LAND USE ELEMENT PLAN

INTRODUCTION: LAND USE ELEMENT PLAN

The 2012 Land Use Element Plan guides the direction of the County's planning efforts. It provides the primary direction for achieving the Master Plan's guiding principles as well as the designation of land use categories throughout the County. It also connects the other element plans which comprise the County's Master Plan.

The importance of maintaining and enhancing the quality of life enjoyed by citizens in Harford County is fundamental to this Plan. Recognizing that quality of life is based on a myriad of factors that must be incorporated, the Plan is grounded in a sustainable approach to land use planning - one that supports and promotes healthy, vibrant communities that offer affordable housing opportunities to all residents.

This Plan continues to support the use of designated growth areas, particularly the Development Envelope which has been part of all Comprehensive Plans since 1977. The Development Envelope, an area generally defined by I95/U.S. Route 40 and the MD Route 24 corridor north to Bel Air and Forest Hill, is a growth management tool designed to ensure that planned development is located in suitable areas that can be provided with necessary public facilities and services. The Plan maintains its goal of directing new development and redevelopment to this area.

The Land Use Element Plan also recognizes the importance of preserving the County's rich rural heritage. The County's Priority Preservation Area was established in 2008 and expanded in 2009. While preservation opportunities are available to qualifying property owners throughout the County, within the Priority Preservation Area the County has established a goal of preserving 80% of the remaining undeveloped land.

Comprised of five sections, the 2012 Plan presents information about existing land use, land development capabilities, strategies for addressing sustainability through growth management and resource conservation, community area plans, and an implementation program. The Plan also includes the Land Use Map which establishes the land use designations and the Natural Features Map which highlights various features which influence land use.

Section One, Existing Land Use, provides insight on current land uses and prevailing character. An overview and understanding of current conditions is necessary prior to forming policies for the future land use and community area plans.

Section Two, Land Capability Analysis, provides basic land inventory data. The potential development capacity of land both inside and outside of the Development Envelope is examined. This information is used to ensure that there is sufficient vacant land to accommodate projected growth and to support polices set forth in this Plan. Information is provided for agricultural, residential, commercial and industrially zoned land.

The land use designations shown on the Land Use Map are discussed in the Plan's text. They are a guide to understanding the County's policy on appropriate uses for land, as well as the relationships between and among these uses. The pattern of development and intensity of land use described in this Land Use Element Plan represents anticipated uses for the next decade. The map reflects the directions and intentions outlined in the Sustainability Through Growth Management and Resource Conservation Section.

The Sustainability Through Growth Management and Resource Conservation section consists of four elements – land use, economic prosperity, public facilities services and safety, and sustainability. Each element contains a policy, themes, and implementation strategies. Themes were developed from the public participation process and in response to State Comprehensive Plan requirements.

The Community Area section now recognizes 13 Community Areas. The Bush River Community Area was formed in 2011. This new community area was formed from the Abingdon-Riverside-Emmorton (ARE) and Greater Aberdeen-Greater Havre de Grace community areas. As a result, both of the aforementioned community areas have new boundaries, and ARE is now reorganized as the Abingdon-Emmorton Community Area. This section provides general descriptions of the 13 areas, and identifies major land use issues for each community area. These area descriptions and plans will serve as the basis for guiding future planning activities within these communities.

The Implementation Section outlines a work program for completing the strategies set forth in the Plan. For each of the strategies, the responsible and supporting departments and agencies are identified. A timeframe has been assigned and is intended to direct the Plan's work program. This section also identifies if any of the recommendations involve capital expenditures.

As required by State legislation, the Master Plan and the Land Use Element Plan will be reviewed every six years for consistency with the State "Visions". It will also be adjusted to allow for the consideration of changing factors in land use policies, and to provide for a comprehensive review of all Plan elements in a uniform manner.

EXISTING LAND USE AND LAND CAPABILITY REVIEW

Harford County has a diverse mix of existing land uses. Residential, commercial, and industrial uses are generally concentrated in the Development Envelope. Agricultural, forested and very low density residential uses are generally found in designated rural areas (Figure 21). Understanding the locations of these existing land uses will help guide the development of this Plan.

The Department of Planning and Zoning maintains an inventory of current land uses. These are determined at a property level and are updated on a regular basis through the issuance of use and occupancy permits. The classification of properties into the individual categories represents the predominant use on the property, and this determination was based on a combination of aerial photography, information maintained by the State tax assessment office, and field verification.

The categories used to classify the properties for the land use inventory are more detailed than the combined categories presented in this Plan. For example, industrial use can be refined to identify properties where manufacturing, warehousing or general contracting are the predominate use. Likewise, commercial uses can be identified as medical, professional, retail or food related.

For mapping purposes, the existing inventory was generalized into the following categories:

Agricultural – Properties that are identified as having an agricultural use (properties larger than 10 acres without an improved structure) or properties that are being used as agricultural residential (properties larger than 10 acres with a residential structure).

Commercial – Any property identified as having retail or service uses or any 'mixed use' property where retail or service was identified as the largest component.

Industrial - Any property with manufacturing, warehousing, distribution, trade contracting or construction service uses, or any 'mixed use' property where industrial is considered the largest component.

Institutional - Any government owned or operated property including court houses, offices, police, fire or school. Institutions also include semi-public facilities like churches and cemeteries.

Office - Any property identified as commercial research, professional services or medical services, or any 'mixed use' property where office uses were considered the largest component.

Residential – Properties identified as having a residential use

Recreation/Open Space- Any property used for recreation including active recreation (playgrounds, ball fields), or passive recreation (identified parks, wooded or cleared, trails or natural). This also includes identified 'open space' in communities, owned and maintained by any sort of HOA or other quasi-public group.

Transportation/Utilities - Any property used for transportation including railroads, airports, roadways, parking, or any utility property used for electrical or gas distribution, transfer or storage. Also includes solid waste management operations.

Other Mixed Uses - The remaining properties where there is an identified mix of uses on a property that are too different from each other, or equally split in coverage or intensity, making a clear decision on the primary use of the property impractical. (Example: 20 acres of land with a house, a small field, and a couple of structures for a contracting or construction business).

Vacant buildings – This designation is only used for properties with existing structures that were field verified to be vacant (either abandoned and neglected, or abandoned and for sale/lease)

Unimproved land – Any property that is too small to be considered agricultural as defined above. Which means it is under 10 acres, does not have agricultural assessment, and has no other identifiable primary use (vacant lot).

Based on an analysis completed in 2010, the primary land use in the County is agricultural (Figure 21). Encompassing 55% of the County, this category includes land actively used for crop production, dairy farming, and large wooded areas that are not intensely used for other purposes. Residential uses are the second most common land use by area, covering almost 24% of the County. Recreational uses are the third largest component at 9% and include State and County Parks as well as identified open space occurring in larger subdivisions. The remaining land is a mix of commercial, industrial, institutional and other uses.

EXISTING LAND USE
Harford County, Maryland

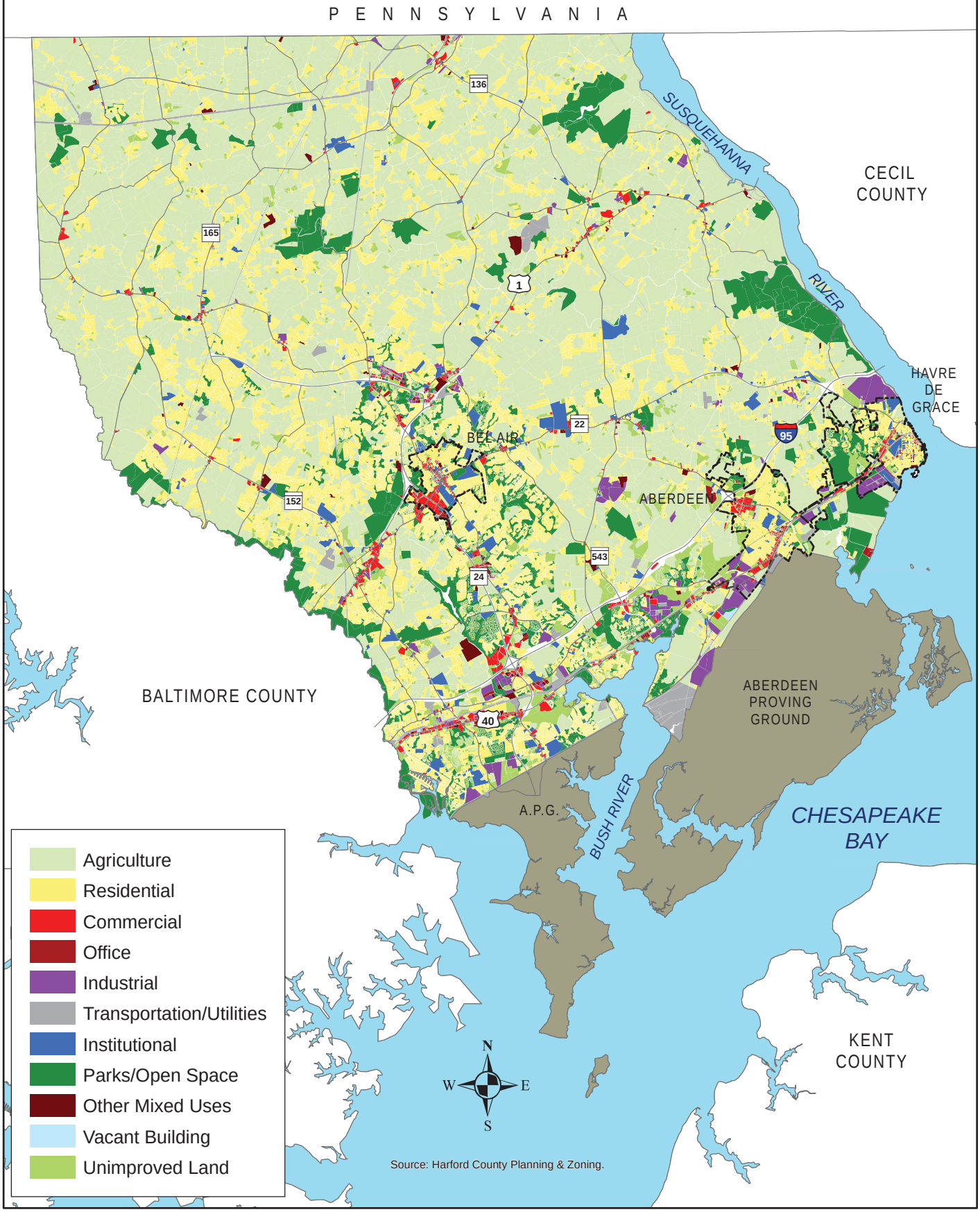

Figure 21

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LAND CAPACITY ANALYSIS

DEVELOPMENT ENVELOPE RESIDENTIAL LAND CAPACITY

As part of the 2012 Master Plan, a comprehensive inventory of residential land was completed in December 2010 to determine the remaining building capacity of the Development Envelope. The Harford County Residential Land Study for the Development Envelope evaluated data from four categories: approved preliminary plans with un-built units, potential capacity of undeveloped land, municipal undeveloped land, and potential residential mixed use development to estimate the remaining capacity within the Development Envelope. The methodology used to quantify this potential is provided in the study.

Based on the analysis performed, there is an estimated capacity of approximately 24,179 residential units within the current Development Envelope. The breakdown of units by category is as follows:

4,635	Plan approved but un-built dwelling units
11,683	Potential dwelling units from vacant undeveloped land
5,096	Potential dwelling units from municipalities: Aberdeen, Bel Air, Havre de Grace
2,765	Potential residential mixed use dwelling units

In addition to these numbers, Aberdeen, Bel Air, and Havre de Grace have identified adjacent areas for possible annexation in their Municipal Growth Element Plans. The cities of Aberdeen and Havre de Grace are each served by their own water and sewer facilities and the development of the area between the cities will be dependent on a cooperative agreement to ensure that adequate water and sewer service is available. These possible annexations could substantially increase the potential residential unit holding capacities in this area of the County. Based on the most recent plan updates of these cities, a maximum yield of about 6,200 units is estimated.

To determine the countywide build-out rate, current population projections and historic trends in growth are taken into consideration. This analysis resulted in a projected build-out rate of 1,100 new residential units a year even though recent activity has been lower. Based on past trends that resulted in an average of 82% (902 units) of the new units each year being located within the Development Envelope, there is sufficient capacity to last about 27 years.

AGRICULTURAL LAND RESIDENTIAL LAND CAPACITY

An inventory of the development potential of the land in the rural area of the County was completed in early 2011. The Harford County Agricultural Land Study included land outside of the Development Envelope that is zoned Agricultural, Village Residential or Rural Residential. Based on the analysis, there is an estimated capacity of 8,618 units available in the rural area of the County. The breakdown of the estimated capacities is as follows:

6,643	Total Agricultural zoned capacity
1,570	Rural Residential zoned capacity
405	Village Residential zoned capacity

It is not the County's intent to promote growth in these rural areas. The Plan does, however, recognize that some growth will occur outside of the designated growth areas. The Plan's policy is that this growth should, as much as possible, be directed to the Rural Villages, and that only minimal development occur outside of the designated growth areas.

COMMERCIAL CAPABILITIES

The Harford County Commercial Land Study was completed in December 2010 and determines the amount of existing commercial space in the County as well as the potential space available on undeveloped land currently zoned for commercial use. Based on this analysis, Harford County has 19.1 million square feet of existing commercial space, of which 6.7 million square feet is located in the municipalities of Aberdeen, Bel Air and Havre de Grace. Almost half of this commercial space (9.8 million square feet) is used for retail. The mixed use category is comprised of a range of retail and office uses in combination with residential, industrial, and other uses. The "other" category is comprised of a range of uses including industrial, health and human services, governmental, religious and educational institutions.

The inventory shows that there are 1,109 properties, totaling 2,644 acres, of vacant land zoned for commercial use in Harford County. In total, these properties have the potential to yield 24.8 million square feet of additional commercial space. To determine future needs, a methodology for calculating potential commercial development based on building trends between 2000 and 2010 and environmental constraints was used. The development trends data indicated that over 4.5 million square feet of commercial space was developed in Harford County between 2000 and 2010. This averaged 410,400 square feet per year.

Based on the development trends data from 2000 to 2010, it is estimated that 4.1 million square feet of additional commercial space will be needed over the next ten years. It is assumed that approximately 68% of this space will be used for retail and 26% for office use. Comparing projected demand and gross land capacity through 2035, the County will have a sufficient amount of commercially zoned land to meet projected needs beyond the life of this Plan.

INDUSTRIAL CAPABILITIES

A diversified economic base is important for the financial future of Harford County. It helps to provide both tax revenue and employment opportunities. In 2010, the inventory of available industrial land was updated. The Harford County Industrial Land Study looked at industrially zoned lands within the County (LI, GI, 15% of CI) that have remaining development opportunity.

An established methodology that looked at lot size, environmental constraints and historic development trends was applied to the industrially zoned properties. The study identified 416 properties totaling 3,348 acres that are available for industrial development. Of these, 37 sites (155 acres) are within one of the County's three municipalities.

The study showed that a wide range of different property sizes exist within the County. About 25% of the available acreage for development is on properties that are less than 10 acres in size, and an additional 25% of available acreage occurs on properties over 100 acres in size. In addition, the Harford County Zoning Code allows industrial zoned properties greater than five acres in size within the Development Envelope to be developed as mixed use properties with commercial and residential components.

In total these properties have the potential to yield 52.5 million square feet of additional industrial space. To determine future needs, a methodology for calculating potential industrial development based on development trends between 2000 and 2010 and environmental constraints was used. The development trends data revealed that 1.79 million square feet of industrial space was developed in Harford County during this time period. This averaged 162,900 square feet per year. Based on these development trends it is estimated that 1.6 million square feet of additional industrial space will be needed over the next ten years. Comparing projected demand and gross land capacity through 2035, the County will have a sufficient amount of industrially zoned land to meet projected needs beyond the life of this Plan.

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LAND USE MAP: DESIGNATIONS

The Land Use Map represents a generalization of planned land use patterns and intensities, as well as the policies concerning the level and location of development for the next 10 years. Areas beyond the Development Envelope that do not already have public utilities should remain agricultural. The land use categories depicted on the map are explained below. Low, medium, and high-intensity areas are located in the Development Envelope (Figure 22). Commercial shopping facilities shown on the map include neighborhood and community centers within the Development Envelope and Rural Villages outside of the Development Envelope.

It is important to note that the categories of use on the map are not meant to be exclusive, and it is not expected that the uses in an area will be limited to a single land use. For instance, while most commercial activity in the County is expected to be located in and around the centers referred to above, additional isolated commercial activity may occur throughout the low, medium, and high-intensity areas. Such uses should be consistent with the definition of each category and compatible with adjacent uses. In addition, other land uses not directly related to agriculture may occur in the County's rural area so long as they do not significantly modify the character of the areas outside of the Development Envelope.

LAND USE: MAPPING DEFINITIONS

Agricultural – Areas where agriculture is the intended primary land use. Residential development potential is limited and available at a density of 1.0 dwelling unit for every 10 acres. No new commercial or industrial uses are permitted except those intended to serve the agriculture industry or residents of the area while maintaining the character of the surrounding countryside.

Low Intensity – Areas within the Development Envelope where residential development is the primary land use. Development densities shall range from 1.0 to 3.5 dwelling units per acre. Neighborhood commercial uses such as doctors' offices and banks are examples of some of the nonresidential uses associated with this designation.

Medium Intensity – Areas within the Development Envelope where residential development is the primary land use. Development densities shall range from 3.5 to 7.0 dwelling units per acre. Limited commercial uses such as grocery and convenience stores, banks, and professional offices are intended for this designation.

High Intensity – Areas within the Development Envelope that are intended for higher density residential development, exceeding 7.0 dwelling units per acre. These areas are also appropriate for a wide range of commercial uses including retail centers, home improvement centers, automotive businesses and professional offices.

Rural Villages – Areas intended for concentrated residential, commercial and institutional uses located within the agricultural areas of the County that support the character and economy of the surrounding communities by providing necessary goods and services.

Neighborhood Centers – Areas intended for limited commercial activities such as convenience stores and other service oriented uses that complement and serve the surrounding residential areas.

Community Centers – Areas intended to combine a mix of uses including civic, social and cultural facilities along with more intensive commercial, service, office, and residential activities. These centers should be located along major highways or at important crossroads.

Industrial/Employment – Areas intended for the concentration of manufacturing, warehousing/ distribution, technical, research, office, and other employment activities. Generally these designations should be situated along major transportation corridors.

Mixed Office – Areas designated to promote major economic development opportunities such as corporate offices, research and development facilities, and high-tech services which create significant job opportunities and investment benefits. This area may also include limited residential and retail uses to service the employment center. Designated at strategic I-95 interchanges, development will be subject to specific performance, architectural, and site design standards.

HEAT – Area designated for the Higher Education and Conference Center (HECC) at HEAT (Higher Education Applied Technology); a planned higher education and research development park. The HECC initiative brings Maryland's finest institutions of higher education together to offer programs that are in demand by residents and businesses. The Center is located in Aberdeen at MD Route 22 and I-95.

HCC – Harford Community College is a public community college. The College is located on Thomas Run Road and adjacent to MD Route 22, three miles east of Bel Air. The College provides high quality, accessible and affordable educational opportunities and services that promote professional competence and economic development and improve the quality of life in a multicultural community.

APG – Aberdeen Proving Ground was established in 1917 as a military facility where design and testing of weapons could be carried out in close proximity to the nation's industrial and shipping centers. APG occupies more than 39,000 acres of land and comprises two principal areas, the Aberdeen area and the Edgewood Area, separated by the Bush River. The Proving Ground's primary mission is focused on civilian contractors whose technological efforts support national defense, intelligence, medical research, engineering, and computer technology to aid the war fighter.

Chesapeake Bay Critical Area – Areas generally within 1,000 feet of tidal water and tidal wetlands, including expansion areas necessary for the protection of identified sensitive natural features and natural habitat protection areas.

State & County Parks – Areas of land designated for public open space and recreation. These areas also include some lands that provide specialized uses such as the Stoney Forest Demonstration Area and the Harford Glen Environmental Education Center.

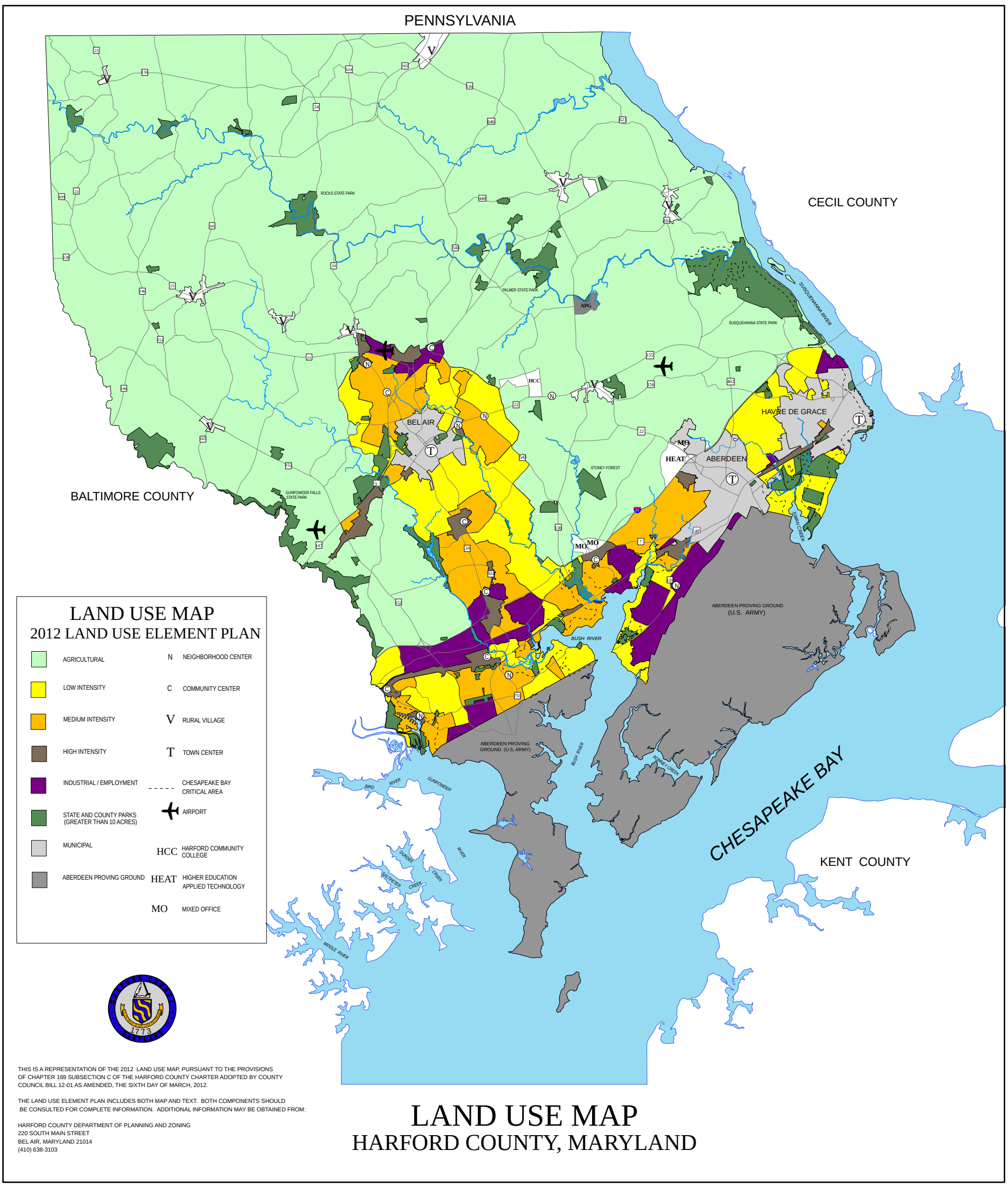
PENNSYLVANIA
CECIL COUNTY
BALTIMORE COUNTY
KENT COUNTY
CHESAPEAKE BAY
SUSQUEHANNA RIVER
ROCKS STATE PARK
PALMER STATE PARK
SUSQUEHANNA STATE PARK
GUNPOWDER FALLS STATE PARK
STONEY FOREST
BEL AIR
HAVRE DE GRACE
ABERDEEN
HEAT
HCC
APG
MO
ABERDEEN PROVING GROUND (U.S. ARMY)
BUSH RIVER
BIRD RIVER
GUNPOWDER RIVER
DUNDEE CREEK
SALTPETER CREEK
MIDDLE RIVER
SWAN CREEK
LAND USE MAP
2012 LAND USE ELEMENT PLAN
AGRICULTURAL
LOW INTENSITY
MEDIUM INTENSITY
HIGH INTENSITY
INDUSTRIAL / EMPLOYMENT
STATE AND COUNTY PARKS (GREATER THAN 10 ACRES)
MUNICIPAL
ABERDEEN PROVING GROUND
N NEIGHBORHOOD CENTER
C COMMUNITY CENTER
V RURAL VILLAGE
T TOWN CENTER
CHESAPEAKE BAY CRITICAL AREA
AIRPORT
HCC HARFORD COMMUNITY COLLEGE
HEAT HIGHER EDUCATION APPLIED TECHNOLOGY
MO MIXED OFFICE
THIS IS A REPRESENTATION OF THE 2012 LAND USE MAP, PURSUANT TO THE PROVISIONS OF CHAPTER 169 SUBSECTION C OF THE HARFORD COUNTY CHARTER ADOPTED BY COUNTY COUNCIL BILL 12-01 AS AMENDED, THE SIXTH DAY OF MARCH, 2012.
THE LAND USE ELEMENT PLAN INCLUDES BOTH MAP AND TEXT. BOTH COMPONENTS SHOULD BE CONSULTED FOR COMPLETE INFORMATION. ADDITIONAL INFORMATION MAY BE OBTAINED FROM:
HARFORD COUNTY DEPARTMENT OF PLANNING AND ZONING
220 SOUTH MAIN STREET
BEL AIR, MARYLAND 21014
(410) 638-3103
LAND USE MAP
HARFORD COUNTY, MARYLAND

Figure 22

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NATURAL FEATURES MAP: MAPPING DESIGNATIONS

The usability of the designations shown on the Land Use Map are affected by the County's Source Water Protection Districts as defined in the Natural Resources Element Plan and the Development Regulations and features identified on the Natural Features Map (Figure 23). The features depicted on the map are representative of policies and preservation programs currently being implemented by the County. Areas shown on the map that are related to regulatory programs and policies are subject to specific guidelines for management and development. Resources shown on the map include:

Chesapeake Bay Critical Area - Areas generally within 1,000 feet of tidal water and tidal wetlands, including expansion areas necessary for the protection of identified sensitive natural features and natural habitat protection areas. These areas receive special State and local protection under the Chesapeake Bay Critical Area Program. In addition to the 1,000-foot boundary, the three land use management areas are shown: Intensely Developed Areas (IDA), Limited Development Areas (LDA), and Resource Conservation Areas (RCA).

Intensely Developed Areas (IDA) – Areas where residential, commercial, institutional, and/or industrial land uses predominate and where relatively little natural habitat occurs. This is where new development will continue to be concentrated.

Limited Development Areas (LDA) – Areas where land use intensity is moderate and some natural habitat still occurs. Low and medium intensity development will continue to be permitted here.

Resource Conservation Areas (RCA) – Areas where the protection of natural environments and resource utilization (agriculture, forestry, fishery activities) are the primary use. Any future development shall minimize impacts on the natural features of this area and any new development will be limited to low intensities.

Stream Systems – All stream systems in the County are regulated as part of the Natural Resources District. The streams shown on the Natural Features Map represent only a portion of the overall County stream system.

Deer Creek Scenic River District – This represents the area included in the State Wild and Scenic Rivers Program which established a 150-foot buffer on both sides of the creek to preserve its natural beauty.

Habitat Areas – Areas of ecological value that have received local, State and/or Federal recognition for their uncommon or unique species. The locations on the map are approximate.

Sensitive Species Project Review Areas (SSPRA) – This represents the general locations of documented rare, threatened and endangered species. This data assists in compliance with the Economic Growth, Resource Protection and Planning Act of 1992 and aids in streamlining the process of reviewing proposed projects for potential impacts to rare, threatened and endangered species and other regulated Wildlife and Heritage Service resources.

Rural Legacy Area – State recognized areas where preservation efforts, through easements or fee simple acquisitions, are focused to form large contiguous tracts of protected land, including land that is

agricultural, forested or ecologically sensitive. Development inconsistent with the easement will not be allowed.

Preservation Areas – Private lands that have voluntarily been placed into programs to conserve valuable natural features or resources. Uses being planned for areas adjacent to these sites should be compatible and, where possible, enhance existing preservation areas. The areas shown on the Map include agricultural preservation areas, Rural Legacy Easements, Maryland Environmental Trust Easements, and Maryland Historical Trust Easements.

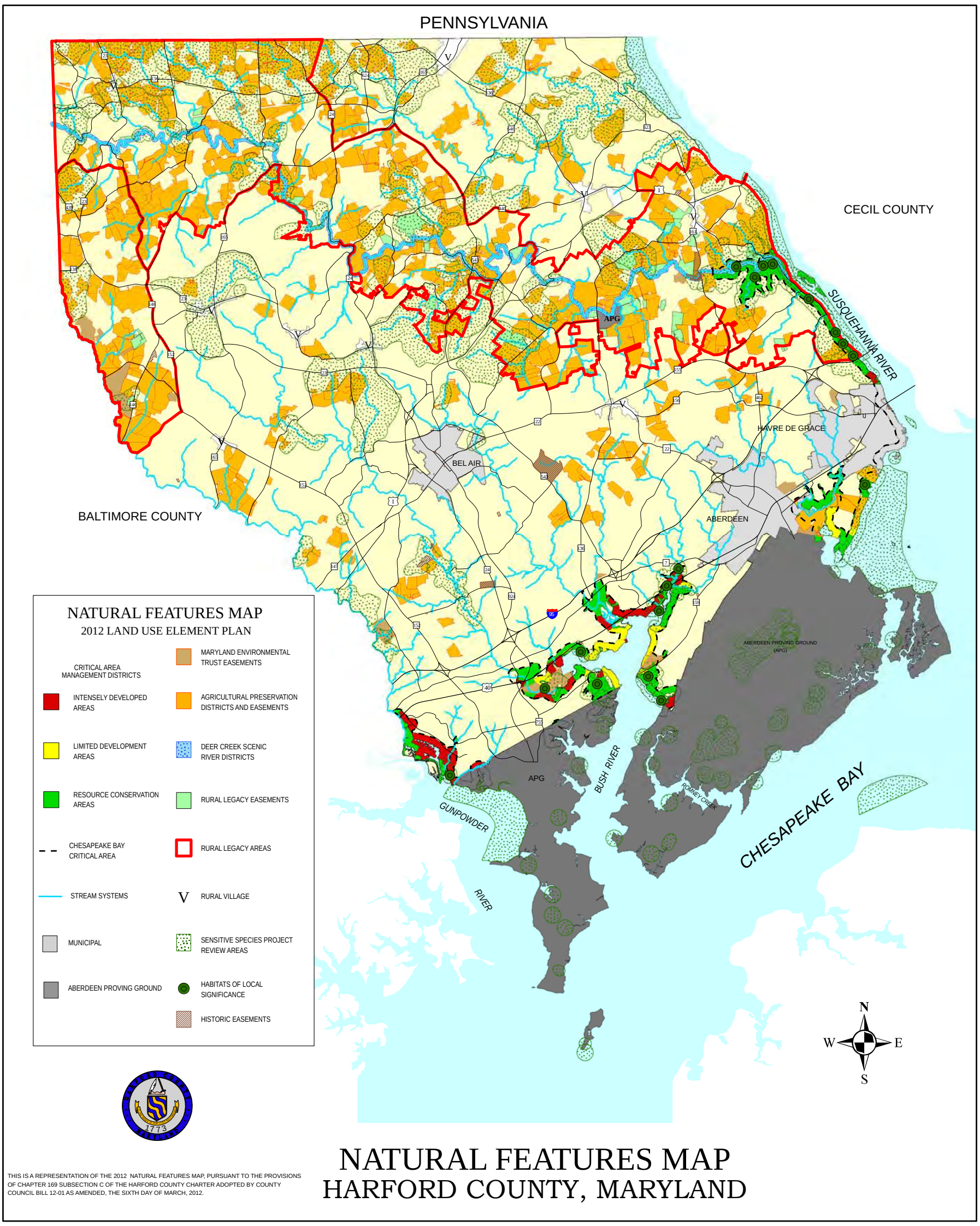
PENNSYLVANIA
CECIL COUNTY
BALTIMORE COUNTY
SUSQUEHANNA RIVER
HAVRE DE GRACE
BEL AIR
ABERDEEN
APG
ABERDEEN PROVING GROUND (APG)
BUSH RIVER
ROMNEY CREEK
GUNPOWDER
RIVER
CHESAPEAKE BAY
NATURAL FEATURES MAP
2012 LAND USE ELEMENT PLAN
CRITICAL AREA MANAGEMENT DISTRICTS
INTENSELY DEVELOPED AREAS
LIMITED DEVELOPMENT AREAS
RESOURCE CONSERVATION AREAS
CHESAPEAKE BAY CRITICAL AREA
STREAM SYSTEMS
MUNICIPAL
ABERDEEN PROVING GROUND
MARYLAND ENVIRONMENTAL TRUST EASEMENTS
AGRICULTURAL PRESERVATION DISTRICTS AND EASEMENTS
DEER CREEK SCENIC RIVER DISTRICTS
RURAL LEGACY EASEMENTS
RURAL LEGACY AREAS
RURAL VILLAGE
SENSITIVE SPECIES PROJECT REVIEW AREAS
HABITATS OF LOCAL SIGNIFICANCE
HISTORIC EASEMENTS
N
W
E
S
THIS IS A REPRESENTATION OF THE 2012 NATURAL FEATURES MAP, PURSUANT TO THE PROVISIONS OF CHAPTER 169 SUBSECTION C OF THE HARFORD COUNTY CHARTER ADOPTED BY COUNTY COUNCIL BILL 12-01 AS AMENDED, THE SIXTH DAY OF MARCH, 2012.
NATURAL FEATURES MAP
HARFORD COUNTY, MARYLAND

Figure 23

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IMPLEMENTATION

Implementation

The strategies identified in the 2012 Land Use Element Plan provide the framework for implementation. Successfully implementing these policies and strategies will require the cooperation of government agencies and officials, community leaders, and citizens. Harford County will strive to complete these programs, projects, and activities in a fiscally responsible manner while also supporting the County's sustainability initiatives.

Because the physical development of the County has evolved in relation to the various plans, policies, and regulations implemented over time, the importance of incorporating this Plan's policies and strategies into the various planning tools – zoning, subdivision, and adequate public facilities ordinances is necessary to ensure compliance with the Plan. Among the recommendations that relate to this are: the development of a revised Transfer of Development Rights Program that establishes receiving areas within the County's designated growth areas, evaluation of the possibility of expanding the County's Priority Preservation Area, expanded design standards for designated Rural Villages, the development of additional quality of life protections for private and residential properties, and specified studies and initiatives that support the provision of public facilities and implementation of the Bay Restoration Program.

A work program has been developed that prioritizes these initiatives and identifies the agency that will be responsible for its completion. Finally, it identifies which of the implementation measures involve capital expenditures. This provides a connection between the Plan's recommendations and the capital budget process.

To help provide direction and accountability for the implementation strategies identified in this Plan, an implementation matrix was developed. This matrix addresses each of the strategies identified in the Plan and assigns a timeframe to the task. The timeframe is intended to indicate the general interval during which the strategy is to be completed. Three timeframes are used: Short-term (0-3 years), intermediate (3-6 years), and long-term efforts that must be addressed on an on-going basis throughout the life of the Plan. The timeframe and extent to which a particular action item is completed is dependent on many factors including but not limited to available resources including personnel and finances, public support, and Countywide priorities. The matrix also identifies the primary department(s) that will oversee implementation of the strategies as well as noting if the item would be a capital expenditure. The abbreviations included in the chart below are used in the "Responsibility" column of the Implementation Matrix.

All of the strategies included in the matrix will be reviewed annually, and the Director of the Department of Planning and Zoning shall prepare an annual report identifying accomplishments and recommended revisions to the timeframes assigned. A cumulative report detailing overall Plan accomplishments, shortfalls, and identified implementation problems will be prepared prior to the next comprehensive update of the Land Use Element Plan.

ADMN	Harford County Administration	**IT**	Information Technology
BOED	Board of Education	**LB**	Library Board
DCS	Department of Community Services	**MUN**	Municipalities
DPW	Department of Public Works	**OED**	Office of Economic Development
EOC	Emergency Operations	**P&R**	Department of Parks and Recreation
HCC	Harford Community College	**P&Z**	Department of Planning and Zoning
HD	Health Department	**SCS**	Soil Conservation Service
HH	Healthy Harford	**SHO**	Sherriff's Office

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
LAND USE			
LAND USE THEME – ***Maintain and enhance quality of life throughout the County.***			
1. Manage growth to provide adequate housing, employment opportunities, and needed services and facilities in a fiscally responsible manner that is consistent with the County's designated growth areas.	Long-term	P&Z	N
2. Require connections between neighborhoods and employment, shopping, recreation, and educational facilities through a combination of streets, sidewalks, pathways, and bikeways that unify the community and support a healthy lifestyle.	Long-term	P&Z; P&R; DPW	Y
3. Support the creation of community centers, gateways and focal points that reflect the character of the surrounding areas.	Intermediate	P&Z;P&R;DPW	Y
4. Ensure that all new development is designed to have a minimum impact on agricultural activities, natural areas, and other resources.	Long-term	P&Z; P&R; ADMN	N
5. Enhance the character of the rural areas of the County.	Long-term	P&Z; ADMN	N
6. Develop architectural and aesthetic standards that are unique to designated communities that will establish themes and characteristics of each community. These design standards shall allow some flexibility while requiring certain design elements and aesthetics that complement the community in which the use is located.	Short-term	P&Z	N
7. Develop architectural design standards applicable to big box retail centers that provide for aesthetic enhancements and architecture that complement the existing community with particular attention given to protecting residential communities from noise, lighting and traffic.	Short-term	P&Z	N
8. Implement enforceable limits on lighting, dust/fumes and noise pollution on all properties to protect all property owners' rights to peaceful use and enjoyment of their properties and to ensure the effectiveness of buffer zones.	Short-term	P&Z; SHO	N
9. Improve the protection of ecosystems in Natural Resource Districts by limiting disturbances such as stormwater management facilities, sewage pumping stations, and nonessential roads within these Districts.	Short-term	P&Z; SCS; DPW	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
LAND USE THEME – *Manage growth in a sustainable manner.*			
1. Revise the County's Transfer of Development Rights Program to establish receiving areas within the County's designated growth areas and incentivize its use to the maximum extent possible.	Short-term	P&Z	N
2. Continue to monitor the County's inventory of residential, commercial and industrial land to ensure that projected needs can be met.	Long-term	P&Z	N
3. Work with the municipalities and other County agencies and departments to ensure that future growth is accomplished in a manner that is consistent with the Watershed Implementation Plan.	Intermediate	MUN; P&Z; DPW; P&R; HD; SCS	N
4. Continue to coordinate with the municipalities to ensure that future annexations are consistent with the Municipal Growth Elements and the County's Land Use Element Plan.	Long-term	P&Z; MUN	N
5. Encourage traditional neighborhood design guidelines, mixed use and infill developments where appropriate.	Long-term	P&Z; DPW	N
6. Ensure that the potential impacts of sea-level rise and damage from flooding and other weather related events are included as part of the County's long range planning process.	Long-term	DPW; P&Z; ADMN	N
7. Evaluate and update if necessary, the County's growth management policies in relation to the objectives of the Phase II Watershed Implementation Plan.	Intermediate	P&Z	N
8. Maintain the goal of preserving 500 acres per year within the Priority Preservation Area.	Long-term	P&Z	N
9. Identify additional areas to be proposed for inclusion in the Priority Preservation Area.	Short-term	P&Z	N
10. Continue to preserve agricultural and forested lands to meet the objectives of the Priority Preservation Area Program.	Long-term	P&Z	N
11. Maintain the County's Maryland Agricultural Land Preservation Foundation certification.	Long-term	P&Z	N
12. Support the growth of Harford Community College to enhance and expand quality educational opportunities available within the community.	Long-term	P&Z; OED	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
LAND USE THEME: Redevelopment - *Ensure that redevelopment remains a viable development option.*			
1. Identify appropriate locations within the County's designated Priority Funding Areas and support redevelopment efforts there.	Short-term	P&Z	N
2. Encourage redevelopment projects that remove existing septic systems in the Development Envelope.	Intermediate	DPW; HD	N
3. Foster the redevelopment of older neighborhoods and commercial corridors**.**	Long-term	P&Z; OED; ADMN	N
4. Review the Development Regulations and identify options to enhance and encourage the use of the mixed-use option.	Short-term	P&Z	N
5. Starting with the Rural Village Study develop design standards that can be used to retain or reestablish the original character of the Rural Villages.	Intermediate	P&Z	N
6. Ensure that redevelopment, infill development or any expansion of future Rural Villages support the character of the village through architectural and aesthetic standards and traditional neighborhood design.	Long-term	P&Z	N
LAND USE THEME – *Provide a balance and mixture of housing to meet the needs of all income levels and age groups throughout the County.*			
1. Support the development of diverse, safe, and high quality affordable housing for people of all ages, ethnic groups, and races.	Long-term	P&Z; DCS	N
2. Continue to coordinate with the Department of Community Services to ensure consistency between the Land Use Element Plan and the Consolidated Plan's Housing Element.	Long-term	DCS: P&Z	N
3. Develop an inventory of affordable rental housing units and determine if this meets the needs of the community based on data provided by the Department of Community Services.	Intermediate	DCS; P&Z	N
4. Develop a policy for providing affordable housing within the various land use designations.	Intermediate	P&Z; DCS	N
5. Encourage a mix of multi-family housing options as part of redevelopment and revitalization projects.	Long-term	P&Z	N
6. Review and revise regulations that might restrict affordable housing opportunities.	Short-term	P&Z; DCS	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
ECONOMIC PROPSERITY			
ECONOMIC PROSPERITY THEME - ***Adapting to a changing economy.***			
1. Review, on an annual basis, the Economic Development Advisory Board's Visioning Plan to ensure that its strategic approach sustains and enhances the County's economic vitality.	Long-term	OED	N
2. Develop and implement an Office of Economic Development business expansion plan.	Intermediate	OED	N
3. Develop, implement, and periodically assess the effectiveness of established incentives to attract and retain targeted businesses.	Long-term	OED	N
4. Maintain the County's inventory of vacant commercial and industrial lands to ensure that an adequate assortment of properties is available for use.	Long-term	P&Z; OED	N
5. Increase the availability of higher educational opportunities that provide advanced degrees to support the needs of the County's technology based employers.	Intermediate	HCC; BOED; OED	N
6. Evaluate the designated community and neighborhood centers and establish boundaries that provide for appropriate growth and redevelopment consistent with community character.	Intermediate	P&Z	N
7. Continue to demonstrate a commitment to environmental stewardship through the promotion of energy efficiency, resource management, and sustainability.	Long-term	ADMN	N
8. Establish a process which includes an architectural design review for commercial projects to ensure that structures, landscaping and other features of the project complement and enhance the community in which the proposed project is located.	Short-term	P&Z	N
ECONOMIC PROSPERITY THEME – ***Support a diversity of businesses and jobs including farm based businesses.***			
1. Continue to support the startup, expansion, and relocation of businesses by providing an adequate inventory of usable properties along with sufficient infrastructure and a well trained labor force.	Long-term	OED; P&Z; DPW; HCC	N
2. Support and coordinate efforts to provide adequate infrastructure and community investment in areas identified for employment opportunities.	Intermediate	DPW; OED; P&Z	Y

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
3. Create partnerships at the local, State, and national level to support the implementation of economic development policies.	Intermediate	OED; ADMN; MUN	N
4. Develop and implement educational training that provides a well prepared diversified workforce.	Intermediate	HCC; BOE; ADMN; BOE	N
5. Encourage the redevelopment of commercial areas to strengthen community identity and contribute to overall neighborhood revitalization.	Long-term	P&Z	N
6. Evaluate the design criteria for retail commercial buildings to ensure that they support the maintenance and enhancement of the surrounding community character.	Short-term	P&Z	N
7. Continue to recognize and support the agricultural industry as an important part of the County's economy and heritage.	Long-term	OED; ADMN; P&Z	N
8. Support the expansion of existing farm markets and the diversification of on-farm production.	Intermediate	ADMN; OED	N
9. Continue to support the County's tourism industry in a manner that benefits County residents and encourages community reinvestment.	Long-term	OED	N
ECONOMIC PROSPERITY THEME – *Maintain an emphasis on the U.S. Route 40 Corridor.*			
1. Work with the State and the municipalities to identify infrastructure improvements for the U.S. Route 40 Corridor that support its role as the County's primary business corridor.	Intermediate	P&Z; MUN; DPW; IT	Y
2. Investigate the possibility of expanding the boundaries of the Chesapeake Science and Security Corridor.	Short-term	OED; P&Z	N
3. Provide state of the art information technology services throughout the U.S. Route 40 Corridor.	Long-term	IT	Y
4. Work with the State to identify alternative opportunities to support redevelopment and revitalization as an offset to the sunset provisions of the County's Enterprise Zone.	Intermediate	OED	N
5. Encourage the provision of workforce housing within employment areas.	Long-term	P&Z; DCS	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
ECONOMIC PROSPERITY THEME – *Continue to support the mission of Aberdeen Proving Ground.*			
1. Continue to work with the State to improve access to the facility including roads, upgrades to MARC service and facilities, and the establishment of a Transit Oriented Development centered on the Aberdeen train station.	Intermediate	P&Z; DPW; DCS; OED	Y
2. Maintain a permanent liaison with Aberdeen Proving Ground to support the retention of the facility in Harford County and to ensure the coordination of future initiatives.	Long-term	OED; ADMN	N
3. Promote the development of service industries and technology companies that support the facilities workforce and mission.	Intermediate	OED	N
4. Identify potential opportunities for the development of mixed use projects that offer a variety of housing types, services, and office space that supports the Proving Ground's mission.	Long-term	P&Z; OED	N
PUBLIC FACILITIES, SERVICES AND SAFETY			
PUBLIC FACILITIES, SERVICES AND SAFETY THEME– *Proactively plan for facilities that meet community needs.*			
1. Continue to evaluate existing levels of service provided by the County's public facilities and services and determine future needs.	Long-term	P&Z; DPW	N
2. Use the land use inventories to determine where and how much new growth could occur and identify facilities and services needed to support this growth.	Intermediate	P&Z; DPW	N
3. Develop a capital improvement process which establishes a consistent and coordinated approach to ensure that included projects are compatible with the Land Use Element Plan.	Short-term	DPW; P&Z	N
4. Continue to review all capital projects for consistency with adopted planning documents.	Long-term	DPW; P&R; LB; BOED; P&Z; IT	N
5. Create a comprehensive master facilities inventory that can be used to identify and address future facility needs.	Short-term	ADMN; DPW; P&R; LB; BOED; IT; P&Z	N
6. Locate new or expanded community facilities in designated community and neighborhood centers whenever possible.	Long-term	P&Z; DPW; P&R; LB; BOED	Y
7. Continue to pursue information technology- (IT) initiatives to provide improved communications and online services.	Long-term	IT	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
8. Undertake a study to determine future needs for the County's Detention Center.	Intermediate	SHO; ADMN	N
PUBLIC FACILITIES, SERVICES AND SAFETY THEME– *Fund needed improvements or expansions in a cost effective way.*			
1. Support the development of multi-purpose facilities to reduce land acquisition and construction costs.	Long-term	ADMN; P&R; LB; BOED; DPW	Y
2. Evaluate the fiscal impact and timing of needed capital improvements to minimize their impacts on operational and maintenance budgets.	Long-term	DPW; P&R; LB; BOED; ADMN	N
3. Establish prioritization guidelines to ensure that facilities and services are provided in a manner that maximizes the efficient use of capital resources.	Short-term	DPW; P&Z; ADMN	N
4. Maximize the procurement of grants, endowments, and private donations for applicable public facilities and services.	Long-term	ADMN; DPW; LB; BOED; P&R	N
5. Maintain an effective facilities financing program to ensure that the impact of new development is mitigated through appropriate fees.	Long-term	DPW; P&Z; ADMN	N
6. Continue to use special taxing or special assessment districts in areas where major facility upgrades are needed.	Long-term	ADMN; DPW; OED	N
7. Explore the possibility of public/private partnerships for County buildings including lease to purchase or sale back agreements.	Short-term	ADMN	Y
8. Develop a process to institutionalize public private partnerships to provide needed facilities or land for public improvements.	Intermediate	ADMN	N
9. Review and update the Rules and Regulations to provide for the timely construction of public facilities in relation to development projects.	Short-term	P&Z; DPW	N
PUBLIC FACILITIES, SERVICES, AND SAFETY THEME: HEALTH AND SAFETY - *Provide for safe and healthy communities.*			
1. Provide bicycle and pedestrian accommodations to and at County-owned facilities.	Intermediate	DPW; P&Z; ADMN	Y

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
2. Review and revise the Subdivision Regulations to require that new development and redevelopment occurring within the designated growth areas support a healthy lifestyle by being interconnected and accessible by walking, biking, or transit.	Short-term	P&Z	N
3. Coordinate the construction of trails and bike/pedestrian activities in corridors that link existing or planned facilities.	Long-term	P&Z; DPW; P&R	Y
4. Provide additional opportunities for healthy activities by expanding the hours and offerings at the activity centers.	Short-term	P&R	N
5. Design and build more community centers with indoor athletic and exercise options.	Long-term	P&R	Y
6. Support the development of a Center for the Visual and Performing Arts.	Short-term	P&R; P&Z; ADMN	Y
7. Continue to work with Healthy Harford to provide opportunities for a healthy lifestyle.	Long-term	P&Z; DPW; HH; BOED	N
SUSTAINABILITY			
SUSTAINABILITY THEME: - ***Integrate sustainable practices into County government operations.***			
1. Enhance the County 'Green Team' advocacy of best management practices that promote energy and cost savings measures within each department of County Government.	Short-term	ADMN	N
2. Establish an employee communication strategy to showcase best practices of sustainability as well as increase employee participation and decision-making in sustainability initiatives.	Short-term	ADMN	N
3. Complete a greenhouse gas inventory of County Operations and define a greenhouse gas reduction strategy based upon the baseline inventory.	Short-term	ADMN	N
4. Adopt a Sustainability Action Plan for County government operations to establish an implementation plan for sustainable practices.	Short-term	ADMN	N
5. Implement sustainable building standards into the construction and renovation of government facilities wherever possible.	Short-term	ADMN	Y
6. Partner with the State, Baltimore Metropolitan Council, Harford County Public Libraries, Harford County Public Schools, Harford County municipalities, APG and the Harford County Chamber of Commerce to develop joint sustainability goals and programs.	Intermediate	ADMN; BOED; MUN; LB	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
SUSTAINABILITY THEME: - *Educate, empower and engage citizens about sustainability.*			
1. Conduct a greenhouse gas inventory for the community at large.	Intermediate	ADMN	N
2. Continue to support the Harford County Green Business Network.	Long-term	ADMN; OED	N
3. Partner with residents, businesses and non-profit organizations to develop sustainability goals and programs.	Intermediate	ADMN	N
4. Develop a community sustainability education and outreach program.	Intermediate	ADMN	N
5. Establish a Community Sustainability Advisory Committee.	Short-term	ADMN	N
6. Continue to support the County's Recycling Office single-stream recycling initiatives.	Long-term	ADMN; DPW	N
SUSTAINABILITY THEME: - *Encouraging Mixed Use.*			
1. Create an educational brochure on the benefits of mixed use developments for the community and developers.	Intermediate	ADMN; P&Z	N
2. Host a developer charette to discuss challenges and incentives related to mixed-use developments.	Intermediate	ADMN; P&Z	N
3. Apply the Housing and Transportation Affordability Index to the County development review process and determine its usefulness as an affordable housing tool.	Intermediate	ADMN; P&Z	N
4. Study successful mixed-use projects and identify the criteria and processes that are needed to generate a market for mixed-use projects.	Intermediate	ADMN; P&Z	N
5. Evaluate the greenhouse gas reductions from mixed use developments to support the goals within the 2009 Maryland Greenhouse Gas Reduction Act.	Intermediate	ADMN; P&Z	N
SUSTAINABILITY THEME: - *Make revitalization a viable sustainable development option.*			
1. Explore the feasibility of integrating multi-modal options within revitalization areas to reduce greenhouse gas emissions.	Short-term	DPW; ADMN; P&Z	Y
2. Integrate energy efficiency and water conservation measures within revitalization projects.	Short-term	ADMN; P&Z	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
3. Establish public and private partnerships and alternative financing methods that will encourage and incentivize the redevelopment and revitalization of projects and brownfield sites located within designated corridors enhancing the area and bringing properties to their fullest, highest and best use while creating job opportunities for residents of our County.	Short-term	OED; P&Z	N
4. Coordinate with stakeholders to develop implementation strategies for the Carbon Neutral Corridor Pilot Study.	Intermediate	P&Z; ADMN; OED; DPW	N
5. Continue to support the Carbon Neutral Corridor Pilot Study.	Long-term	ADMN; DPW; P&Z	N
SUSTAINABILITY THEME: - *Sustaining Rural Areas and Agriculture.*			
1. Expand the *Buy Local* campaign by utilizing a multi-media approach.	Short-term	ADMN; OED	N
2. Identify the process and alternatives for establishing an Urban Farms program.	Intermediate	ADMN; P&Z	N
3. Expand the *Farm to School* program within the Harford County Public Schools.	Short-term	ADMN; BOED	N
4. Research the feasibility of a regional food policy with neighboring counties.	Intermediate	ADMN; MUN	N
5. Support renewable energy generation opportunities on agriculturally zoned parcels .	Long-term	P&Z; ADMN	N
6. Continue to support the preservation of agricultural land with the goal of maintaining a workable farm base.	Long-term	P&Z	N
SUSTAINABILITY THEME: - *Water Quality and Watershed Protection.*			
1. Identify new strategies, in coordination with the municipalities, to assure the County will meet its nutrient and sediment reduction targets for the Chesapeake Bay TMDL and local TMDLs.	Short-term	MUN; P&Z; DPW; HD	N
2. Develop a tracking mechanism to monitor the best management practices being undertaken to improve water quality and meet nutrient and sediment reduction goals.	Intermediate	DPW; HD; SCS; MUN; P&Z	N
3. Identify additional funding mechanisms to achieve water quality goals.	Intermediate	DPW; SCS; HD; MUN; P&Z	N
4. Explore enhancements to the County's Forest Conservation Program and Natural Resource District regulations as well as potential new programs, to increase the acreage of stream buffers and forests to benefit water quality and ecological health.	Intermediate	P&Z; SCS	N

Themes and Associated Implementation Strategies/Action Items	Timeframe	Responsibility	Capital Item (Y/N)
5. Develop incentives and promote low impact development and green building practices to reduce the amount of impervious surfaces and reduce impacts to water quality.	Short-term	P&Z; DPW; ADMN	N
6. Establish policies in Tier II watersheds to protect surface water supplies and high quality streams.	Short-term	P&Z	N
7. Pursue the accelerated implementation of the Bush River and Deer Creek Watershed Plans to protect water quality and conserve natural resources.	Intermediate	DPW; P&Z; SCS	Y
SUSTAINABILITY THEME: - ***Manage the County's Mineral Resources in a sustainable manner.***			
1. Work with the community and the State to ensure that mining operation plans are designed to protect the environment and address compatibility with surrounding land uses.	Long-term	P&Z	N
2. Ensure that new development plans, in areas where mineral resource extraction is being conducted, are designed to avoid conflicts with ongoing and planned future mining activities.	Long-term	P&Z	N
3. Create a framework for reviewing and maintaining restoration plans.	Intermediate	P&Z	N
4. Include mineral resources in the next update of the Natural Resources Element Plan to ensure consistent management of the County's resources.	Intermediate	P&Z	N

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LAND USE

POLICY: Guide future growth and development in a sustainable manner that maintains or enhances quality of life throughout the County.

Land use involves the management and modification of land and its associated resources. In Harford County, there are a variety of uses associated with the land use designations delineated in the County's Master Plan and Land Use Element Plan. These land use designations serve as a guide for future development and help to ensure a coordinated and harmonious relationship between existing and anticipated land uses.

Since the inception of the Development Envelope in 1977, the goal has been to direct new growth to this specific area. In the Development Envelope, land use designations provide for residential, commercial, and industrial land uses in areas where public facilities and services can be provided. Outside of the Development Envelope, the objective has been to minimize the impacts of growth on agricultural lands and other resources. As a result of these efforts, on average 80% of all new growth has been directed to the Development Envelope and Countywide over 45,500 acres of land have been protected through preservation efforts.

The Plan recognizes that in order to meet the TMDL requirements established by the Environmental Protection Agency's Bay Restoration Program, new development and redevelopment in the County must be served by a wastewater system that provides enhanced nutrient reduction. This includes advanced on-site septic systems or connection to public utilities where the utility is available or planned to be available. Development in areas not served by public sewer must be minimized. The amount of impervious surfaces associated with development must be reduced to achieve the water quality objectives.

Now the County must look ahead and prepare to address the challenges of the 21st century. In Harford County, land use decisions must focus on maintaining and enhancing quality of life, managing growth, and providing opportunities for redevelopment. They must also provide for a healthy lifestyle, and they must consider the potential impacts of global climate change and uncertain energy costs while addressing Bay restoration efforts and the protection of our resources. They must support growth within designated areas and protect areas that are rich in agricultural and/or natural resources, where preservation of large contiguous tracts is necessary to sustain rural resources and resource-based businesses.

LAND USE THEME – ***Maintain and enhance quality of life throughout the County.***

Quality of life is an all encompassing concept that relates to all elements of this Plan. It involves the stewardship of land, water and air and the provision of services and facilities that result in sustainable communities. It also involves the more intrinsic values that influence the enjoyment and satisfaction that County residents experience in their everyday lives.

Harford County has recognized the importance of quality of life in previous plans, and the County realizes that in light of continuing growth and development, maintaining and enhancing the quality of life is more important than ever. While the design of the built environment is a key component, protecting and enhancing existing neighborhoods requires that new uses, redevelopment, and infill be completed in a manner that blends with and enhances the surrounding community character. Neighborhoods need to remain vibrant, well into the future, while providing opportunities for a diverse array of housing styles and prices that offer affordable, quality housing for all income levels.

Implementation Strategies

1. Manage growth to provide adequate housing, employment opportunities, and needed services and facilities in a fiscally responsible manner that is consistent with the County's designated growth areas.

2. Require connections between neighborhoods and employment, shopping, recreation, and educational facilities through a combination of streets, sidewalks, pathways, and bikeways that unify the community and support a healthy lifestyle.

3. Support the creation of community centers, gateways and focal points that reflect the character of the surrounding areas.

4. Ensure that all new development is designed to have a minimum impact on agricultural activities, natural areas, and other resources.

5. Enhance the character of the rural areas of the County.

6. Develop architectural and aesthetic standards that are unique to designated communities that will establish themes and characteristics of each community. These design standards shall allow some flexibility while requiring certain design elements and aesthetics that complement the community in which the use is located.

7. Develop architectural design standards applicable to big box retail centers that provide for aesthetic enhancements and architecture that complement the existing community with particular attention given to protecting residential communities from noise, lighting and traffic.

8. Implement enforceable limits on lighting, dust/fumes and noise pollution on all properties to protect all property owners' rights to peaceful use and enjoyment of their properties and to ensure the effectiveness of buffer zones.

9. Improve the protection of ecosystems in Natural Resource Districts by limiting disturbances such as stormwater management facilities, sewage pumping stations, and nonessential roads within these Districts.

LAND USE THEME – *Manage growth in a sustainable manner.*

Harford County has managed growth through a combination of designated growth areas, legislative tools such as Adequate Public Facilities ordinances, and preservation programs. Because available land is a primary factor for new development and redevelopment, the County maintains vacant land inventories that identify the remaining residential, commercial, and industrial properties both inside and outside of the Development Envelope. As noted previously, there is a sufficient inventory of vacant land to meet the County's residential, commercial, and industrial needs for the foreseeable future. This inventory can be extended even further by wise redevelopment, revitalization, and infill.

While Harford County and the municipalities have worked together to meet the requirements of the State's Smart Green and Growing legislation through the establishment of Municipal Growth Element Plans, Water Resource Element Plans, and a Priority Preservation Area Plan; they still face additional growth management challenges. The Environmental Protection Agency's Bay Restoration Program is

being addressed through Watershed Implementation Plans (WIP). Harford County's Phase II WIP is being developed in coordination with the municipalities and must address the Total Maximum Daily Load (TMDL) requirements. These TMDLS will influence the location and scale of development that can occur in the County since 60% of the targeted load reductions are to be met by 2017.

Along with the Bay Program, other State programs will have a direct impact on growth, preservation, and other resources. These will require that the County reevaluate some of its programs to ensure that they are compatible with State goals.

Implementation Strategies

1. Revise the County's Transfer of Development Rights Program to establish receiving areas within the County's designated growth areas and incentivize its use to the maximum extent possible.

2. Continue to monitor the County's inventory of residential, commercial, and industrial land to ensure that projected needs can be met.

3. Work with the municipalities and other County agencies and departments to ensure that future growth is accomplished in a manner that is consistent with the Watershed Implementation Plan.

4. Continue to coordinate with the municipalities to ensure that future annexations are consistent with the Municipal Growth Elements and the County's Land Use Element Plan.

5. Encourage traditional neighborhood design guidelines, mixed use and infill developments where appropriate.

6. Ensure that the potential impacts of sea-level rise and damage from flooding and other weather related events are included as part of the County's long range planning process.

7. Evaluate and update if necessary, the County's growth management policies in relation to the objectives of the Phase II Watershed Implementation Plan.

8. Maintain the goal of preserving 500 acres per year within the Priority Preservation Area.

9. Identify additional areas to be proposed for inclusion in the Priority Preservation Area.

10. Continue to preserve agricultural and forested lands to meet the objectives of the Priority Preservation Area Program.

11. Maintain the County's Maryland Agricultural Land Preservation Foundation certification.

12. Support the growth of Harford Community College to enhance and expand quality educational opportunities available within the community.

LAND USE THEME: REDEVELOPMENT – ***Ensure that redevelopment remains a viable development option.***

Redevelopment is an important aspect of the development cycle of a community. It is defined as any new construction on a site that has pre-existing uses. Projects can be small or large ranging from a single building to an entire neighborhood. Redevelopment activities can include the rehabilitation or reconstruction of existing structures, the design or replanning of areas with insufficient site layout, the demolition and clearance of existing structures, and the construction of public facilities including, but not limited to, public buildings, streets, sidewalks, sewers, storm drains, water systems and street lights.

It is one of the most effective ways to support sustainable development because it reduces the pressure to develop "green" or previously undeveloped sites. Redevelopment reduces sprawl, and it tends to occur in areas already served by public infrastructure. It can also improve environmental problems that might not have been addressed by previous uses.

Harford County's Development Regulations encourage redevelopment in the Chesapeake Science and Security Corridor (CSSC) and Edgewood Neighborhood Overlay District (ENOD). The CSSC, located along the U.S. Route 40 corridor, encourages redevelopment to support high-tech, science and security related employment and educational opportunities. The Edgewood Neighborhood Overlay District is intended to encourage quality redevelopment within the Edgewood Community Area. The County has also demonstrated commitment to redevelopment through its school replacement program. Bel Air High School, Edgewood High School, North Harford High School, and Deerfield Elementary have all been reconstructed or expanded on the existing school sites. The County is also working with the City of Aberdeen to establish a Transit Oriented Development project at the site of the existing train station on U.S. Route 40.

Implementation Strategies

1. Identify appropriate locations within the County's designated Priority Funding Areas and support redevelopment efforts there.

2. Encourage redevelopment projects that remove existing septic systems within the Development Envelope.

3. Foster the redevelopment of older neighborhoods and commercial corridors.

4. Review the Development Regulations and identify options to enhance and encourage the use of the mixed-use option.

5. Starting with the Rural Village Study develop design standards that can be used to retain or reestablish the original character of the Rural Villages.

6. Ensure that redevelopment, infill development or any expansion of future Rural Villages support the character of the village through architectural and aesthetic standards and traditional neighborhood design.

LAND USE THEME – ***Provide a balance and mixture of housing to meet the needs of all income levels and age groups throughout the County.***

The programs and actions of local government can have an influence on the housing market. In preparing an update of the Land Use Element Plan, the County evaluates data about current home ownership patterns, amounts of available land within the various zoning classifications and projected population and household numbers. This analysis yields information that is used to formulate policies and strategies that will provide opportunities for the development of the types and amounts of housing needs for the next 20 years. These strategies should provide a range of housing choices that meet the needs of persons of all income levels, age groups, including persons with special needs.

Harford County also has a Consolidated Plan which establishes strategies to provide decent housing, a suitable living environment, and expanded economic opportunities for low to moderate income residents. The Consolidated Plan's goal is accomplished through partnerships among all levels of government and the private sector and includes for-profit and non-profit agencies. The Consolidated Plan is prepared by the Department of Community Services, and is part of their efforts to promote home ownership and assist with the rehabilitation of homes. Community Services also administers programs that help to provide housing for the elderly and affordable rental housing.

As the County prepares for the update of its Consolidated Plan, it must be ready to face the challenges of the current economic climate. Since 2008, less than 600 residential permits have been issued per year, which is an indicator of the downturn in the available housing market. Even with a slight shift toward more townhomes, condominiums, and apartments, the number of families desiring affordable housing has increased beyond the market offerings. When updating the Consolidated Plan to address future needs for a variety of affordable housing, the community's desire to maintain the quality and character of existing neighborhoods must be considered.

Implementation Strategies

1. Support the development of diverse, safe, and high quality affordable housing for people of all ages, ethnic groups, and races.

2. Continue to coordinate with the Department of Community Services to ensure consistency between the Land Use Element Plan and the Consolidated Plan's Housing Element.

3. Develop an inventory of affordable rental housing units and determine if this meets the needs of the community based on data provided by the Department of Community Services.

4. Develop a policy for providing affordable housing within the various land use designations.

5. Encourage a mix of multi-family housing options as part of redevelopment and revitalization projects.

6. Review and revise regulations that might restrict affordable housing opportunities.

SUMMARY

During the public input process, it was clear that maintaining and enhancing quality of life is important to the citizens of Harford County. Residents like their communities and neighborhoods, and the

County's agricultural heritage. They value the lifestyle they have. Concerns about the potential impacts associated with additional growth were clearly stated, but citizens also recognized that growth must be accommodated. Infrastructure and service improvements, along with maintaining community character, were identified by the public as crucial to maintaining their quality of life.

The challenge facing Harford County is managing this future growth in a way that protects the existing community values while also addressing the Watershed Implementation Plan and TMDL requirements. Beginning with the establishment of Priority Funding Areas, which includes the Development Envelope, the three municipalities, areas designated for economic development, Harford Community College, the Higher Education Conference Center at HEAT, the Mixed Office areas, and the Rural Villages, the County has taken steps to define its designated growth areas.

Starting with the PFAs, these areas will be designated as targets for growth and community revitalization with the goal of ensuring that they are vibrant and attractive places to live and work. The designation of these areas will begin with areas already targeted for revitalization such as Enterprise Zones, BRAC Zones, and Transit Oriented Development Zones. In the remainder of the PFA the goal will be to maintain the quality of life and protect the character of existing residential and commercial neighborhoods while providing a variety of housing options and community facilities and services in a sustainable manner.

Maintaining the quality of life in the rural areas of the County is also a challenge. Harford County has a strong history of preservation efforts dating back to the 1970s when the first properties were preserved through programs offered by the Maryland Environmental Trust and the Maryland Historical Trust. In 1982, the County began its first agricultural preservation program with the Maryland Agricultural Land Preservation Foundation (MALPF). Then in 1993, the County established the Harford County Agricultural Land Preservation Program (HALPP), and since 2000 the Rural Legacy Program has provided land owners with an additional option for protecting their land. The County continues to recognize preservation as an important component of its land use strategies and continues to protect agricultural lands utilizing all these programs.

The Rural Legacy Program was created to protect large, contiguous tracts of the State's most precious cultural and natural resource lands, and in Harford County the program is available to property owners in two specific areas – the Deer Creek Valley Rural Legacy Area and the Manor Rural Legacy Area. The Deer Creek Rural Legacy Area encompasses 66,701 acres stretching across the County from the Susquehanna River to the Baltimore County border and the Manor Rural Legacy Area. It also reaches north through the Deer Creek watershed to the Pennsylvania line. The Manor Rural Legacy Area is located in the northwestern part of the County and is a joint preservation effort between Baltimore and Harford Counties. The Manor Rural Legacy Area consists of 28,434 acres of which approximately 12,000 acres are in Harford County.

The importance of concentrating preservation efforts to support agricultural operations, combined with the need to maximize the efficiency of State funding, was highlighted in 2006 by the Maryland General Assembly. In response to the passage of the Agricultural Stewardship Act (House Bill 2), Harford County designated a Priority Preservation Area (PPA). The Priority Preservation Area follows the same boundaries as the Deer Creek Rural Legacy Area, and within this area, preservation efforts are focused with the goal of preserving 80% of the remaining undeveloped land. Approximately 49% of this area has been protected through various programs, and the County will continue to pursue preservation efforts within the PPA to ensure continued participation in the MALPF program. In addition to the Rural Legacy Areas, other communities throughout the County have a rich agricultural heritage. Recognizing the

importance of protecting this heritage and the associated agricultural industry, the Department will evaluate options to determine if the County's Priority Preservation Area should be expanded, and if appropriate the County will pursue the expansion of the area or the designation of additional PPAs.

While the County remains an advocate of agricultural land preservation and continues to support the evolution of its agricultural industry, anticipated growth and the Phase II WIP requirements must also be addressed in the rural areas. Looking at alternatives that minimize the conversion of agricultural lands to other uses, while maintaining the landowner's equity, has led to an increased focus on other growth management tools.

Transfer of Development Rights (TDR) is a "smart growth" tool that can be used to manage land development. It is a method of protecting land by transferring the property owner's rights to develop from one area – "the sending area" to another area –"the receiving area". These transfers allow for the preservation of land, while generally allowing another area to increase its density. However, other guidelines for requiring TDRs can be established unrelated to density increases.

Recently, TDR programs have become a focus of the Maryland Agricultural Land Preservation Foundation's recertification process. Many Harford County citizens have also proposed that the County's TDR program be revised. The Department of Planning and Zoning will undertake a review and update of the County's TDR program. The goal will be to protect land owner equity while establishing new receiving areas focused on the Designated Growth Areas in a manner that supports the Plan's policies and is consistent with State initiatives.

In addition to directing where growth occurs, it is important to address the types of land uses that are permitted within the various designations, and how these can be provided to enhance community character. The Community Area section of the Plan describes the character of 13 different community areas, and provides guidance for the future of each area. Nevertheless, strategies in the Plan need to comprehensively address how changes in use should relate to the surrounding community and how design standards and the establishment of community gateways and focal points can support community identity. Strategies also need to support a variety of housing options and a healthy lifestyle.

Future growth and redevelopment in the County will have to focus not only on the Plan's goals and strategies, but also on State and Federal initiatives. The EPA's Bay Restoration Program will have a major influence on how and where Harford County grows. In order to meet State and Federal requirements for TMDL, wastewater nutrient loadings will have to be addressed, particularly in the rural areas. These strategies include reducing the number of additional septic systems in the County; therefore, this Plan removes the Rural Residential (RR) designation from the Land Use Element Plan Map. Addressing these issues while continuing to foster viable, sustainable communities that support a healthy lifestyle will require the County, State and the three municipalities to continue to work together.

ECONOMIC PROSPERITY

Policy: Promote economic opportunity for all segments of the population and support the development of a diverse, innovative, and competitive economy.

Harford County recognizes that supporting economic prosperity is a key component of maintaining a high quality of life in the County. The County's economic development program promotes business growth and new investment that generates valuable employment opportunities and supports the development of a sustainable, dynamic economy.

While Harford County's strategic mid-Atlantic location along the I-95 corridor is a major asset, the County recognizes the need to enhance its competitive position by creating an environment that allows business and industry to respond to today's rapidly changing economy at the local, regional, national, and global level. Since 2005 when the Department of Defense's Base Realignment and Closure (BRAC) Commission recommended a series of military relocations and alignments, that changed the mission of the Aberdeen Proving Ground, Harford County has been a leader in supporting the facility's new mission. Switching from a predominately military mission to civilian contractors at the forefront of technical achievements in national defense, intelligence, chemical and biological research, engineering, and computer technology has increased economic development interest in this area.

In addition to the benefits associated with this economic growth, the potential impact on infrastructure and the surrounding communities needs to be taken into consideration. While planning for economic development, consideration must be given to improving the quality of life within the community. With careful planning and the incorporation of appropriate amenities, businesses will remain good corporate neighbors.

Another component of the County's economic prosperity focuses on maintaining and developing a strong agricultural economy. Increasingly, local farmers are moving toward marketing their products to the surrounding community, and this effort is supported by the concept of sustainable agriculture. Maintaining the County's agricultural industry is a major component of the County's economic prosperity, and it also offers County residents a healthy option as it relates to food production, distribution, and consumption.

The strategies included in this section are intended to improve economic prosperity by ensuring that the local economy can grow in ways that strengthen the County's businesses and industries-large and small-while also supporting the mission of Aberdeen Proving Ground. They are designed to help retain and create jobs that offer self-reliant wages, provide a highly trained workforce that can meet the needs of employers, and support the initiatives of the Chesapeake Science and Security Corridor.

ECONOMIC PROSPERITY THEME - ***Adapting to a changing economy.***

Harford County's economic development policies are geared toward improving economic prosperity by supporting and strengthening our businesses and industries, retaining and creating jobs, and stimulating investment in the County's communities. Maintaining economic prosperity in the 21st century requires flexibility and recognition that businesses must operate in the broader context of the regional, national, and global community. The County needs to ensure its competitive position by creating an environment where businesses can create, respond, and adjust rapidly.

Recognizing this changing economic climate, the County's Economic Development Advisory Board has developed a five year Visioning Plan. While the Plan adopted in December of 2010 recognizes that the County has entered into the final phase of BRAC, it also recognizes that the County must be prepared for the future economic growth beyond BRAC. The Visioning Plan provides a strategic approach to sustaining and enhancing the County's economic vitality while establishing its long-term regional viability as a "technopolis" in northeastern Maryland and the mid-Atlantic region. It recognizes the importance of land use, workforce development and education, and finance.

Implementation Strategies

1. Review, on an annual basis, the Economic Development Advisory Board's Visioning Plan to ensure that its strategic approach sustains and enhances the County's economic vitality.

2. Develop and implement an Office of Economic Development business expansion plan.

3. Develop, implement, and periodically assess the effectiveness of established incentives to attract and retain targeted businesses.

4. Maintain the County's inventory of vacant commercial and industrial lands to ensure that an adequate assortment of properties is available for use.

5. Increase the availability of higher educational opportunities that provide advanced degrees to support the needs of the County's technology based employers.

6. Evaluate the designated community and neighborhood centers and establish boundaries that provide for appropriate growth and redevelopment consistent with community character.

7. Continue to demonstrate a commitment to environmental stewardship through the promotion of energy efficiency, resource management, and sustainability.

8. Establish a process which includes an architectural design review for commercial projects to ensure that structures, landscaping and other features of the project complement and enhance the community in which the proposed project is located.

ECONOMIC PROSPERITY THEME – ***Support a diversity of businesses and jobs including farm based businesses.***

Aberdeen Proving Ground has been one of the County's primary employers for many years, and the Base Realignment and Closure Act has been a driving force of the County's economic development program since its passage in 2005. However, Harford County must remain diligent in its efforts to be a diversified business community. It must not become totally centered in the defense industries, but rather it must remain a County that supports all its businesses and industries regardless of size.

The County's location in the mid-Atlantic region continues to be an asset. Combined with a sound industrial and commercial land inventory, transportation availability via road and rail, and the County's proximity to major airports and harbors in Baltimore and Philadelphia, Harford County remains a prime location for prospective companies.

Another component of Harford County's economic development strategy is maintaining and developing a strong agricultural economy – one that recognizes the importance of farming as an industry and one that supports and promotes sustainable agriculture. The Division of Agriculture provides information and assistance to existing and prospective farmers. Their programs help farmers to become well educated about grant opportunities, expansions, and improvements. Each year the Division of Agriculture establishes a series of priorities. While these priorities vary, they continue to focus on marketing, education, and public awareness.

Implementation Strategies

1. Continue to support the startup, expansion, and relocation of businesses by providing an adequate inventory of usable properties along with sufficient infrastructure and a well trained labor force.

2. Support and coordinate efforts to provide adequate infrastructure and community investment in areas identified for employment opportunities.

3. Create partnerships at the local, State, and national level to support the implementation of economic development policies.

4. Develop and implement educational training that provides a well prepared diversified workforce.

5. Encourage the redevelopment of commercial areas to strengthen community identity and contribute to overall neighborhood revitalization.

6. Evaluate the design criteria for retail commercial buildings to ensure that they support the maintenance and enhancement of the surrounding community character.

7. Continue to recognize and support the agricultural industry as an important part of the County's economy and heritage.

8. Support the expansion of existing farm markets and the diversification of on-farm production.

9. Continue to support the County's tourism industry in a manner that benefits County residents and encourages community reinvestment.

ECONOMIC PROSPERITY THEME – ***Maintain an emphasis on the U.S. Route 40 Corridor.***

Harford County identified the U.S. Route 40 Corridor as the foundation of its designated growth corridor in 1969, and the importance of this corridor continues today as evidenced by the designation of the Chesapeake Science and Security Corridor (CSSC) and the Enterprise Zone (Figure 24). The U.S. Route 40 Corridor offers a mix of land uses and intensity of development that serves to attract both short and long term investment. It provides business opportunities combined with housing and amenities that are linked by a multimodal transportation network.

An example of the potential the Corridor can offer is seen in the redevelopment of the former Bata Shoe Factory at Belcamp. Now a corporate campus, Water's Edge is a mixed use development that includes office and professional centers combined with housing at a waterfront location. The planned revitalization of the Aberdeen Train Station as a Transit Oriented Development along with the planned improvements to the Edgewood MARC station will continue to build on numerous other projects that support the resurgence of this area.

Because of the Enterprise Zone and CSSC designations along the Corridor, these areas will be targeted by the State and Harford County for growth and community revitalization. The U.S. Route 40 Corridor presents an unparalleled opportunity for defense-related contractors and other companies looking to

relocate to this area. These changes will bring with them an improved quality of life supported by the services and amenities that support this type of economic prosperity.

Implementation Strategies

1. Work with the State and the municipalities to identify infrastructure improvements for the U.S. Route 40 Corridor that support its role as the County's primary business corridor.

2. Investigate the possibility of expanding the boundaries of the Chesapeake Science and Security Corridor.

3. Provide state of the art information technology services throughout the U.S. Route 40 Corridor.

4. Work with the State to identify alternative opportunities to support redevelopment and revitalization as an offset to the sunset provisions of the County's Enterprise Zone.

5. Encourage the provision of workforce housing within employment areas.

ECONOMIC PROSPERITY THEME – ***Continue to support the mission of Aberdeen Proving Ground.***

With the adoption of the 2005 Base Realignment and Closure Act, efforts were initiated to prepare Harford County for the change of mission and associated workforce that would reshape Aberdeen Proving Ground (APG). Jobs began moving incrementally to APG in 2008 with the official changeover occurring in 2011. In total, over 18,000 jobs resulted from the BRAC reassignment, which also generated over one billion dollars in economic activity throughout the County.

Aberdeen Proving Ground remains one of the County's largest employers with an employment base of approximately 24,000. However, as the operations at APG switched from a predominately military mission to a civilian based high tech contractor workforce, it generated a multiplier effect in terms of future needs. Similar to the rest of the County, quality of life has emerged as a focus for those now working at APG. Providing workforce housing, quality schools, and other associated amenities and services along with improved transportation options are important to supporting the Proving Ground's mission.

Implementation Strategies

1. Continue to work with the State to improve access to the facility including roads, upgrades to MARC service and facilities, and the establishment of a Transit Oriented Development centered on the Aberdeen train station.

2. Maintain a permanent liaison with Aberdeen Proving Ground to support the retention of the facility in Harford County and to ensure the coordination of future initiatives.

3. Promote the development of service industries and technology companies that support the facilities workforce and mission.

4. Identify potential opportunities for the development of mixed use projects that offer a variety of housing types, services, and office space that supports the Proving Ground's mission.

SUMMARY

The type and supply of employment based lands is a significant factor in the County's ability to meet the needs of a rapidly changing economy. Harford County has a sufficient inventory of industrial and commercial lands to meet projected needs for the life of this Plan and well into the future (Figure 25).

Based on the 2010 Industrial Land Inventory, there are 416 parcels totaling 3,348 acres of vacant industrially zoned land. Of these, 83% are within the Development Envelope, plus there are an additional 37 sites totaling 155 acres within the municipalities.

The 2010 Commercial Land Inventory identifies 2,644 acres of developable vacant commercial land that has the potential to generate over 24.8 million square feet of additional commercial space. Based on an annual average of 410,400 square feet of commercial space being built during the 2000 to 2010 period, there is sufficient capacity to meet the County's commercial space needs for the foreseeable future.

A majority of these parcels are located in the southern region of the County along I-95 and U.S. Route 40. Efficient utilization of these areas would, in some cases, require the consolidation of lots. This confirms the County's Economic Advisory Board concern that the size of some of this land could present a challenge from an economic development perspective.

In past Land Use Element Plans, Neighborhood and Community Centers and the Rural Villages have been designated as the focal points for shopping and commercial services. Within these designations, the provision of commercial development should consider the location within the community, and these areas should be in appropriately sized, well defined groupings. New commercial development shall incorporate architecture and aesthetics that respect, contribute and enhance the community. Commercial development should be harmonious with the existing community. They should continue to serve as community focal points, and they should provide quality shopping and commercial areas that are an enhancement to the community.

One of the County's most important investments, that supports economic prosperity, is infrastructure. This applies particularly to infrastructure that helps communities and businesses become more productive, that leverages private investment, and helps direct investment to areas that have the greatest need or potential benefits. These infrastructure improvements must also be planned and completed in a manner that supports the preservation of community character.

Recognizing the need to address issues on a regional level, the County continues to participate with the Baltimore Regional Council and has joined with the municipalities to develop the Phase II Watershed Implementation Plan (WIP). The WIP will address Total Maximum Daily Load (TMDL) requirements associated with the Environmental Protection Agency's action to clean up the Chesapeake Bay.

The availability of information technology infrastructure is yet another important component of economic prosperity. The accessibility and dependability of this technology is considered by businesses during their site selection process. Harford County is moving forward with the establishment of a countywide fiber optic network. A wireless initiative is also being investigated. Strategies supporting this are presented in the Public Facilities, Services, and Safety section of the Plan.

Another important component of a strong local business network is access to a well trained labor and technology workforce. The availability of higher education institutions and opportunities are an

important part of this. Harford County Public Schools has taken steps to prepare students through its efforts to promote its Science, Technology, and Math program (STEM) and by the establishment of a series of magnet programs and specialized areas of study that prepare students for work in today's changing economy. Harford Community College, including its operation of the Higher Education and Applied Technology (HEAT) Center, is also immersed in the education continuum. It serves as the primary resource for higher education in the County. It provides high quality, accessible and affordable educational opportunities and services that promote professional competence, economic development and improved quality of life in the community. Efforts must continue to provide additional opportunities for continued higher education and advanced degrees as well as continued training for technical skills.

Equally important is Harford County's agricultural industry. Harford County recognizes the agricultural community as an important segment of its economy. The County's strong commitment to agricultural land preservation, combined with efforts to provide for the diversification of agriculturally related businesses, demonstrates the importance of the agricultural industry. The Division of Agriculture, with the help of the Agricultural Economic Advisory Board, offers a variety of services to the local agricultural community including promoting the Farmer's Markets and the Buy Local Program. The continuation and enhancement of all of these efforts is needed to help local farmers remain a strong component of the local economy.

Also supporting the County's economic diversity is tourism. Harford County offers visitors a variety of recreational, historic, and scenic venues that contribute to residents' quality of life. Heritage tourism is among one of the fastest growing sectors of tourism in Maryland, and the County's many museums and historic properties offer the opportunity to develop and promote an effective heritage tourism initiative. The County's location, along the main travel route connecting New York, Philadelphia, Baltimore and Washington D.C., makes it easily accessible to visitors. Through the Office of Tourism, the County is marketed to a broad range of venues, and the importance of supporting and encouraging the County's tourism business is included in EDAB's five year plan.

CHESAPEAKE SCIENCE & SECURITY CORRIDOR AND ENTERPRISE ZONE

Harford County, Maryland

Figure 24

OPPORTUNITIES FOR ECONOMIC PROSPERITY
Harford County, Maryland

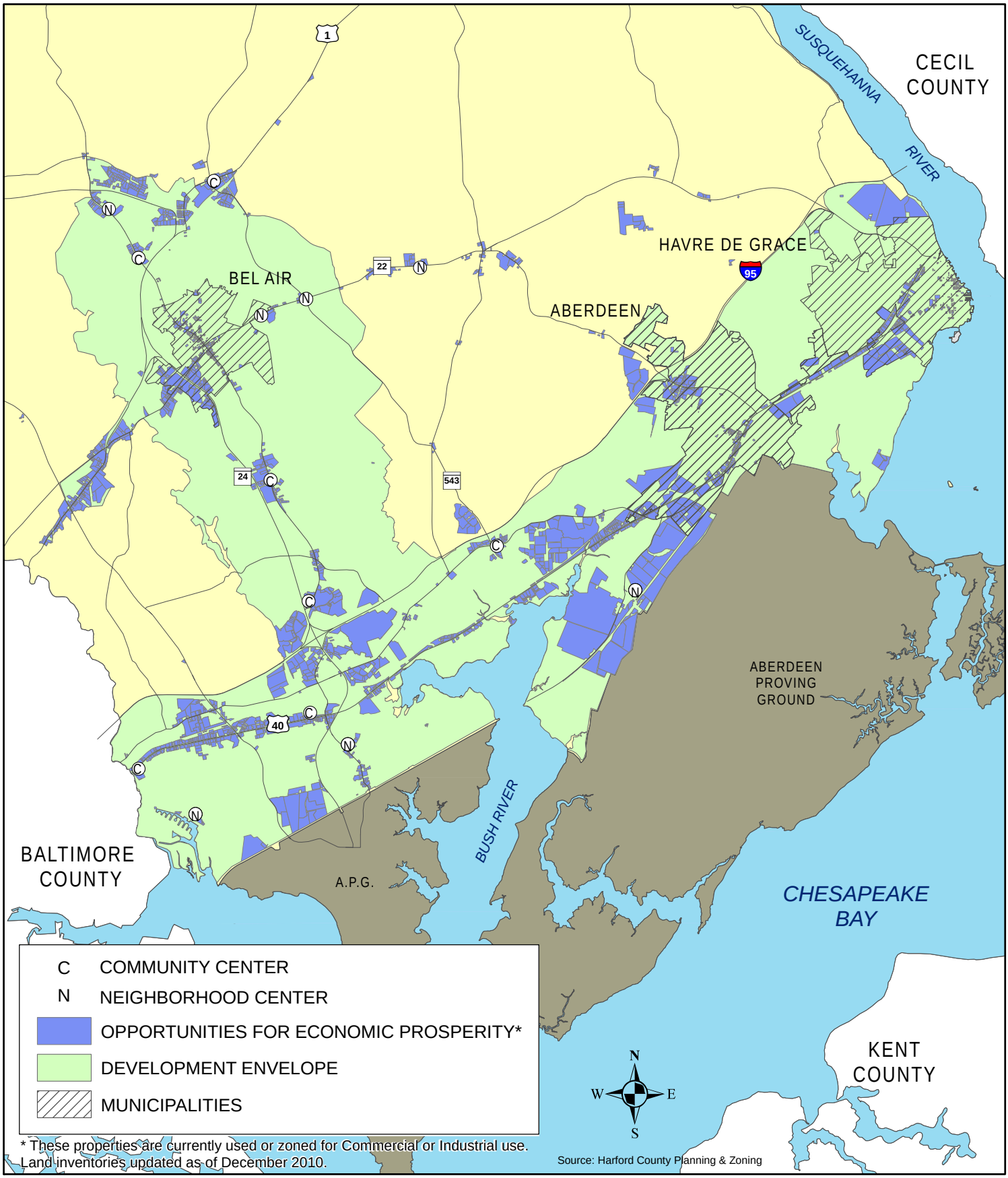

Figure 25

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PUBLIC FACILITIES, SERVICES AND SAFETY

Policy: Provide the public facilities and services that are needed to serve the existing population and projected new growth in a safe, healthy, and sustainable manner.

As the population of Harford County increases, so does the need for public services and facilities. When planning for these, it is important to consider not only the size of the County's future population but also its age and geographic distribution. Seniors and school aged children, for example, may have very different service and facility needs. However, they can also share facilities as is evidenced by the joint use that occurs in various community and activity centers throughout the County. Consideration of providing combined use facilities should be a primary objective, and as facilities and services are provided they should be located in a manner that provides good community design, strengthens the area's sense of community, and supports a healthy lifestyle.

For this Plan, the facilities and services discussed are publicly managed and have a direct influence on the location of land uses. These facilities and services include water and sewer, solid waste management, transportation, police and emergency operation (EMS and Fire), schools (including higher education), libraries, and parks and open space. Each of these has a guiding plan that establishes unique goals, policies, and strategies.

The purpose of this section is to incorporate these services into the overall planning process in a manner that ensures the needed facilities and services are provided in a timely and cost effective way. A method for prioritizing needed facilities and services should continue to be used, and this evaluation should be used to ensure coordination between the Land Use Element Plan and the Capital Improvement Program.

Water and Sewer

The majority of all sewage generated within the County's Development Envelope is treated at the Sod Run Wastewater Treatment Plant in Perryman. The Sod Run plant is sized to serve areas of the Development Envelope that still have development potential. In 2010, the average daily flow to Sod Run was 12.6 million gallons per day (MGD). The design capacity for an average day is 20.0 million gallons per day, resulting in a net reserve capacity of 7.4 million gallons per day. The County has a second facility in Joppatowne that treats an average of 0.76 million gallons per day. Aberdeen and Havre de Grace both have their own sewage treatment facilities. All of these facilities have Biological Nutrient Removal (BNR) technology.

While these plants operate under an existing National Pollutant Discharge Elimination System (NPDES) permit, future permits will require incorporating a total pound loading limit and a compliance schedule for nitrogen and phosphorous discharges. Because the County and municipal plants will all be limited by nutrient caps in the foreseeable future, the successful completion and operation of an Enhanced Nutrient Removal (ENR) system is essential to meet the demands of future growth. Havre de Grace completed their ENR upgrade in 2011 and each of the other treatment plant owners are working with the Maryland Department of Environment on grant funding for these upgrades. ENR is anticipated to be operational at the Joppatowne and Sod Run facilities before the end of 2014.

Harford County is the largest purveyor of public water in the County serving over 40,000 connections. Water for the system is provided by the County's wells on Perryman peninsula, an intake along the Susquehanna River in Havre de Grace, with the majority of the water being supplied via the 108 inch Susquehanna Aqueduct which provides raw water from Baltimore City. The current agreement with the

City allows for withdrawal of up to 20 MGD, but the County is negotiating with the City to execute an option to increase the amount to 30 MGD. The regions of Aberdeen City, the Aberdeen Proving Ground, Aberdeen and Edgewood Areas and the Maryland American Water Service areas will require an additional 10 MGD of raw water capacity above the 30 MGP currently planned.

In 2010, the average demand on Harford County's public water system was 12.1 million gallons per day with a maximum of 17.1 million gallons per day. This was within the County's 2010 capacity of 20.4 million gallon per day. The expansion of the Abingdon Water Treatment Facility is expected to be completed in 2012. The expansion increased the County's daily water treatment capacity to 30.4 million gallons per day.

Solid Waste Management

It is the County's responsibility to manage and dispose of solid waste and recyclables generated by its residents, businesses and institutions. As a result, Harford County provides for a safe, environmentally sound integrated solid waste management program which promotes waste reduction, increases recycling and resource recovery, and decreases the quantity of solid waste requiring landfilling.

Environmental, economic, and regulatory principles guide the provision of solid waste management services which is undertaken by the Division of Environmental Services within the Department of Public Works. The Division is responsible for the development of the 10-year Solid Waste Management Plan, which helps to ensure that the County maintains adequate solid waste disposal capacity for current and future solid waste projections. The current Plan addresses waste management for the period 2005 through 2014.

The County's integrated waste management program includes the landfill, residential drop-off facility, mulch and compost operation, and recycling transfer station within the Harford Waste Disposal Center in Street; the Harford Waste To Energy Plant in Magnolia; the Tollgate Yard Trim drop-off facility in Bel Air; and numerous waste oil drop-off sites located throughout the County. In September 2010, the County embarked on an extremely successful change to its recycling program, switching from a dual stream to single stream system, enabling the County to increase its curbside recycling rate by 35 percent. The Division of Environmental Services will continue to evaluate the operation of its current facilities and plan, design and construct future facilities as necessary to meet the long-term solid waste disposal needs of the County.

Roads and Transit

There are over 1,460 miles of roads in Harford County; 1,045 of them are maintained by the County. The remainder are State, municipal, or private roads. The County also maintains 225 bridges. Over 2.3 million vehicle miles of travel are averaged throughout the County on a yearly basis. Harford Transit Link operates seven fixed local routes within Harford County and the municipalities along with a demand response system for the elderly and handicapped. The Maryland Transit Administration has three commuter bus routes (410, 411, and 420) that originate in Bel Air and Havre de Grace providing service to Baltimore City. MARC rail service is available on the Penn Line from stations in Aberdeen and Edgewood. Amtrak service is also available at the Aberdeen station.

Adequate transportation alternatives are a necessary component of serving the population and enhancing employment opportunities within Harford County. Coordination of land use and transportation planning is necessary for the creation of an effective and efficient transportation system.

The 2010 Transportation Element Plan addresses the County's policies and priorities for maintaining and developing a safe and efficient multimodal transportation system.

Fire, Sheriff, and Emergency Operations

Reliable and competent emergency operations and response is essential for providing citizens with an outstanding quality of life. In Harford County, these services are provided by the Sheriff's Office, Volunteer Fire Department and the County's Emergency Operations Center. In addition to these services, the County is supported by the Maryland State Police, which maintains a barrack in Benson and police departments that operate in each of the municipalities. A mutual aid agreement among the various fire companies also extends to Baltimore County, Cecil County, and Pennsylvania.

Fire and Emergency Medical Services

Fire and emergency medical services (EMS) are provided by the County's volunteer fire companies. There are 12 fire and EMS companies operating from 27 stations and substations that serve Harford County's population. These volunteers responded to 30,485 calls in 2010 which is a 4.98% increase over 2009. Of these, 8,301 were fire calls and 22,184 were calls for emergency medical service (Figures 26 and 27). This was a 6.45% and 28.98% increase respectively in calls for service over 2009. Many of the stations are now staffing crews 24/7 to meet the higher demand for medical services.

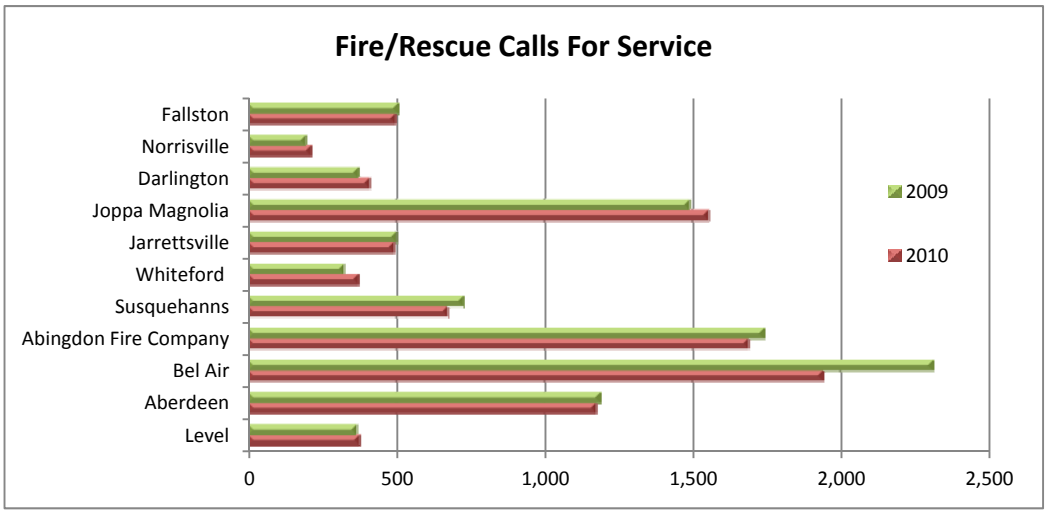

Figure 26

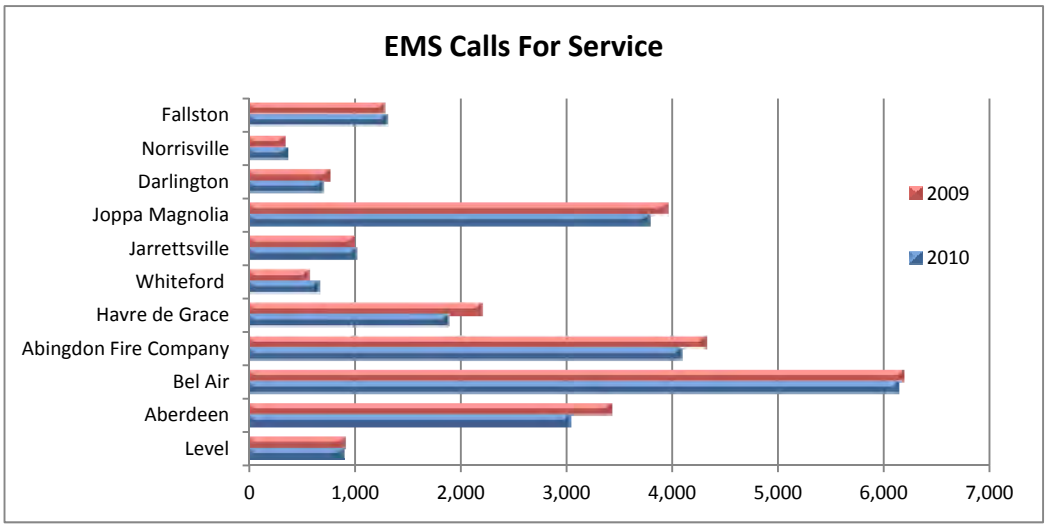

Figure 27

In 2009, with the assistance of a consultant, the County undertook the development of a Fire and EMS Services Master Plan. The study was undertaken to help the County determine the effectiveness and current status of the Fire and EMS service in the County. The study also provided recommendations for the future delivery of these services. An all encompassing study, it provided a complete analysis of the fire and EMS system and 9-1-1 center operations. It also investigated current and projected company response areas, volunteer recruitment and retention, and the potential need for some paid fire and EMS staffing to support the County's volunteer system in the future.

Following this, the County Executive created a Fire and Emergency Services Commission charged with reviewing and recommending methods in which the County can achieve and maintain efficient and equitable delivery of services. The Commission will also review and make recommendations regarding the implementation and recommendations contained in the Fire and EMS Study. The County has also relocated funding for EMS within the Division of Emergency Operations budget to provide for paid EMS to be strategically located throughout the County as a supplement for the volunteer EMS service.

Sheriff

In Harford County, the Sheriff's Office is dedicated to protecting the rights of all citizens and strives to preserve peace while providing a safe environment for all citizens. The Sheriff's Office has a workforce of more than 500 sworn and civilian personnel. Of these, 294 are sworn law enforcement officers and 134 are sworn correctional officers. The State Police Barracks has 44 officers, and Aberdeen, Bel Air and Havre de Grace police forces have 40, 32 and 36 officers respectively. The County's Sheriff's Office and the three municipal police departments also have a mutual aid agreement for emergency responses. The sworn officer per thousand residents ratio is 1.6 which is slightly below the national average.

The Harford County Sheriff's Office operates out of Bel Air, with precincts in Jarrettsville and Edgewood. The construction of a new southern precinct office at the intersection of U.S. Route 40 and MD Route 152 is underway, and it will serve the growing communities in that area. The Sheriff's Office also maintains community policing substations in several other communities. Identified capital projects include a new Sheriff's Office building and a Training Academy.

Opened in 1973, the Harford County Detention Center could house 100 inmates. Alterations and additions have been constructed over the years with the last expansion opening in 1997. This expansion increased the capacity to 474. An expansion initiated in 2008, added 288 beds to the facility for a total capacity of 762. However, a needs study for the next phase of the Detention Center's expansion should be undertaken.

In 2010, the Harford County Sheriff's Office responded to over 145,500 calls. This was just slightly higher than 2009 calls for service (Figure 28). The Sheriff's Office categorizes statistics and crime analysis into different sectors within the County. The sectors and the total number of incidents are defined in Figure 29. The types of incidents are presented in Figure 30. Overall the number of incidents declined in 2010.

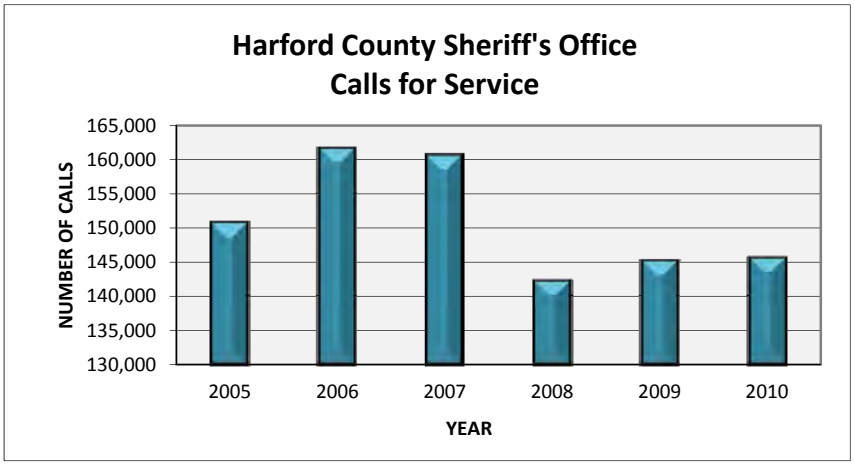

Figure 28

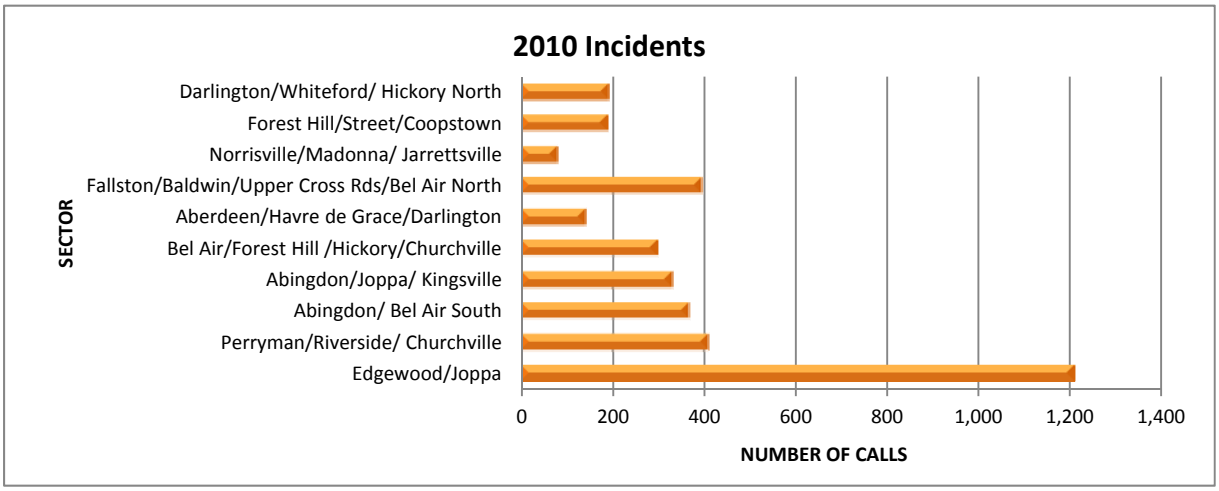

Figure 29

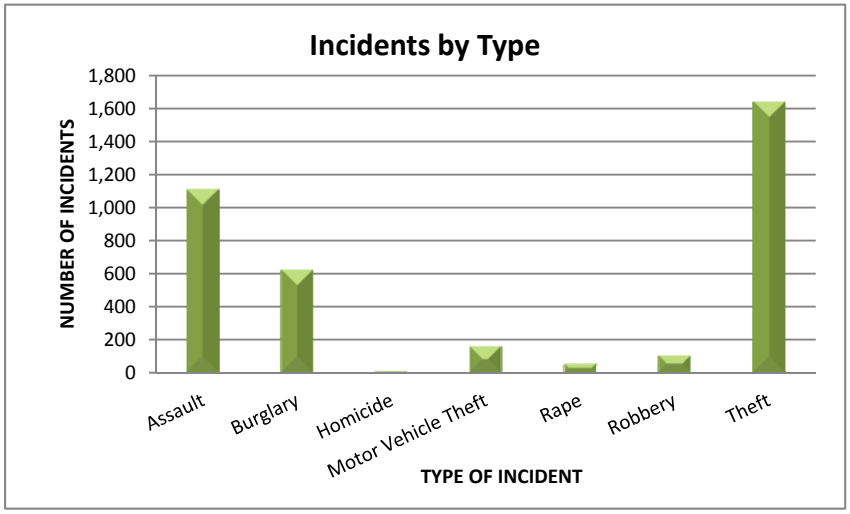

Figure 30

Emergency Operations Center

Providing efficient and timely emergency operations and responses are priorities for Harford County's Division of Emergency Operations (EOC). The EOC is a multi-component agency. It is comprised of the 911 Communications and Dispatch Center, the Office of Emergency Management, and Hazardous Materials Response Team (HAZMAT). All three have day to day functions as well as emergency response functions during and after an emergency or disaster.

During an emergency or disaster, the Division of Emergency Operations oversees and staffs the Harford County Emergency Operations Center (EOC). At this command and control center, representatives from Harford County government and its agencies as well as the State of Maryland, the local municipalities, and other vital agencies and organization continue to run the government and direct resources for responses and recovery operations.

In 2010, the dispatchers at EOC processed 387,662 calls for service. The majority of these (72%) were incoming calls. While the source of 911 calls have been changing over the years from landlines to wireless calls, in 2010 68% of the 911 calls received were wireless.

Public Education

Harford County Public Schools (HCPS) operates 33 elementary schools, nine middle schools and 10 high schools including Harford Vocational Technical High School. Also a part of the system is the John Archer School for the disabled. In the past 10 years, Harford County's student enrollment has decreased by 3%, with a net decrease of 1,125 students. As of the 2010/2011 school year, the total school system enrollment was 38,413 students in 53 schools, employing 5,417 people.

With 2,777 teachers, the Harford County Public School System has a ratio of 13.8 students per teacher and spends approximately $11,906 per year on each student. The County's public school system serves the entire County, including the incorporated municipalities.

In addition, Harford Community College (HCC) provides higher education opportunities. Founded in 1957 as a public community college, the college occupies 332 acres on Thomas Run Road. The College also has two off-campus buildings. In 2008, the College's Board of Trustees approved a new Campus Master Plan. This Plan proposes new buildings for both the Main and West Campuses, reconfigures roads and walkways, addresses the need for more parking and preserves "green" areas consistent with the College's concerns for the environment.

Located just three miles east of Bel Air and served by Harford Transit, HCC has an enrollment of just over 9,700 full and part-time students that resulted in 42,640 total course enrollments. The College provides high quality educational opportunities and services. To meet the educational needs of the community, HCC offers programs with six specific functions: general education, college or university transfer programs, career education, continuing education/community service, transitional studies/ developmental education, and student development and enrollment services.

The Higher Education & Conference Center at HEAT is located in Aberdeen at the juncture of Interstate 95 and MD Route 22. This facility offers baccalaureate and graduate programs from several colleges and universities. These include the College of Notre Dame, Johns Hopkins University, Towson University, the University of Maryland at College Park and the University of Phoenix. Harford Community College coordinates the academic programs and maintains the facility of the Higher Education and Conference Center at HEAT.

Also offered at this site are training programs for businesses, industries, and local governments. These are offered through the Continuing Education and Training Division of Harford Community College. Because of the site's professional atmosphere, it is also ideal for businesses, industry, and government organizations to hold off-site meetings, training or small conferences. Leased incubator space is also offered for technology based start-up organizations. The Higher Education & Conference Center at HEAT is a member of the Maryland Business Incubator Association.

Library

The services and materials that the Harford County Library System offers include a variety of books, periodicals, reference materials, audio and video materials, and games. The library also provides public meeting rooms, copy machines, audiovisual equipment, access to computers and the internet, printers and a microfilm reader-printer. Programs are offered for both children and adults, as are information services, reading development materials, online community information directories, health information, tax assistance, and volunteer opportunities. The system operates under a Board of Trustees that receives funding from a number of sources with the County providing the largest amount of funding.

In the more than 60 years since its founding, the Harford County Library System has expanded to include 11 branches and an administration and support services building. The library also offers mobile services via its Rolling Reader and Silver Reader. The Rolling Reader visits after school programs to promote reading for pleasure. The program is targeted to school age children attending kindergarten to eighth grade. The Silver Reader travels to assisted living facilities, long term care facilities, adult medical day care, senior centers and senior apartment locations throughout Harford County. In this way, many individuals and groups that are not currently served at branch locations can enjoy access to Harford County Public Library resources. The Silver Reader is dedicated to serving the County's growing population of seniors who might be unable to visit their local library branch.

In 2010, the annual circulation of materials reached almost 4.7 million with over 214,000 registered borrowers. The system has experienced a 46% increase in circulation between fiscal year 2005 and fiscal year 2010. Because of the shift to a more digitally connected society, the library system has taken steps to serve the needs of its patrons. The public library now offers 351 computer work stations throughout its 11 branches along with a mobile application. Upgrades to the computers and bandwidth have been completed, and the system now offers downloadable ebooks, and downloadable audiobooks. In 2010, there were over 8.7 million virtual visits to the network library.

Parks & Recreation

Open space and natural landscapes are an important component of any community and contribute to its identity, livability and viability. Open space can be in the form of State or County Parks, recreational and passive natural land, as well as private recreational centers such as swim clubs and golf courses.

Within Harford County, there are four State Parks – Gunpowder Falls, Susquehanna, Rocks, and Palmer. These parks provide over 6,900 acres of public lands offering a combination of recreation and resource based activities. The County will continue to work with the State to ensure that adjoining land uses remain compatible with these public lands. Where appropriate, preservation initiatives will be pursued.

The Harford County Department of Parks and Recreation acts as stewards for County-owned public lands. As of 2010, the County owns and maintains 96 recreation facilities totaling over 4,600 acres of land. The County's park system ranges from small community parks such as Chell Road Park in Joppatowne to larger regional facilities such as Cedar Lane Park in Bel Air. The Department of Parks and Recreation also works with the Board of Education to provide recreational opportunities for local communities. Whereas community parks and school lands provide active recreational facilities, the County also has two parks, Eden Mill and Anita C. Leight Park that are devoted to nature studies and take advantage of the County's invaluable natural resources.

As the County's population continues to grow, so does the need for recreation and open space to maintain high quality communities. While the Department of Parks and Recreation's Land Preservation, Parks & Recreation Plan addresses the amount and types of land and facilities necessary to supply the needs of current and future residents, this Plan must also ensure that land uses adjacent to these sites minimize conflicts and provide pedestrian access where applicable.

Information Technology

With increasing demand for reliable communications and digital transfer of data, a fast, reliable network for exchanging information is important. Providing a high-speed network in a cost effective manner that reaches the population of the County would help improve government efficiency at providing services and would increase the County's competitiveness in attracting businesses.

Plans are under design by Harford County to develop a high speed data network, known as the Harford Municipal Area Network (HMAN). This network ultimately would be able to reach almost every residential, business, and government facility in the County. This system would be predominately based on wireless microwave technology, with fiberoptics used selectively where wireless technology is impractical. This high-speed wireless service provider network would be maintained by the County, and would enable private communication companies to offer services to local residents and businesses. It would also support the County's efforts to streamline communication among its agencies and also with its citizens, and would provide improved online services for the libraries, schools, and other public facilities.

PUBLIC FACILITIES, SERVICES AND SAFETY THEME– ***Proactively plan for facilities that meet community needs.***

New or expanded public facilities and services that are needed by communities throughout the County can include streets, parks and playgrounds, police and fire stations, schools, libraries, and water and sewer systems. These facilities need to be constructed in a sequence that meets growth needs. Once needs are identified, it is critical that funding be earmarked and the planning, design, engineering and construction schedule be developed and followed. Because public improvement programs generally cover the scheduling of capital projects over a five year program, it is important that the County proactively plan for the facilities rather than react to providing facilities after the fact.

Harford County has Adequate Public Facilities (APF) standards that apply to schools, water and sewer facilities, and roads. They are used by the Department of Planning and Zoning to balance land development with the availability of these facilities. In accordance with the County's APF provisions, the Annual Growth Report identifies any facilities that are below the County's adopted minimum standards. The Annual Growth Report provides an ongoing analysis of growth trends, facility capacity and service performance. This report is used by public officials to assess adequacy, capacity, and to support the evaluation of priority projects in the Capital Improvement Program. It is also used to identify crucial deficiencies which require prompt attention.

Implementation Strategies

1. Continue to evaluate existing levels of service provided by the County's public facilities and services and determine future needs.

2. Use the land use inventories to determine where and how much new growth could occur and identify facilities and services needed to support this growth.

3. Develop a capital improvement process which establishes a consistent and coordinated approach to ensure that included projects are compatible with the Land Use Element Plan.

4. Continue to review all capital projects for consistency with adopted planning documents.

5. Create a comprehensive master facilities inventory that can be used to identify and address future facility needs.

6. Locate new or expanded community facilities in designated community and neighborhood centers whenever possible.

7. Continue to pursue information technology (IT) initiatives to provide improved communications and online services.

8. Undertake a study to determine future needs for the County's Detention Center.

PUBLIC FACILITIES, SERVICES AND SAFETY THEME– ***Fund needed improvements or expansions in a cost effective way.***

The funding of public facilities and services in Harford County is achieved through a number of avenues that include Federal, State, and local funds. Projects are also funded through taxes, special assessments, bonds, fees, and other one-time charges. The County is legislatively empowered to enact impact fees for school construction; it utilizes hookup fees for water and sewer service, and the Adequate Public Facilities legislation provides for specific road or intersection projects that maintain or improve the level of service impacted by a specific development project.

The County's Capital Improvement Program provides the link between the Land Use Element Plan and the actual construction of public improvements. The Land Use Element Plan identifies the types of facilities and services that are needed and their possible locations. The Capital Improvement Program states when they will be built and what they will cost. Because the provision, nature, and location of public facilities greatly influence the patterns of growth, capital programming is one of the most important implementation tools at the County's disposal.

Implementation Strategies

1. Support the development of multi-purpose facilities to reduce land acquisition and construction costs.

2. Evaluate the fiscal impact and timing of needed capital improvements to minimize their impacts on operational and maintenance budgets.

3. Establish prioritization guidelines to ensure that facilities and services are provided in a manner that maximizes the efficient use of capital resources.

4. Maximize the procurement of grants, endowments, and private donations for applicable public facilities and services.

5. Maintain an effective facilities financing program to ensure that the impact of new development is mitigated through appropriate fees.

6. Continue to use special taxing or special assessment districts in areas where major facility upgrades are needed.

7. Explore the possibility of public/private partnerships for County buildings including lease to purchase or sale back agreements.

8. Develop a process to institutionalize public private partnerships to provide needed facilities or land for public improvements.

9. Review and update the Rules and Regulations to provide for the timely construction of public facilities in relation to development projects.

PUBLIC FACILITIES, SERVICES, AND SAFETY THEME: HEALTH AND SAFETY - ***Provide for safe and healthy communities.***

When planning public facilities and services it is important to recognize the impact these have on the community's character and overall quality of life. The concept of quality of life is often influenced by how convenient or easily accessible facilities and services are, and how safe citizens feel as they go about their daily activities. However, recent studies indicate that land use policies and facility planning also contribute to the health of the community.

A healthy community offers a built environment that encourages and supports behaviors focused on physical activity. Trails, sidewalks, and bikeways create linkages between residential and business areas, and they encourage walking or bicycling instead of automotive travel. Creating a safe structural environment for children to walk to school is also a way to promote physical activity.

Harford County recognizes the importance of providing recreational facilities including bicycle and pedestrian linkages. The Department of Parks and Recreation oversees the development and management of the County's sports fields, and they work with non-profit groups, the recreation councils and the Board of Education to provide playgrounds, activity centers, and assorted recreational programs. Additional walking and bicycling opportunities are provided along the Ma and Pa Heritage Trail and the Lower Susquehanna Heritage Greenway. The County Development Regulations also require the provision of pedestrian and bicycling facilities, and the 2010 Transportation Element Plan emphasizes the need for the continued development of these facilities as part of a functional multimodal transportation network.

Implementation Strategies

1. Provide bicycle and pedestrian accommodations to and at County-owned facilities.

2. Review and revise the Subdivision Regulations to require that new development and redevelopment occurring within the designated growth areas support a healthy lifestyle by being interconnected and accessible by walking, biking, or transit.

3. Coordinate the construction of trails and bike/pedestrian activities in corridors that link existing or planned facilities.

4. Provide additional opportunities for healthy activities by expanding the hours and offerings at the activity centers.

5. Design and build more community centers with indoor athletic and exercise options.

6. Support the development of a Center for the Visual and Performing Arts.

7. Continue to work with Healthy Harford to provide opportunities for a healthy lifestyle.

SUMMARY

Providing public facilities and services to meet the needs of the County's current and future population remains a priority. The provision of these facilities must be accomplished in a timely manner that balances planned growth with fiscal responsibility and sustainability, while also ensuring the health and safety of County residents. Steps need to be taken to ensure that facilities identified during the Development Review process are provided concurrent with project development.

Harford County monitors the provision of several public facilities through the Annual Growth Report which is developed in accordance with the Harford County Adequate Public Facilities (APF) legislation. The Annual Growth Report is presented to the County Council in June, and the report identifies any facilities that are below the County's adopted minimum standards. The report addresses schools, the water and sewage system, and road intersections. It also addresses the State's requirements for Adequate Public Facilities as established by the Smart Green and Growing legislation.

The County's APF standards, however, do not address all of the facilities and services needed by County residents. Additional needs are generally identified and prioritized by the responsible agency, and are then brought forward to the County for inclusion in the Capital Improvement Program (CIP). Trying to balance multiple needs is always a challenge, but it is an even greater one in fiscally conservative times. Because of this, the Plan proposes that the County establish prioritization guidelines. In addition, standards need to be established that help to ensure that the CIP consistently reflects projects through the five year process.

Within the County's designated growth areas, the prioritization guidelines should consider the following: that the maximum number of residences and business are being served, that the reuse and redevelopment of existing facilities has been considered, that the facilities are located and designed to maximize the County's investment in the community, and that they are in proximity to residential neighborhoods to support energy efficiency while also integrating walking and bicycling. All projects included in the CIP should be linked to the Land Use Element Plan, and they should also take into consideration the health and safety of County residents. Outside of the designated growth areas, health and safety should be the primary guideline. Projects proposed for inclusion in the CIP should also be categorized as capacity, enhancement, modification, or modernization projects to help evaluate the need being addressed. Once included in the CIP, projects should be monitored and tracked to ensure that they are completed within their noted timeframe.

The funding of public facilities and services in Harford County is provided through a variety of mechanisms. Contributions from developers and the recreation councils combined with bonds, grants, and Federal and State funds are joined with taxes and fees to support the CIP. Investments in capital improvements can be enhanced by maintaining or enhancing existing funding sources, maximizing joint uses, prioritizing capital investments, and leveraging other resources and partnerships with public, private and non-profit entities. Leasing is another financing alternative that might prove beneficial.

Recognizing that the costs of new development are shared by the existing and future resident base, and acknowledging the increasing need and costs of public facilities, the County should investigate alternative sources to fund needed facilities and services. In addition, special taxing districts, tax increment financing, and road clubs should all be evaluated as potential solutions to providing needed facilities. If these are found to be practical solutions, specific guidelines and regulations should be established to institutionalize their use. Operational efficiencies also need to be maximized, and facilities and services must be tailored to meet the needs of diverse communities with varying demographics

prior to absorbing additional population growth. The importance of identifying alternative funding sources is reinforced by the State who focuses its investments for capital improvements based on specific guidelines.

While public safety has been and remains a primary objective in the provision of public facilities and services, ensuring that Harford County is a healthy community has increased in importance. A healthy community is not just one with excellent medical care; it is one with an environment that encourages and enables healthy behaviors including physical activity, thus land use decisions become a central factor in the health and well being of Harford County residents.

Over the past decade, obesity has been recognized as a national health threat and a major public health challenge. Based on data collected in 2010 in Harford County, more than 60% of adults are overweight or obese, as are nearly one-third of the children and teens. Research clearly demonstrates that as the rates of obesity rise, the incidence of diabetes increases as well. Given this trend, it is important that this Plan provide opportunities for healthy lifestyle choices through the built environment.

Support for this approach is provided by Healthy Harford Inc., a coalition of government agencies, local businesses, and non-profit organizations dedicated to making Harford County the healthiest community in Maryland. This group worked with the County Council to enact an Obesity Prevention Resolution which calls for the creation of the Harford County Built Environment Task Force. This Task Force is charged with identifying opportunities and supporting efforts to create a more walkable and bikeable community; one that is pedestrian friendly, encourages active recreation, and provides the infrastructure and safety measures for children to walk to school. The goal is to reduce the poor public health outcomes that are associated with a sedentary lifestyle.

SUSTAINABILITY

POLICY: Provide for sustainable development and conservation while managing the resources that define the County's identity, contribute to its economy, and quality of life.

Since the 1969 Master Plan, sustainable planning practices have been at the core of the County's framework "to guide public and private actions affecting a wide range of activities in the County". This framework established sustainable tools to address land use, transportation, public schools, parks and open space, public buildings and facilities, and utilities and public services while facilitating growth and sustaining quality of life. The County defines *sustainability* as protecting and preserving economic, environmental, and social resources through their efficient use and reuse for current and future generations.

The County's built environment is its most permanent, lasting investment and symbolizes the values that make the County great. For that reason, the Development Envelope concept was adopted as a sustainability tool in the 1977 Master Plan to focus development within the boundary while preserving natural and agricultural resources in the rural areas. Establishing a sustainably built and natural environment is not without its challenges; therefore the County's Comprehensive Master Plan is crucial in achieving this Vision.

By addressing the policies established in the proceeding sections of this Plan, Harford County will continue to implement a sustainable approach to land use planning. Nevertheless, the County's commitment to sustainability, both within its operations and the community, warrant a stand-alone section to emphasize its significance to the future of the County. Specifically, this section identifies strategies to support sustainable plans for County government and the community, revitalization

efforts, encouraging mixed use, ensuring water quality, sustaining agriculture and protecting mineral resources. The performance measures expressed in this section support the County's 2008 Environmental Stewardship Initiative, Energy and Resource Management Policy and subsequent guiding principles to improve efficiency and stewardship within the County.

SUSTAINABILITY THEME: ***Integrate sustainable practices into County government operations.***

The County strives to lead by example through integrating sustainable practices into County government operations and decision making processes to ensure efficient use of environmental, economic, and social resources. Sustainable decision making will allow the County to comprehensively evaluate policies, programs and procedures to develop guiding principles and long-term sustainability goals.

In May 2011, the County established the Sustainability Office through an Executive Order. This office is charged with developing and implementing the Environmental Stewardship Initiative through the advocacy of sustainability. The Sustainability Office will foster optimization of operations through the integration of sustainability into the decision making process. Concurrently, the programs and activities of the Office will strive to educate and encourage employees and the community to incorporate sustainability within their professional and personal lives. The Sustainability Office is developing a multi-dimensional approach, collaborating with County departments and agencies to establish sustainability policies and strategies. The approach includes developing guiding policies, educational resources, a greenhouse gas inventory, a communication network for employees as well as administering Energy Efficiency and Conservation Block Grant projects and fostering partnerships with the community and local business. The Sustainability Office participates in the County's Green Team, Harford County Green Business Network with the Office of Economic Development, Baltimore Metropolitan Council's Regional Sustainability Committee as well as the Harford County Public Schools' Resource and Conservation Committee. Furthermore, the Sustainability Office works to exchange ideas as well as promote the accomplishments of Harford County as a sustainable government and community through memberships in the Maryland Green Registry, the Maryland Sustainable Network, National Association of Counties (NACO) and ICLEI-Local Governments for Sustainability.

<u>Implementation Strategies</u>

1. Enhance the County's 'Green Team' advocacy of best management practices that promote energy and cost savings measures within each department of County Government.

2. Establish an employee communication strategy to showcase best practices of sustainability as well as increase employee participation and decision-making in sustainability initiatives.

3. Complete a greenhouse gas inventory of County Operations and define a greenhouse gas reduction strategy based upon the baseline inventory.

4. Adopt a Sustainability Action Plan for County government operations to establish an implementation plan for sustainable practices.

5. Implement sustainable building standards into the construction and renovation of government facilities wherever possible.

6. Partner with the State, Baltimore Metropolitan Council, Harford County Public Libraries, Harford County Public Schools, Harford County municipalities, APG and the Harford County Chamber of Commerce to develop joint sustainability goals and programs.

SUSTAINABILITY THEME: ***Educate, empower and engage citizens about sustainability.***

Diverse community networks of citizens that embrace and support sustainability are a vital part of the County's sustainability efforts. This Plan generates an education and outreach framework for establishing these networks as well as developing long-term community sustainability goals. The Sustainability Office will assist in the organization and creation of accessible resources and implementation strategies to guide the community beyond awareness into action. The initial phase of community engagement involved the development of an Environmental Stewardship webpage and a Harford County Green Business Network (HCGBN) with the Office of Economic Development. The HCGBN combines two of the County's initiatives: Economic Prosperity and Environmental Stewardship to recognize businesses within Harford County that strive to intertwine sustainability within their business model. The next phase will be to collaborate with the community to develop a community sustainability strategy.

Implementation Strategies

1. Conduct a greenhouse gas inventory for the community at large.

2. Continue to support the Harford County Green Business Network.

3. Partner with residents, businesses, and non-profit organizations to develop sustainability goals and programs.

4. Develop a community sustainability education and outreach program.

5. Establish a Community Sustainability Advisory Committee.

6. Continue to support the County's Recycling Office single-stream recycling initiatives.

SUSTAINABILITY THEME: ***Encouraging mixed use.***

The County recognizes that to efficiently use and reuse our resources, mixed-use development patterns should be integrated into the Development Envelope. Mixed Use neighborhoods encourage combining a variety of compatible land uses while emphasizing multi-modal transportation options to create a connected and accessible community. The increased connectivity promotes the use of existing infrastructure and the conservation of open space while at the same time promoting a sense of community and economic prosperity. Economic opportunity is created through the establishment of new uses, thereby creating jobs and fostering local businesses. Similarly, a mixed-use neighborhood also encourages affordable housing to ensure all County residents are engaged within the community.

Implementation Strategies

1. Create an educational brochure on the benefits of mixed use developments for the community and developers.

2. Host a developer charette to discuss challenges and incentives related to mixed-use developments.

3. Apply the Housing and Transportation Affordability Index to the County development review process and determine its usefulness as an affordable housing tool.

4. Study successful mixed-use projects and identify the criteria and processes that are needed to generate a market for mixed-use projects.

5. Evaluate the greenhouse gas reductions from mixed use developments to support the goals within the 2009 Maryland Greenhouse Gas Reduction Act.

SUSTAINABILITY THEME: ***Make revitalization a viable sustainable development option.***

Revitalization is the revival or renewal of existing communities and infrastructure to efficiently meet the needs of County residents and businesses. With revitalization, comes reduced economic pressure on greenfields or previously undeveloped sites outside of the County's Development Envelope by bringing new life to existing infrastructure. It can also include the rehabilitation and re-use of old or historic structures. This is environmentally friendly and promotes sustainable communities. At the same time, this reduces unconnected or 'leap-frog' development and is consistent with Maryland's Smart Growth Policies as it focuses development in areas that have been designated for growth.

By stimulating growth in existing areas that tend to be already served by major public infrastructure and facilities, revitalization creates an opportunity to increase the efficiency of current land use patterns. As a result, existing open space, farmland and other resources are preserved. Revitalization also brings new economic development opportunities to the area such as new services and jobs. At the same time, revitalization generates an opportunity to integrate and reconnect the existing community to the surrounding communities through a multi-modal transportation approach.

Implementation Strategies

1. Explore the feasibility of integrating multi-modal options within revitalization areas to reduce greenhouse gas emissions.

2. Integrate energy efficiency and water conservation measures within revitalization projects.

3. Establish public and private partnerships and alternative financing methods that will encourage and incentivize the redevelopment and revitalization of projects and brownfield sites located within designated corridors enhancing the area and bringing properties to their fullest, highest and best use while creating job opportunities for residents of our County.

4. Coordinate with stakeholders to develop implementation strategies for the Carbon Neutral Corridor Pilot Study.

5. Continue to support the Carbon Neutral Corridor Pilot Study.

SUSTAINABILITY THEME: ***Sustaining rural areas and agriculture.***

The County recognizes the need to sustain rural areas and agriculture to maintain the resources that define the County's identity, contribute to its economy, and quality of life. With its designation of specific growth areas and a strong agricultural preservation program, the County has a firm foundation for continuing the protection of agricultural lands. However, sustaining agriculture as a viable industry involves more than land preservation.

Through the years, agricultural practices have changed dramatically. Productivity has increased due to new technologies, mechanization, increased chemical use, specialization, and government policies that favored maximizing production. While these changes have had many positive effects, there were also downsides including the decline of family farms. Harford County respects and values its multi-generational farms, and it values and supports its young farmers as they face the challenges and opportunities of farming sustainably. The County supports the enhancement of existing programs, and the development of new opportunities to meet the needs of the agricultural community while also encouraging a new generation of sustainable agricultural entrepreneurs.

Implementation Strategies

1. Expand the *Buy Local* campaign by utilizing a multi-media approach.
2. Identify the process and alternatives for establishing an Urban Farms program.
3. Expand the *Farm to School* program within the Harford County Public Schools.
4. Research the feasibility of a regional food policy with neighboring counties.
5. Support renewable energy generation opportunities on agriculturally zoned parcels.
6. Continue to support the preservation of agricultural land with the goal of maintaining a workable farm base.

SUSTAINABILITY THEME: ***Water quality and watershed protection.***

A sustainable water resource is fundamental to the public's health and quality of life. It not only provides a safe drinking water supply, but also clean water for aquatic life and recreational pursuits. The quality of water is directly related to what is happening on the land. Stormwater runoff from the land may carry nutrients, sediment and other pollutants to a waterway. The velocity and quantity of stormwater runoff from impervious surfaces (in developed areas) can also lead to streambank erosion and degradation. In order to protect water quality in our local waterways the land use activities in a watershed must be considered.

Harford County has many programs in place to sustain and protect its water resources. In response to a State mandate, the County developed a Water Resources Element in 2009. This element plan provides strategies to assure that the County's drinking water and wastewater needs will be met through 2020 and beyond.

Watershed plans have been developed for the Bush River and Deer Creek watersheds. Winter's Run in the Bush River watershed provides the surface water supply for the Town of Bel Air and Aberdeen Proving Ground's Edgewood facility. Deer Creek is a source of drinking water for Aberdeen Proving Ground. Groundwater resources help meet part of the County's water supply needs through the

Perryman wellfield. Groundwater also provides drinking water for those residents on private or community wells in the rural area of the County. Wellhead protection district regulations were established by the County in 2008 in order to protect the Perryman wellfield as well as other community water supplies from contamination. These surface water supply watersheds and groundwater recharge areas for public water supplies have been designated by the State as Priority Water Resource Areas and this is consistent with the County's efforts to protect these important resources.

Protection of water quality is also addressed through a variety of other County programs and regulations. Buffers to streams and nontidal wetlands are required through the County's Natural Resource District regulations. Stream buffers provide a natural filter to stormwater runoff and are a cost-effective means to achieve water quality. Stormwater management and sediment and erosion control regulations help protect the County's waterways from the negative impacts of development and increased impervious surfaces. Best management practices on farmland are extremely important to the protection of our water resources.

Water quality protection efforts over the last two decades have been driven, in part, by the restoration efforts for the Chesapeake Bay. The Federal Clean Water Act requires the establishment of water quality standards for all water bodies within the State. Maryland has established such standards. For any water body not meeting a water quality standard, a plan is required to be prepared addressing the total amount of a pollutant that a water body can assimilate and still meet water quality standards. This plan is called a Total Maximum Daily Load (TMDLs). TMDLs will be developed for those streams in Harford County that do not meet water quality standards. As these TMDLs are being developed, the U.S. Environmental Protection Agency is developing a TMDL for the Chesapeake Bay for impairments to the Bay resulting from excess nutrients and sediment. Harford County will be addressing the needed reductions in nutrients and sediment to meet its share of the reductions required for the Chesapeake Bay TMDL. This in turn will benefit local waterways as well. It is evident that the current level of effort will not be sufficient to meet the required reductions by 2025; therefore, additional programs and strategies will be developed in the coming years.

Many streams and water bodies in Harford County are not impaired and are of good water quality. Streams that are of higher quality than the minimum water quality standards have been designated Tier II waters under the Clean Water Act and require protection to sustain the higher quality. Tier II watersheds are also designated as Priority Water Resource Areas by the State. Most of these designated streams occur in the Deer Creek and Little Gunpowder Falls watersheds. County efforts must be directed at protecting higher quality watersheds, as well as bringing impaired waters up to water quality standards.

Implementation Strategies

1. Identify new strategies, in coordination with the municipalities, to assure the County will meet its nutrient and sediment reduction targets for the Chesapeake Bay TMDL and local TMDLs.

2. Develop a tracking mechanism to monitor the best management practices being undertaken to improve water quality and meet nutrient and sediment reduction goals.

3. Identify additional funding mechanisms to achieve water quality goals.

4. Explore enhancements to the County's Forest Conservation Program and Natural Resource District regulations as well as potential new programs, to increase the acreage of stream buffers and forests to benefit water quality and ecological health.

5. Develop incentives and promote low impact development and green building practices to reduce the amount of impervious surfaces and reduce impacts to water quality.

6. Establish policies in Tier II watersheds to protect surface water supplies and high quality streams.

7. Pursue the accelerated implementation of the Bush River and Deer Creek Watershed Plans to protect water quality and conserve natural resources.

SUSTAINABILITY THEME: ***Manage the County's mineral resources in a sustainable manner.***

The State of Maryland identified the need to protect and manage mineral resources, and requires that it be an element of the comprehensive planning process. Harford County is underlain by a wide variety of extractable minerals. There are currently eight mining operations with active permits located in various areas of the County (Figure 31). These operations provide valuable, nonrenewable natural resources that are vital to maintaining a sound, balanced, and diversified local economy. The economic importance of mining industries is significant to the County, and must be balanced with the quality of life issues of surrounding residents. Mineral extraction industries often find themselves in conflict with surrounding land uses, frequently because they lie within the Development Envelope. Assuring the continued viability of these resources, while maintaining a high quality of life for residents, will require the County to become actively engaged in addressing concerns regarding compatibility of uses and site reclamation.

Prior to the end of mining operations, reclamation plans must be developed to address site stabilization and the subsequent use of the site. The mine operators, as well as permitting agencies and surrounding landowners, must all be involved in the development of reclamation plans. Within the various community areas where mineral extraction has or is occurring there is a strong consensus that these areas be reclaimed in a manner that enhances the community and protects water quality.

<u>Implementation Strategies</u>

1. Work with the community and the State to ensure that mining operation plans are designed to protect the environment and address compatibility with surrounding land uses.

2. Ensure that new development plans, in areas where mineral resource extraction is being conducted, are designed to avoid conflicts with ongoing and planned future mining activities.

3. Create a framework for reviewing and maintaining restoration plans.

4. Include mineral resources in the next update of the Natural Resources Element Plan to ensure consistent management of the County's resources.

SUMMARY

Sustainability, as defined previously, requires the efficient management of the County's environmental, economic, and social resources which can be a challenge. However, the challenge is minimized by the framework created within the County's Master Plan and Land Use Element Plan. The Plan establishes a sustainable roadmap for the County to efficiently manage these resources without compromising its quality of life. By implementing the Land Use, Economic Prosperity, and Public Facilities, Services, and Safety sections of the Plan, the County supports sustainable land use planning. However, the

underpinning of the sustainability road map is measuring and tracking usage patterns related to energy, water, land use, economic development, and public facilities and services.

Data collection is a vital element in determining current statistics and will require coordination with various County agencies and departments. The County's greenhouse gas inventory will evaluate environmental consumption patterns by calculating and tracking emissions and reductions of greenhouse gases (carbon dioxide, methane, nitrous oxide) and criteria air pollutants (NOx, SOx, carbon monoxide, volatile organic compounds, particular matter) associated with electric generation, fuel use, and waste disposal over a specific period of time (e.g., one year). For the County, two inventories will be conducted: one for all the County government buildings and operations and another for the community. The results of the inventory will help the County to track greenhouse gas emission trends, to develop strategies and policies as well as to assess progress. An initial inventory will be based upon Maryland's Greenhouse Gas Reduction Act of 2009. The Greenhouse Gas Reduction Act of 2009 requires the State to achieve a 25% reduction in statewide greenhouse gas emissions from 2006 levels by 2020. While the County is not required to comply with the Act, the County has decided to evaluate and track emissions and related reduction targets.

Sustainability will not be achieved instantaneously but will require continuous and consistent work by the County, beginning with the strategies identified in this Plan. One strategy is developing a County Government Sustainability Action Plan. The Sustainable Action Plan will identify goals and strategies for integrating sustainability into County government operations. County government operations include, but are not limited to, daily functions, plans and policies along with facility maintenance and employee awareness. A Sustainability Action Plan will evaluate current tools and procedures to identify existing best practices as well as guiding principles to integrate sustainability into the process. Beyond that, the Action Plan will establish targets and measures for reporting and monitoring progress.

Another strategy is to coordinate with stakeholders to develop implementation strategies for the Carbon Neutral Corridor Pilot Study. The Carbon Neutral Corridor Pilot Study is an interagency demonstration project evaluating strategies to reduce greenhouse gas emissions along the U.S. Route 40 transportation corridor from Havre de Grace to Baltimore City. A Carbon Neutral Corridor is a geographic area around a transportation corridor in which public and private entities partner to identify a broad range of mitigation measures and strategies to reduce greenhouse gas emissions based upon the 2006 levels identified in Maryland's Greenhouse Gas Reduction Act of 2009. The U.S .Route 40 Carbon Neutral Corridor proposal is the first on-the-ground demonstration project in Maryland to comprehensively review the impact of land use, transportation, economic development, housing, environmental conservation and energy efficiency on greenhouse gas emissions. The goal of the project is to collaborate with multiple agencies and community members to designate strategies to reduce greenhouse gas emissions along the U.S. Route 40 Corridor. While the project has yet to be completed, it is another tool that must be considered as part of the County's sustainability initiative.

In addition to government's efforts, the citizens of Harford County must also embrace sustainability initiatives. Increasing awareness about steps that can be taken to implement a sustainable lifestyle will help residents and businesses integrate these practices into their day to day actions. Identifying how other communities have managed to make mixed-use communities a viable development alternative and implementing these findings will help to expand redevelopment opportunities while providing land uses that are not totally automobile dependent.

Likewise identifying the policies and the steps needed to support the establishment of community farming opportunities, otherwise known as urban farming, will help to improve the quality of life within the Development Envelope. Combined with the continued enhancement of the County's Buy Local Program, these sustainable initiatives will support the efforts of the agricultural community in today's changing economy and provide citizens with healthy food options.

The County's efforts to provide sustainable water resources will be a primary focus during the coming decade. Protection of its existing surface water supplies, as well as its groundwater resources, is essential to meeting the drinking water needs of the citizens of Harford County. The development of new and expanded strategies to meet the nutrient and sediment load reductions for the Chesapeake Bay TMDL will influence not only the County's land use policies, but also the level of effort with implementation of agricultural best management practices and existing County programs, such as stormwater management, stream restoration, and promotion of denitrifying septic systems. Efforts will focus not only on improving water quality, but protecting those high quality water resources that have been identified by the State as Tier II streams.

Article 66B recognizes that mineral resources are an important natural resource within the County and the State of Maryland, and it requires their sustainable management. As a result, the strategies identified are coordinated with the programs and goals of the Maryland Department of the Environment (MDE). Assuring the continued availability of these resources, contributes to the County's economy, and their extraction must be undertaken in a manner that respects the communities where these operations occur. Preservation of community character and quality of life requires the County to earnestly consider the compatibility of uses and site reclamation plans in relation to the surrounding community.

Accordingly, plans for the reclamation of mining sites must be developed as a cooperative effort on the part of mine operators, permitting agencies, and surrounding landowners. This process must assure that the reclamation, restoration and/or stabilization plans are compatible with surrounding land uses, and they must address the monitoring, maintenance and bonding requirements, and the concerns of the community. The protection of groundwater quality is a primary objective in all reclamation plans and is consistent with this Plan's strategies to provide a safe drinking water supply, and clean water for aquatic life and recreational pursuits.

While most of the mining operations in Harford County occur in the U.S. Route 40/I-95 corridor, remnants of past mining activity can be found in other parts of the County, most notably the slate and green marble quarries in the Whiteford-Cardiff area. Harford County has been fortunate to have recoverable deposits of these minerals, which provide the County with an inexpensive and convenient source of building materials. Roads, residences, commercial buildings, public utilities, and industrial facilities require the use of these materials. Mineral extraction industries also provide jobs and income as mined-materials are frequently transported to markets outside of the County.

Assuring the continued viability of these resources, while maintaining a high quality of life for residents, will require that the County remain actively engaged in addressing concerns regarding compatibility of uses and site reclamation. These activities are also tied to the protection of the County's other natural resources and for that reason, the Plan recommends that mineral resources be incorporated into the next update of the Natural Resources Element Plan.

MINERAL RESOURCE SITES
Harford County, Maryland

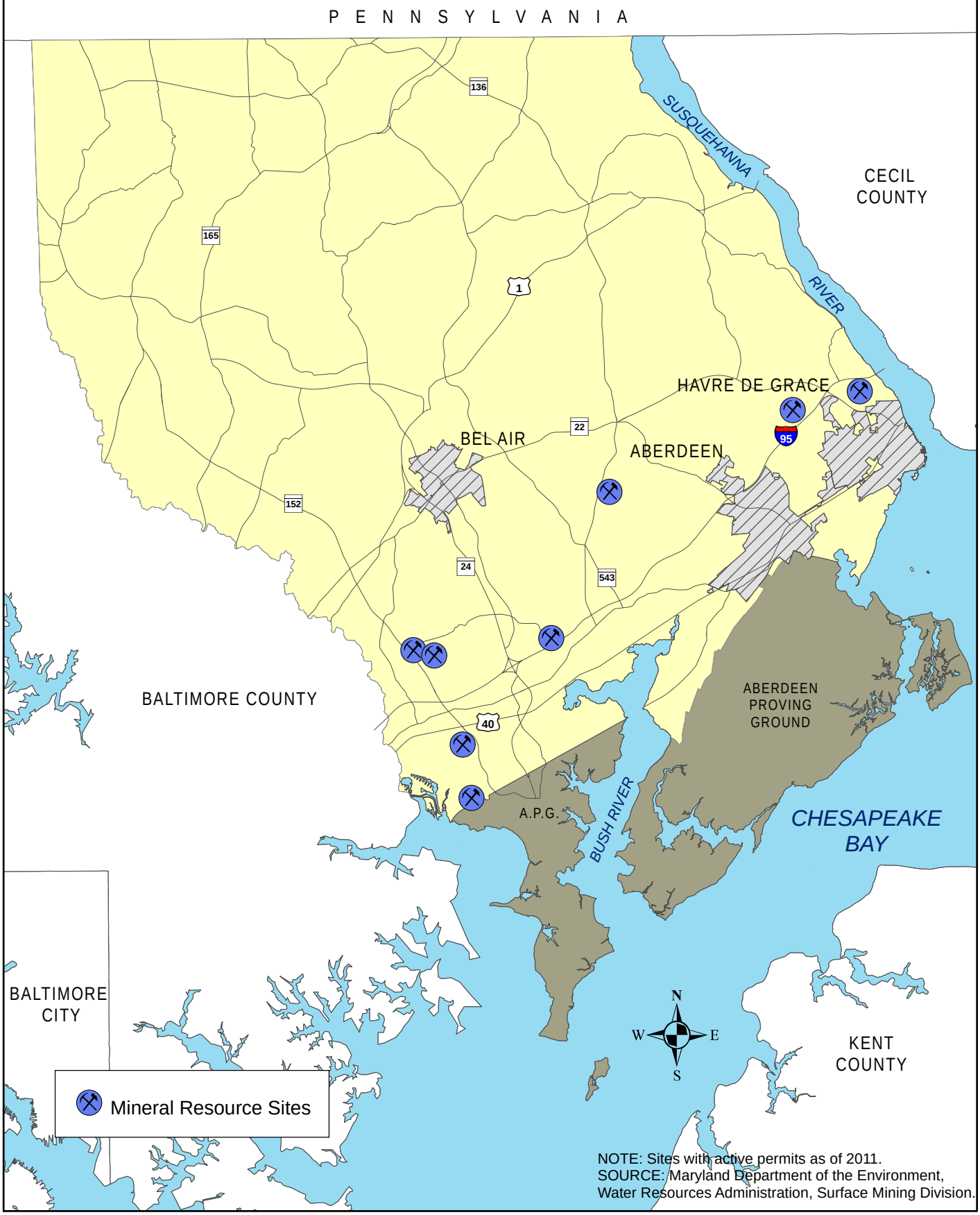

Figure 31