other means to help keep the plan fiscally achievable.
3. Consider an APFO to address future needs.
4. Consider whether Development Rights and Responsibilities Agreements would be a useful tool for Cecil County.
5. Coordinate with the Towns to implement the Towns' and the County's Comprehensive Plans.
6. In collaboration with the Towns and the State, identify and then collect measures, indicators, and data to meet the State's Smart, Green and Growing Act requirements for annual reports, beginning in 2011, establishing a goal and documenting the amount of growth occurring inside and outside the Priority Funding Areas.

## 11.5 Summary of Implementation Policies and Actions

The 2010 Comprehensive Plan includes many policies and action items to translate the County's goals into reality. The table below summarizes the actions from each chapter, lists the responsible County agency or agencies, and defines the timeframe in which the implementation action should be achieved.

The following abbreviations are used in the "Responsibility" column of this element.

| | |
|---|---|
| B | Department of Budget |
| BCC | Board of County Commissioners |
| CC | Cecil College |
| CPS | Cecil County Public Schools |
| CCPL | Cecil County Public Library |
| DPW | Department of Public Works |
| ED | Office of Economic Development |
| ES | Department of Emergency Services |
| HO | Office of Housing & Community Development |
| HD | Health Department |
| PC | Planning Commission |
| P&I | Department of Permits and Inspections |
| PR | Department of Parks and Recreation |
| PZ | Office of Planning and Zoning |
| SCT | Department of Senior Services and Community Transit |
| SO | Sheriff's Office |

As described in the Plan Introduction, the following definitions are used in the "Timeframe" column in this element:

1 = Underway/ongoing

2 = Immediate: 0-5 years

3 = Medium Range: 5-10 years

4 = Long Range: Beyond 10 years

## Table 11.2 Plan Implementation

| | Policy/Action Summary (see Chapters for full text) | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| ***Land Use*** | | | |
| 1 | Use the future land use map as a basis for updating the County's zoning map and zoning and land development ordinances. | PZ | 2 |
| 2 | Make the Growth Corridor attractive and functional to attract people to live and businesses to locate and expand:<br>Provide adequate, attractive infrastructure and community facilities to serve the area; schools, transit, sidewalks and trails, parks, cultural amenities, police, fire and emergency services, health care, libraries, as well as basic services such as roads, water and sewer, telecommunications, and solid waste.<br>Review the Planned Unit Development (PUD) regulations and approval process to make PUDs easier to develop in desired locations (see Section 3.5.1).<br>Create mixed use zoning districts to facilitate development in the Future Land Use Map's Mixed Use areas. Encourage the development of horizontal and vertical mixed uses<br>Adopt a Smart Code Ordinance to provide urban design requirements leading to the building of attractive, walkable, communities (see Section 3.6.2).<br>Consider increasing the maximum height limits in the zoning ordinance.<br>Consider establishing minimum development densities in portions of the Growth Corridor. | PZ | 2 |
| 3 | Consider a growth management policy to ensure that development in rural areas does not exceed a desirable share of overall county development. Appoint a broad-based committee to recommend a plan and related ordinances to implement this policy. | **BCC**, PZ | 2 |
| 4 | Review the Transfer of Development Rights (TDR) program, including the sending and receiving rates, to incentivize its use to the greatest degree possible. | PZ | 2 |
| 5 | Continue to use all means to preserve land in the Rural Areas for agricultural and natural resource pursuits. | **BCC**, PZ | 1 |
| 6 | Locate commercial uses at key intersections and nodes and not as strip development along major roads. | **PZ**, PC, BCC | 1 |
| 7 | Coordinate with the Towns to plan for future annexation areas, and for compatible land uses along common boundaries. | **PZ**, PC, BCC | 1 |
| 8 | Coordinate with the State and the Towns to identify improvements for the US 40 corridor to support its role as the County's primary business corridor | PZ, DPW, ED | 2 |
| 9 | Conduct a Village District Study to evaluate current conditions in villages, changes since the villages were designated, and whether adjustments should be made to the zoning map and text as they affect villages. | PZ | 3 |
| 10 | Conduct a study of county scenic roads and determine whether a protection program for the road and of the land and views from the road is warranted. | PZ | 3 |
| ***Economic Development*** | | | |
| 1 | Encourage the development of office uses along the US 40 corridor, especially in the Mixed Use areas, where they can be integrated with residential and commercial/retail uses. | **PZ**, PC, BCC | 2 |
| 2 | Focus the Mixed Use area between US 40 and MD 7 west of Elkton on employment uses, in campus-like office settings, supporting the County's goal of making US 40 its primary business corridor. | **PZ**, PC, BCC | 3 |
| 3 | Make available a listing of all commercially and industrially zoned land that can be developed as office uses in support of BRAC. | ED | 2 |
| 4 | Provide infrastructure, including water, sewer and roads, to designated employment and mixed use areas. | DPW, PZ | 1 |
| 5 | Continue efforts to relocate the tollbooths on Interstate 95 to the Maryland-Delaware state line. | BCC | 1 |

| | Policy/Action Summary (see Chapters for full text) | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| 6 | Support the economic viability of farming, equine, forestry and related business activities.<br>Review the need to expand the types of activities considered to be value-added agricultural related enterprises.<br>Consider expanding permissible agriculture and forestry support enterprises in the Rural Conservation and Resource Protection areas.<br>Review standards for retail on-site sales on land not zoned for business use (currently addressed in the zoning regulations as farmers markets and roadside stands). | PZ | 2 |
| 7 | Promote tourism by continuing to build upon the County's character. Coordinate with the State, towns, and businesses to attract tourists from nearby major population centers, especially to the Lower Susquehanna Heritage Greenway. | ED | 1 |
| 8 | Take advantage of the freight rail lines that traverse Cecil County by promoting this asset as an economic development opportunity and directing employment uses that rely on fuel-efficient cargo operations to designated employment areas along rail lines. | **ED** | 1 |
| 9 | Encourage and support the provision of telecommunications services to commercial, industrial, governmental, and residential users in the Growth Areas. Work with service providers to extend broadband to other areas of the County. | **ED**, DPW | 1 |
| 10 | Encourage the training and development of the local labor force to fulfill the future needs of local industry, especially in science, technology, engineering and math. Continue to work with Cecil College, the Cecil County Public Schools and other partners to expand workforce development programs. | ED | 1 |
| 11 | Explore the potential to develop a commercial fishing dock in Cecil County to provide opportunities for the offloading of seafood. | ED | 3 |
| ***Transportation*** | | | |
| 1 | Complete the following projects, working the State Highway Administration as appropriate.<br>I-95 widening (one lane in each direction) Delaware line to the Susquehanna River<br>MD 213 US 40 to Frenchtown Road; 2 to 4 lane divided.<br>MD 272 US 40 to Lums Road; 2 to 4 lane divided<br>Intersection upgrade at US 40 and MD 213 in Elkton.<br>North-south connection between MD 7 and US 40 to serve the Mixed Use Employment area west of Elkton.<br>Extension of Chesapeake Boulevard to Maloney Road | **DPW**, PZ | 1 |
| 2 | Work with the State Highway Administration to evaluate the following projects:<br>Northern loop route around Elkton, from MD 781 (Delancy Road) to MD 279, through Elkton West to Marley Road and to US 40.<br>Intersection upgrade at US 40 and MD 222 in Perryville. | **DPW**, PZ | 2 |
| 3 | Work with the State Highway Administration and the Departments of Public Works, Planning and Zoning, and Economic Development to put in place plans and programs that implement the County's vision for US 40. | **PZ**, DPW, ED, SCT | 3 |
| 4 | Work with MdTA and SHA to evaluate the relocation of tolls on I-95 and US 40 to the eastern side of the County, and to minimize toll and truck weight avoidance in conjunction with establishment of a US 301 toll.. | DPW, **ED**, PZ | 1 |
| 5 | Consider amending the County's development ordinance to refer to the Comprehensive Plan's LOS standards or to adopt those standards directly into the ordinances. | PZ | 2 |
| 6 | Support the extension of MARC and SEPTA service to Elkton, in cooperation with MTA, WILMAPCO, and other agencies as appropriate. | **PZ**, DPW | 1 |
| 7 | Increase local bus transit in Cecil County to augment proposed rail service, and to link rail stations to employment and commercial centers and residential areas. | SCT | 1 |
| 8 | Incorporate transit considerations into US 40 upgrades. | SCT | 3 |

| | Policy/Action Summary (see Chapters for full text) | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| 9 | Promote ride sharing by establishing and expanding park and ride lots at key locations, including train stations, and link park-and-ride lots to transit service. | **PZ**, SHA | 1 |
| 10 | Encourage transit accessibility to nearby commercial airports in Baltimore and Philadelphia | PZ | 3 |
| 11 | Create a trails network building on the trails and greenways concept in the County's Land Preservation Parks and Recreation Plan (2005), including the Lower Susquehanna Heritage Greenway | **PZ**, PR | 1 |
| 12 | Encourage the development of walkable communities that serve a wide range of incomes and physical abilities, while reducing dependence on automobile travel | **PZ**, PC | 1 |
| 13 | Consider impact fees or a development excise tax to provide additional County funds for transportation improvements. | PZ, **B**, BCC | 2 |
| 14 | Consider designating funds specifically for transit, bicycle, pedestrian, and other projects that provide alternatives to single-occupant vehicle trips. | PZ, BCC | 2 |
| 15 | Consider a County scenic and/or historic roads program, focused on County roads. | PZ | 3 |
| 16 | Support the use of existing rail lines for commercial goods shipments to reduce through truck traffic on major roads. | ED | 1 |
| 17 | Utilize County waterway connections to the Chesapeake and Delaware Canal to promote shipment of commodity goods such as gravel and agricultural products out of the County by barge rather than by truck | ED | 1 |
| 18 | Consider adopting an Airport Overlay District for the area around the County's airports. Provisions of this district would include notification of potential navigation hazards, and coordination with the Maryland Aviation Administration, as described in Section 3.6.6 | PZ | 2 |
| 19 | Continue to improve the safety of roads in the County, particularly those identified in the 2007 Roadway Improvement Strategic Plan, as well as the I-95/MD 222 interchange | **DPW**, SHA | 1 |
| 20 | Continue the County's program of bridge rehabilitation and replacement | DPW | 1 |
| ***Water Resources*** | | | |
| 1 | Aggressively pursue development of water resources infrastructure in growth areas. High priority actions include:<br>Expand the water distribution system in the Elkton West service area.<br>Combine and upgrade wastewater collection and treatment systems in the Elkton West service area. This includes retirement of the Cherry Hill and Highlands WWTPs and expansion of the Meadowview WWTP.<br>Upgrade and expand the Seneca Point WWTP and collection system to a capacity of at least 5 MGD by 2030. This expansion will require nutrient credits. Therefore, the County should utilize MDE's Nutrient Cap Management and Trading policy for point sources, and forthcoming regulations for nonpoint source trading, and identify nutrient reduction strategies that could provide credits to the Seneca Point WWTP. | DPW | 1 |
| 2 | Amend the County's land development and other related ordinances as follows:<br>Revise the County's stormwater management regulations to implement 2007 Maryland Stormwater Management Act.<br>Adopt the draft wellhead protection ordinance or a similar ordinance.<br>Within 1,000 feet of perennial streams, require all new development that is not connected to public sewer systems to use Best Available Technology for nitrogen removal (septic denitrification). Elsewhere, consider requiring nutrient credits (similar to those established under the state Nutrient Cap Management and Trading policy) for subdivisions built using septic systems.<br>Consider developing a Denied Access policy that designates all public health-related extensions of water and sewer service into rural areas as Denied Access (with provisions to remove Denied Access status where appropriate).<br>Consider developing a County policy and/or regulations regarding agricultural land application of sludge from County wastewater treatment plants. | **DPW**, PZ | 2 |
| 3 | Incorporate water and sewer information from this Comprehensive Plan into the next revision of the County's Water and Sewer Master Plan. | PZ | 2 |

| | Policy/Action Summary (see Chapters for full text) | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| 4 | As a part of the next Comprehensive Plan review, update and refine the non-point source loading analyses (including point source data) used for this WRE. | PZ | 3 |
| 5 | Closely monitor the extension of water and sewer service by Artesian to ensure that water and sewer infrastructure is developed in aBCCordance with the County's land use and growth priorities. | DPW | 1 |
| 6 | Design and implement a rigorous water conservation education program. As part of this program, conduct routine system-wide water use audits to minimize water loss through leaks. | DPW | 3 |
| 7 | Working cooperatively with the municipalities, create and implement a drought management policy for public water systems. | DPW | 3 |
| 8 | Work with municipalities, private water suppliers, MDE, and DNR to secure new surface water sources within the county to meet long-term (post-2030) needs, including (but not limited to):<br>New surface water impoundments, particularly on Principio Creek and at Elk Mills Quarry.<br>New surface water withdrawals from the Susquehanna River, coordinated with Susquehanna River basin Commission and municipalities, as necessary.<br>Additional groundwater wells on Elk Neck Peninsula (coordinating with the Maryland Department of Natural Resources, for well locations on State Forest land), and elsewhere throughout the County.<br>Water desalination. | DPW | 3 |
| 9 | Encourage fluoridation of all community water systems, and seek State funding for these improvements. | | |
| 10 | Investigate options for a program to encourage the use of cisterns, including regulations and requirements for the design and maintenance of these facilities. | | |
| 11 | Continue to identify and eliminate sources of inflow and infiltration (I/I) to free up additional capacity at treatment plants. | DPW | 1 |
| 12 | Identify areas in the County suitable for treated wastewater land application techniques (such as spray irrigation) and tertiary treatment wetlands. Land should be acquired or reserved before 2030 to meet the County's longer term wastewater disposal needs. | DPW | 3 |
| 13 | Continue to actively pursue the abatement of failing septic systems—particularly those identified in the County Water and Sewer Master Plan—through connection to public sewer systems, where appropriate. Work with MDE to ensure that the County receives nutrient credits for such actions. | DPW | 1 |
| 14 | Promote the re-use of stormwater and treated wastewater for purposes such as on-site irrigation, non-potable process water (industrial activities), and other uses, where appropriate. | DPW | 2 |
| 15 | Incorporate watershed-based planning into the County's comprehensive planning program, with the goal of managing watersheds and making day to day decisions in ways that protect, conserve, and restore water quality. | PZ | 3 |
| 16 | In conjunction with the annual land use reporting requirements of Maryland's 2009 Smart, Green, and Growing legislation monitor water quality and the amount of impervious surface at the 8 digit watershed level. | PZ | 2 |
| 17 | Work with counterparts in Pennsylvania and Delaware to address nutrient impairments in watersheds that cross state boundaries. | DPW | 1 |
| ***Sensitive Areas*** | | | |
| 1 | Refine the Priority Preservation Area map and acreage goals as part of the recertification of the County's agricultural land preservation program | PZ | 2 |
| 2 | Review the Transfer of Development Rights program. | PZ | 2 |
| 3 | Continue to participate in land preservation programs including the Maryland Agricultural Land Preservation Foundation, Program Open Space, Rural Legacy, and Forest Legacy, and with land trusts and other land preservation organizations. | PZ, BCC | 1 |
| 4 | Continue to fund the County's Purchase of Development Rights (PDR) program and seek to increase funding. | PZ, BCC | 1 |

| | Policy/Action Summary (see Chapters for full text) | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| 5 | Consider other types of land preservation including PDR by parties other than the county or state, and cluster subdivisions with a high open space preservation requirement. | PZ | 2 |
| 6 | Consider appointing a broad-based Committee to i) study and evaluate the 2007 Green Infrastructure Plan's recommendations in relation to the newly adopted Comprehensive Plan and ii) identify steps the County can take to implement a green infrastructure plan in ways that will support and not conflict with the Comprehensive Plan's other goals, objectives, policies, and actions. | **BCC**, PZ | 2 |
| 7 | Incorporate watershed-based planning into the County's comprehensive planning program. | PZ | 3 |
| 8 | Expand the required non-tidal wetland buffer outside of growth areas from 25 feet to 75 feet. | **PZ**, PC, BCC | 2 |
| 9 | Review other environmental standards, such a forest conservation and habitat protection, as part of the development regulations update which will occur after adoption of the Comprehensive Plan | PZ | 2 |
| 10 | Consider creating a county-level forest conservation program that would allow participation by property owners whose parcels are not large enough to qualify for under state programs. | PZ | 3 |
| ***Community Facilities*** | | | |
| 1 | Explore funding and growth management mechanisms to ensure community facilities are provided concurrent with growth and demand. | **PZ**, B | 1 |
| 2 | Focus attention on providing community facilities in convenient locations in the growth corridor to ensure this area is attractive to people and for development | PZ with all departments | 1 |
| 3 | Consider co-locating and developing community facilities as joint facilities such as parks, senior centers and Health Department facilities | PZ with all departments | 1 |
| 4 | Encourage the use of the latest environmental and energy saving technologies in community facilities buildings and site designs | All departments | 1 |
| 5 | Expand use of technology to deliver efficient and effective community facilities and services | All departments | 1 |
| 6 | Adopt policies and procedures to ensure public schools have adequate capacity as new development occurs. Policies and procedures could include Adequate Public Facilities requirements, development contributions of land or facilities, excise taxes or impact fees, and "front funding" of priority BCCPS projects. | PZ, CCPS | 2 |
| 7 | Support infrastructure needs related to institutional growth at Cecil College | CC, BCC | 1 |
| 8 | Acquire public recreation land in accordance with the County's Land Preservation Parks and Recreation Plan. | PR | 1 |
| 9 | Identify potential public and private partnerships and funding sources to implement the County's recreation goals | PR | 1 |
| 10 | Cultivate and encourage interest in the performing arts by further strengthening the relations with Cecil County Arts Council and Cecil College's Community Cultural Center | CC, ED | 1 |
| 11 | Identify potential sites and acquire land for a future county correctional facility | SO | 4 |
| 12 | Support volunteer fire companies by continuing funding support for apparatus replacement; support those departments that need to hire paid personnel; and incentives to promote volunteer activity. | BCC | 1 |
| 13 | Expand the EMS infrastructure, including 911 technology, paramedic stations, and equipment | ES | 2 |
| 14 | Create a Central Booking Center | **BCC,** SO | 3 |
| 15 | Identify funding for additional facilities, including substations and other infrastructure to support both law enforcement and corrections. | **BCC,** SO | 3 |
| 16 | Invest more money in technology to deliver efficient and effective public safety services. | BCC | 2 |
| 17 | Develop a comprehensive Public Safety Master Plan | SO | 2 |
| 18 | Work with Union Hospital, the Health Department, the Department of Social Services and charitable organizations to coordinate care of the sick and elderly. | HD, SCT | 1 |
| 19 | Encourage the development of satellite health facilities in areas of population growth as needed | HD | 3 |

| Policy/Action Summary (see Chapters for full text) | | Responsibility (Lead in bold) | Timeframe |
|---|---|---|---|
| 20 | Develop a timeline to plan for future space needs/renovation/new construction of the Health Department facility in Elkton | HD | 2 |
| 21 | Continue to reduce the growth of the solid waste stream through waste reduction and expansion of recycling programs. | DPW | 1 |
| 22 | Work with Cecil County Public Library to accommodate growth and demand for new or expanded facilities and smaller branch libraries. | CCPL | 1 |
| ***Housing*** | | | |
| 1 | Prepare a countywide housing needs study to include numerical housing goals and objectives. | HO | 2 |
| 2 | Provide opportunities in the Growth Corridor for higher density mixed-use housing that will facilitate the provision of affordable housing, especially where it can be served by local and regional transit. Coordinate with the Towns to identify similar opportunities within their borders. | **PZ**, HO | 2 |
| 3 | Encourage transit and mobility-friendly design in new communities, especially those containing workforce housing. Support architectural and design flexibility to allow more affordable and workforce housing to be developed. | **PZ**, PC | 1 |
| 4 | Create incentives for private sector participation in the provision of affordable housing. Consider tax or other incentives for developers that build affordable housing, including affordable units in the same developments as more expensive units | **HO**, PZ, B | 2 |
| 5 | Continue programs to rehabilitate existing substandard housing in the County. This action will increase the number of affordable housing units available to workforce families. | HO | 1 |
| 6 | Continue programs to support the homeless and other special needs populations. | HO | 1 |
| 7 | Improve energy efficiency standards and establish a rating system for new residential development. | PZ, HO, P&i | |
| ***Mineral Resources*** | | | |
| 1 | Support the responsible mining of Cecil County's mineral resources. | PZ, BCC, PC | 1 |
| 2 | Reduce conflict that could interfere with the extraction of mineral resources in mineral extraction areas by allowing other development of a type and intensity that is compatible with nearby mining activities until the mineral resources are removed or have been demonstrated to be economically unrecoverable. | PZ | 1 |
| 3 | Balance the interests of the mining industry against the interests of individuals living or working on land adjacent to areas that may be excavated in the future so that conflicts among these parties can be minimized. | PZ, ED | 1 |
| 4 | Strictly control mineral extraction activities in environmentally sensitive areas to protect natural resources, balancing the right to extract mineral resources with the need to protect sensitive areas. | PZ | 1 |
| 5 | Continue to require that a special study be completed to determine the future use of the Mineral Extraction areas after extraction is complete. Use the Comprehensive Plan as guidance for potential future uses including, for example, use of mined land for water resource uses, reservoirs or tertiary treatment wetlands. | PZ, BCC, PC | 1 |
| ***Implementation*** | | | |
| 1 | Review the County's ability to provide and pay for the public services and facilities needed support future growth. ; schools, roads, transit, parks, police, fire and emergency services, health care libraries, water and sewer, and solid waste. | **B**, and all agencies | 1 |
| 2 | Determine whether the County will need additional funding sources to pay for the plan. Determine which funding sources, if any, would be best for the County; impact fees, excise taxes, and/or special taxing districts. | **B**, BCC | 2 |
| 3 | Consider an APFO to address future needs. | **PZ**, CCPS | 3 |
| 4 | Consider whether Development Rights and Responsibilities Agreements would be a useful tool for Cecil County. | PZ, PC | 2 |
| 5 | Coordinate with the Towns to implement the Towns' and the County's Comprehensive Plans. | All agencies | 1 |
| 6 | Work with the Towns and the State to collect measures and indicators data to meet the State's Smart, Green and Growing requirements for an annual report beginning in 2011, establishing a goal and documenting the amount of growth occurring inside and outside Priority Funding Areas. | PZ | 2 |

## Table 11.3 2030 Facilities and Infrastructure Needs Cost Estimate

***Community Facilities Needs and Funding 2010 - 2030***
***Table includes only projects i) where there would be some County Funding ii) with funding needs beyond FY 2010. Table does not include Enterprise Fund Projects: Water, Wastewater, Solid Waste***

| | | $ Cost in thousands (2009 $) | | | | |
|---|---|---|---|---|---|---|
| | **2030 Community Facilities Need** | **Total Project Cost[1]** | **Funding Through FY'10** | **Future Funding Need 2011-2030[2]** | **County Share of Future Funding Need** | **Source** |
| Cecil College | Cecil College Engineering and Math Building - NE Campus | 19,526 | 399 | 19,127 | 7,810 | CIP FY'10, EFMP '10 |
| | Cecil College HVAC Systems | 573 | - | 573 | 229 | CIP FY'10 |
| | Cecil College Technology Infrastructure Phase II | 425 | - | 425 | 170 | CIP FY'10 |
| | New Student Center (North East) | 12,345 | - | 12,345 | 4,938 | Cecil College Campus Master Plan |
| | New Facilities Management and Receiving Bldg (North East) | 2,447 | - | 2,447 | 979 | Cecil College Campus Master Plan |
| | New Learning Commons (North East) | 1,718 | - | 1,718 | 687 | Cecil College Campus Master Plan |
| | Arts and Sciences Building Renovations (North East) | 1,519 | - | 1,519 | 608 | Cecil College Campus Master Plan |
| | Technology Center Renovations (North East) | 995 | - | 995 | 398 | Cecil College Campus Master Plan |
| | Community Cultural Center Renovation/Addition (North East) | 1,915 | - | 1,915 | 766 | Cecil College Campus Master Plan |
| | Facilities Maintenance Projects (North East) | 1,728 | - | 1,728 | 691 | Cecil College Campus Master Plan |
| | New Academic Building (North East) | 10,829 | - | 10,829 | 4,332 | Cecil College Campus Master Plan |
| | Future Maintenance Projects (North East) | 324 | - | 324 | 130 | Cecil College Campus Master Plan |
| | New building (Bainbridge) | 21,000 | - | 21,000 | 8,400 | Cecil College Campus Master Plan |
| Public Schools | New Comprehensive Career and Technology (CTE) High School | 62,463 | - | 62,463 | 30,854 | CIP FY'10, EFMP '10 |
| | North East High School Addition/Renovation | 62,245 | - | 62,245 | 32,125 | CIP FY'10, EFMP '10 |
| | North East Middle School Addition/Renovation | 35,696 | - | 35,696 | 17,219 | CIP FY'10, EFMP '10 |
| | New Gilpin Manor Elementary School | 24,456 | - | 24,456 | 12,216 | CIP FY'10, EFMP '10 |
| | Perryville Elementary Addition/Renovation | 19,276 | - | 19,276 | 9,380 | CIP FY'10 |
| | Chesapeake City Elementary Addition/Renovation | 15,775 | - | 15,775 | 7,771 | CIP FY'10, EFMP '10 |
| | Bohemia Manor Middle / High School (Addition ) | 47,352 | - | 47,352 | 22,877 | EFMP '10 |
| | Cherry Hill Middle School Renovation | 24,407 | - | 24,407 | 11,819 | EFMP '10 |
| | Leeds Elementary Addition/Renovation | 19,110 | - | 19,110 | 9,932 | EFMP '10 |
| | Thomson Estates Elementary Addition/Renovation | 15,573 | - | 15,573 | 8,016 | EFMP '10 |
| | Kenmore Elementary Addition/Renovation | 11,951 | - | 11,951 | 5,871 | EFMP '10 |
| | Elementary Schools (4) to accommodate 2020 to 2030 growth | 80,000 | | 80,000 | ? | ERM, CCPS |
| | High School (1) needed to accommodate 2020 to 2030 growth | 60,000 | | 60,000 | ? | ERM, CCPS |
| Libraries | Elkton Central Library Replacement (replace by 2022) | 25,000 | - | 25,000 | ? | COC Presentation 2/09, CCPL |
| | North East Branch Library Replacement (includes central library HQ) | 19,810 | 1,500 | 18,310 | ? | CIP FY'10, CCPL |

***Community Facilities Needs and Funding 2010 - 2030***
***Table includes only projects i) where there would be some County Funding ii) with funding needs beyond FY 2010. Table does not include Enterprise Fund Projects: Water, Wastewater, Solid Waste***

| | | $ Cost in thousands (2009 $) | | | | |
|---|---|---|---|---|---|---|
| | **2030 Community Facilities Need** | **Total Project Cost[1]** | **Funding Through FY'10** | **Future Funding Need 2011-2030[2]** | **County Share of Future Funding Need** | **Source** |
| | Rising Sun Branch Library Expansion (replace by 2025) | 3,000 | - | 3,000 | ? | COC Presentation 2/09, CCPL |
| | Elkton & Rising Sun Security Upgrade | 595 | - | 595 | ? | CIP FY'10 |
| | Port Deposit / Bainbridge Landscaping | 105 | - | 105 | ? | CIP FY'10 |
| | New Cecilton Branch Library | 4,000 | - | 4,000 | ? | COC Presentation 2/09, CCPL |
| | Conowingo / Oakwood Branch | 1,000 | - | 1,000 | ? | CCPL |
| Health | Health Department Systemic Upgrades | 800 | - | 800 | ? | CIP FY'10 |
| | New Health Department Building | 10,000 | | 10,000 | 8,000 | Stephanie Garrity, Health Dept |
| | Health Department Building renovation | 7,750 | | 7,750 | 6,200 | Stephanie Garrity, Health Dept |
| Social Services | New Social Services Building | 20,000 | | 20,000 | 5,000 | Nicholas Ricciuti, Dept of Social Services |
| | Child Advocacy Center | 875 | | 875 | 219 | Nicholas Ricciuti, Dept of Social Services |
| | Relocated Domestic Violence Center | 1,000 | | 1,000 | 250 | Nicholas Ricciuti, Dept of Social Services |
| EMS | Fair Hill Station Construction | 875 | - | 875 | ? | CIP FY'10 |
| | Sylmar Tower Construction | 515 | - | 515 | ? | CIP FY'10 |
| | Paramedic Station #4 Perry Woods/Woodlands | 500 | - | 500 | ? | CIP FY'10 |
| | Cecil College campus replacement station to serve the North East area | 500 | - | 500 | ? | COC Presentation 2/09 |
| Roads | Roads and Bridges Through 2014 | 72,134 | 6,279 | 65,855 | 56,576 | CIP FY'10 |
| | Roads and Bridges 2015-2030 | 197,565 | | 197,565 | 169,729 | ERM, Future need based on CIP |
| | Elkton Loop Road - Entire Length - Planning and Environmental Compliance | 400 | | 400 | 400 | ERM, 2007 Roadway Strategic Plan |
| | Elkton Loop Road Right of Way acquisition | 170 | | 170 | 170 | ERM, 2007 Roadway Strategic Plan |
| | US 40 to MD 7 connector (linking mixed use areas west of Elkton) - Right of Way acquisition | 60 | | 60 | 60 | ERM |
| | US 40-MD 213 intersection improvement, Planning (County forward fund?) | ? | | ? | ? | ERM |
| Fire | Fire Training Facility in the County | 0 | - | 0 | 0 | COC Presentation 2/09 |
| Public Safety | Cecil County Detention Center renovations | 31,755 | 22,124 | 9,631 | 4,703 | CIP FY'10 |
| | Land acquisition for correctional facility expansion/replacement | 110 | | 110 | ? | Sheriff Janney |
| | Sheriff Substation in the proximity of Chesapeake City and Cecilton | 6,000 | - | 6,000 | ? | COC Presentation 2/09, Sheriff Janney |

***Community Facilities Needs and Funding 2010 - 2030***
***Table includes only projects i) where there would be some County Funding ii) with funding needs beyond FY 2010. Table does not include Enterprise Fund Projects: Water, Wastewater, Solid Waste***

| | | $ Cost in thousands (2009 $) | | | | |
|---|---|---|---|---|---|---|
| | **2030 Community Facilities Need** | **Total Project Cost[1]** | **Funding Through FY'10** | **Future Funding Need 2011-2030[2]** | **County Share of Future Funding Need** | **Source** |
| | Sheriff Substation in the proximity of Rising Sun and Conowingo | 6,000 | - | 6,000 | ? | COC Presentation 2/09, Sheriff Janney |
| Parks | Acquire & develop 250-410 acres | 25,961 | - | 25,961 | ? | LPPRP '05 |
| | Facility development projects | 25,951 | - | 25,951 | ? | LPPRP '05 |
| | Acquire 1,750 acres of additional park/open space land to meet needs through 2030 | 43,825 | | 43,825 | ? | ERM/Dept Rec & Parks |
| Senior Services | Southern County Community Center | 1,680 | - | 1,680 | ? | CIP FY'10 |
| Information Technology | Upgrades and Improvements | 4,000 | | 4,000 | 4,000 | Cecil County Budget Office |
| | TOTAL COST[3] | $1,065,584 | $30,302 | $1,035,282 | | |
| | Road Projects (beyond 2030) | | | | | Source |
| Roads | Elkton Loop Road - 279 East to US 40 Construction $ | 5,200 | | | | ERM, with inputs from JMT, SHA |
| | Elkton Loop Road - 279 West to Marley Road Construction $ | 17,200 | | | | ERM, with inputs from JMT, SHA |
| | Elkton Loop Road - Amtrak and MD 279 Crossing (assumes bridge) | 26,000 | | | | ERM, with inputs from JMT, SHA |
| | US 40 to MD 7 connector (mixed use area) Construction $ | 2,000 | | | | ERM, with inputs from JMT, SHA |
| | US 40 -MD 213 Intersection Reconstruction | | | | | SHA - Jim Dooley |

*Notes:*
*1: Costs are expressed in 2009 dollars*
*2: Based on costs provided in the CIP and estimates from various sources - see sources in notes in electronic version of the table*
*Sources: Cecil County 2010 Capital Improvement Program 4/7/09; Cecil County Public Schools 2010 Educational Facilities Master Plan; February 2009 Comprehensive Plan Public Services COC Presentation; Cecil Community College Strategic Plan 4/28/05*