2011 Annual Growth Report

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The 2011 Annual Growth Report

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EXECUTIVE SUMMARY

In accordance with the Harford County Adequate Public Facilities provisions (Section 267-126) of the Harford County Code, the Harford County Annual Growth Report must be updated annually to identify any facilities that are below the County's adopted minimum standards. This year's Annual Growth Report includes information and analysis regarding Public Schools, the Water and Sewerage System, and Road Intersections, and it addresses the requirements of the Smart Green and Growing legislative package adopted by the Maryland General Assembly in 2009.

This legislation requires local jurisdictions to provide an annual report on development activities and planning programs to ensure that these activities are being completed in a manner consistent with the visions established by the legislation. Every other year, since July 2010, local jurisdictions have been required to report on their Adequate Public Facilities ordinances and how these ordinances are influencing growth within the designated Priority Funding Areas.

Harford County Development Activity:

During calendar year 2011, Harford County approved 32 subdivisions, 27 of which were residential. The residential subdivisions resulted in the creation of 530 lots, of which 464 were located within the County's designated growth areas. This is consistent with the Land Use Element Plan's goal of directing 80% of all new growth to the Development Envelope.

There were a total of 1,808 building permits issued by Harford County in 2011, of which 682 were for new residential structures. The municipalities of Aberdeen, Bel Air, and Havre de Grace issued 134 new residential permits collectively. Approximately 91% of the new construction residential permits were issued for projects within the designated growth areas.

The Master Plan and Land Use Element Plan was adopted in early 2012.

Harford County Public Schools:

Effective July 1, 2012 the adopted adequacy standards for the Public School system are:

Elementary Schools - 110 percent of rated capacity within 3 years.
Secondary Schools - 110 percent of rated capacity within 3 years.

Based on these standards, preliminary plans for all subdivisions may be approved in all elementary and secondary school districts.

Harford County Water and Sewerage System:

Based on the Adequate Public Facilities Ordinance and the Harford County Water and Sewer Design Guidelines, preliminary plan approvals, public works utility agreements, and building permits in areas served by public water and sewer systems can be approved only where adequate capacity exists in the water and wastewater treatment facilities and in distribution and collection lines serving the area.

The County water system's average daily usage in 2011 was 12.1 MGD (Million Gallons Per Day), with a peak day demand of 15.5 MGD. The total maximum daily water treatment capacity is approximately 20.4 MGD. Per the Maryland Department of the Environment's Water Supply Capacity Management Plan, the County has a maximum day drought demand of 18.7 MGD, which leaves an excess capacity of 1.7 MGD for additional growth. Expansion of the existing Abingdon Water Treatment Plant is currently under construction and is anticipated to be completed by May 2012, bringing an additional 10 MGD of source capacity online.

The total average sewage flows, system capacity, and average reserve for the four service areas within Harford County are listed below.

Harford County 2011 Sewerage Capacity by Service Area in Million Gallons Per Day (MGD)			
Service Area	**Total Flow**	**System Capacity**	**Average Reserve**
Harford County-Sod Run	13.4	20.0	6.6
Joppatowne	0.90	0.95	0.05
Spring Meadows	0.01	0.01	0.00
Whiteford-Cardiff	0.037	0.12	0.083

The determination of water or sewerage capacity in a specific area of the County can be found in the "Water and Sewer 2011 Adequate Public Facilities Report" with appropriate guidance from the Department of Public Works. A determination of adequacy is made prior to preliminary plan approval, site plan approval, public works utility agreement execution, and building permit approval.

The water system is evaluated for adequacy for providing flows during the maximum day demand, while maintaining system pressures required to deliver fire flows. Water booster stations and/or transmission lines, service mains, storage tanks, and water treatment plants are evaluated. Areas within the Harford County Development Envelope that exist at the highest elevations of the water pressure zones are evaluated for adequacy on a case-by-case analysis. The anticipated growth within the County is accommodated through a combination of developer funded projects and the County Capital Improvement Program.

The sewerage system is evaluated to accommodate expected peak flows through collectors, interceptors, pump stations, force mains, and wastewater treatment plants. Should a problem exist in a collector sewer, it is the developer's responsibility to resolve

the inadequacy. Inadequacies at major pumping stations and wastewater treatment plants are resolved by programmed capital projects or by projects cooperatively supported by a group of developers.

Harford County Road System:

To determine existing service levels at intersections and the impact of additional traffic, a Traffic Impact Analysis (TIA) must be submitted for developments that generate 249 trips per day at the time of preliminary/site plan review. Proposed developments located within the Chesapeake Science and Security Corridor will not be required to submit a Traffic Impact Analysis unless the proposed use will generate 1,500 trips per day at the time of preliminary/site plan review.

The adequacy standards for road intersections within the study area are based on the property's location within or outside the Development Envelope and are defined as follows:

> ***Inside the Development Envelopment*:** Level of Service (LOS) D.
> If existing LOS is E or F at an intersection within the Development Envelope, then the developer must mitigate the development's new trips.
>
> ***Outside the Development Envelope:*** Level of Service (LOS) C.
> If the existing LOS is D or lower, then the developer must mitigate the development's new trips.

A developer is required to provide improvements at intersections within the study area where trips generated by the development lower the LOS below the adopted standards. These improvements must bring the LOS to the adopted standard. If the TIA determines that the existing level of service does not meet the adopted standards, then the subdivider must mitigate the impact of the trips generated from the development site. The study area is defined for areas within and outside the development envelope as:

> ***Inside the Development Envelope*:** The TIA study area shall include all the existing County and State roads from point of entrance of site to the second intersection of an arterial roadway or higher functional classification road, in all directions. Developments which generate 1,500 or more trips per day may be required to expand the study area.
>
> ***Outside the Development Envelope:*** The TIA study area shall include all existing County and State roads from point of entrance to first intersection of a major collector or higher functional classification road, in all directions.

The determination of existing and projected Levels of Service is calculated in the Traffic Impact Analysis, which is performed by the developer and reviewed by the Departments of Planning and Zoning and Public Works.

In addition to the review of individual Traffic Impact Analyses, the Departments of Planning and Zoning and Public Works have studied a number of major roads and intersections to identify existing conditions. This list of roads represents a cross section of key intersections located inside, outside, and on the fringes of the Development Envelope.

There are three signalized intersections and ten unsignalized intersections with one or more movements operating at a LOS E (or D outside Development Envelope) or lower during peak hours. The evaluation of the LOS is determined by performance of the intersection during one hour peak traffic periods in the a.m. and/or p.m. The following intersections contain one or more movements that operate at an unacceptable LOS:

1. Maryland 24 and US 1
2. Maryland 152 and Singer Road
3. Maryland 22 and Thomas Run Road / Schucks Road
4. Business US 1 and Henderson Road
5. Maryland 147 and Connolly Road
6. Maryland 23 and Grafton Shop Road
7. Tollgate Road and MacPhail Road
8. US 1 and Reckord Road
9. Maryland 7 and Brass Mill Road
10. Maryland 7 and Joppa Farm Road
11. Maryland 155 and Earlton Road
12. Maryland 543 and Henderson Road
13. Maryland 22 and Aldino-Stepney Road

Developments that impact these intersections will be required to mitigate their impacts to the intersection.

INTRODUCTION

In 2009, the Maryland General Assembly enacted the Smart, Green, and Growing legislative package. This legislation was designed to protect Maryland's environment and natural resources and to promote sustainable growth. As a result of Senate Bill 280 and House Bill 295, Harford County is required to submit an annual report to the Maryland Department of Planning. This report must provide information on development activity and planning programs to ensure that these activities are being completed in a manner consistent with the State's Smart, Green, and Growing goals and visions. The aforementioned bills require that reporting be based on designated Priority Funding Areas (See Appendix A).

Starting in July 2010, Harford County was required to submit a report to the Maryland Department of Planning on its Adequate Public Facilities Ordinances (APFOs) and any development restrictions within Priority Funding Areas that are the result of these ordinances. This report must be submitted by July 1st and then every two years thereafter; however, Harford County includes this information annually. As a result of these regulations Harford County's Annual Growth Report has been expanded to include the Smart, Green, and Growing requirements.

The 2011 Annual Growth Report is an ongoing analysis of growth trends, facility capacity, and service performance. The report also contains information on updates to the County's Development Regulations and updates of all planning documents as required by the State. It addresses State requirements regarding planning consistency and opportunities for improving the planning process.

This report is prepared by the Department of Planning and Zoning in coordination with the Department of Public Works - Water and Sewer and Engineering Divisions and the Board of Education. This report provides information on the present development activity as well as past trends and future projections for Harford County and the region.

The information in this report will be used by public officials, citizens, and private developers for various purposes:

- to assess facility adequacy during the development review and approval process;
- to assess facility capacity in regard to zoning reclassification decisions;
- to support the evaluation of priority projects in the annual Capital Budget review; and
- to identify critical deficiencies which require prompt attention by the County.

GROWTH TRENDS

Population Projection Methodology

Yearly estimates of population and households in Harford County for the Annual Growth Report are determined from the 2010 Census. This data is adjusted to reflect a number of variables including building permits, average household size, and household vacancy rates. The five and ten year projections are based on these estimates, with a growth factor applied to determine the rate and quantity of growth in the County. This growth factor is based on the number of building permits anticipated to be issued each year. It is important to note that projections are based on past trends and land availability. The population projections for the five other jurisdictions in the Baltimore Region are based on an interpolation of the Baltimore Metropolitan Council's Round 7C population forecast.

The population/household projections are compared to the Residential Vacant Land Inventory and reallocated based on the availability of residential capacity. A component of the residential land inventory is the number of net planned units remaining. The total planned units remaining is calculated by subtracting the total new residential building permits issued from the total preliminary plan approved units. Subdivision plans with six or more units remaining and approved municipality plans are included. There are 7,763 planned units remaining as of December 31, 2011.

The 2010 Census information at the census block level is utilized for specific analysis of each facility regarding area maps and demographic information. Building permits are identified by facility areas and by subdivision name and/or address for each year. This provides the needed information on growth trends by facility service area.

Regional Data

In accordance with the Harford County Adequate Public Facilities provisions of the Harford County Code, the annual growth report must include data on growth that has occurred during the previous year. Tables 1- 5 address the requirements specified in §267-126 A. (2).

Harford County Development Activity

As required by §3.09 of Article 66B, enacted by Senate Bill 280 and House Bill 295 (2009), Harford County is also required to prepare an annual report on development activity and planning programs as a means of ensuring consistency with the State’s Smart, Green, and Growing goals and visions. The Bills require that reporting be based on designated Priority Funding Areas.

Table 1
Harford County - Baltimore Region
Residential Permit Activity
2007 - 2011

Jurisdiction	2007	2008	2009	2010	2011	Total	Percentage of Baltimore Region
Harford County	788	511	587	548	682	3,116	11.2%
Anne Arundel County	1,851	988	1,180	1,720	2,365	8,104	29.2%
Baltimore City	449	1,144	438	380	1,093	3,504	12.6%
Baltimore County	1,143	1,529	1,021	1,230	488	5,411	19.5%
Carroll County	310	198	180	190	183	1,061	3.8%
Howard County	1,390	1,054	1,473	1,421	1,178	6,516	23.5%
Total	**5,931**	**5,424**	**4,879**	**5,489**	**5,989**	**27,712**	**100.00%**

Source: Baltimore Metropolitan Council, May 2012

Note: Includes municipal permit activity.

Table 2
Harford County - Baltimore Region
Population and Household Projections
2011 - 2021

Jurisdiction	2011 Population	2011 Households	2016 Population	2016 Households	2021 Population	2021 Households
Harford County	245,460	90,739	260,740	99,440	270,380	104,660
Anne Arundel County	539,425	201,682	548,520	212,280	558,400	219,000
Baltimore City	631,749	255,262	676,640	277,800	684,980	283,020
Baltimore County	810,943	320,352	837,080	336,440	849,000	343,460
Carroll County	170,427	60,969	185,340	66,480	193,840	70,360
Howard County	289,428	107,339	301,480	119,280	313,340	126,520
Total	**2,687,432**	**1,036,344**	**2,809,800**	**1,111,720**	**2,869,940**	**1,147,020**

Source: Baltimore Metropolitan Council, Round 7C Forecast.

Table 3
Harford County - Baltimore Region
Employment Projections
2011 - 2021

Jurisdiction	2011 Employment	2016 Employment	2021 Employment
Harford County	132,220	144,080	152,600
Anne Arundel County	343,820	367,600	389,360
Baltimore City	453,220	463,620	473,020
Baltimore County	514,640	532,600	546,180
Carroll County	84,800	87,100	88,500
Howard County	199,220	217,780	234,400
Total	**1,727,920**	**1,812,780**	**1,884,060**

Source: Baltimore Metropolitan Council, Round 7C Forecast.

Table 4
Harford County
Non-Residential Permit Activity
New Permits Valued $50,000 and Over

	2007		2008		2009		2010		2011	
Permit Type	**Number of Permits**	**Square Footage**	**Number of Permits**	**Square Footage**	**Number of Permits**	**Square Footage**	**Number of Permits**	**Square Footage**	**Number of Permits**	**Square Footage**
Commercial	23	219,660	22	436,289	18	376,243	13	469,461	11	78,641
Industrial	13	879,800	7	438,550	1	564	2	59,232	2	14,450
Institutional	23	42,186	20	497,894	10	151,389	1	42,144	5	30,779
Utilities	1	0	8	65,064	2	4,856	2	8,640	10	61,027
Other	1	82,620	1	13,000	0	0	4	11,991	3	3,130
Total	**61**	**1,224,266**	**58**	**1,450,797**	**31**	**533,052**	**22**	**591,468**	**31**	**188,027**

Source: Baltimore Metropolitan Council, May 2012.

Table 5
Harford County
Non-Residential Permit Activity
Additions, Alterations, and Repairs Valued $50,000 and Over

Permit Type	2007		2008		2009		2010		2011	
	Number of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage	Number of Permits	Square Footage
Commercial	34	NA	35	NA	16	NA	24	NA	56	NA
Industrial	1	NA	5	NA	3	NA	2	NA	7	NA
Institutional	10	NA	20	NA	16	NA	14	NA	20	NA
Utilities	2	NA	1	NA	3	NA	3	NA	7	NA
Total	**47**	NA	**61**	NA	**38**	NA	**43**	NA	**90**	NA

NA: Data Not Available

Source: Baltimore Metropolitan Council, May 2012.

New Subdivisions

In 2011, Harford County approved 32 subdivisions, of which 27 were for residential plans and 5 were for non-residential plans, involving a total of 696 acres. The residential subdivisions resulted in the creation of 530 lots involving approximately 557 acres (See Appendix A). While 7 of the subdivisions occurred within the County's designated Priority Funding Area, they yielded 464 lots or 87% of the new lots approved. This percentage is consistent with the 2012 Land Use Element Plan's intent of directing at least 80% of all new growth to designated growth areas. The data reflects no changes in development patterns.

The remaining 20 residential subdivisions, located outside of the designated growth area, created 66 lots. Of these, 70% were two lots or less (12 single-lot subdivisions and two two-lot subdivisions). For the non-residential plans, three of the five were located within the Priority Funding Area. A map of all the approved subdivisions is provided in Appendix A.

New Building Permits Issued

A total of 1,808 building permits were issued by Harford County in 2011 of which 548 were for new residential structures. This is up from 1,554 in 2010. This number includes residential, non-residential, and accessory structure permits. The municipalities of Aberdeen, Bel Air, and Havre de Grace issued 134 new residential permits collectively. Approximately 91% of the 682 new residential permits were located within the County's designated growth area. A total of 108 non-residential permits were also issued. Of these, the largest numbers of permits issued were for industrial (46) with 28 being for storage/warehousing, and 12 for modular/industrialized structures. The remaining non-residential permits were for a variety of commercial and industrial uses. The remaining 1,152 permits were issued for accessory structures such as sheds, swimming pools, garages and other miscellaneous uses. Harford County maintains a monthly data report for building permits.

Development Capacity

The Department of Planning and Zoning has updated the inventory of residentially zoned land in the Development Envelope. This inventory provides a total residential land capacity and includes vacant undeveloped land, preliminary plan approvals, vacant land capacity in the municipalities, and potential redevelopment/infill capacity. Based on this update, there is an estimated capacity of 22,153 units in the development envelope.

Zoning Map Amendments

For 2011, there are no zoning map amendments to report.

PLANNING DOCUMENT UPDATES

This section addresses State reporting requirements regarding Code amendments and new or updated comprehensive plans and plan elements. During 2011, Harford County enacted seven amendments to its Development Regulations, which were comprehensively revised in 2008. Harford County continued work on updating the Master Plan and Land Use Element. The County also initiated the update of the Land Preservation, Parks and Recreation Plan (LPPRP) and the Bicycle and Pedestrian Master Plan. Details are provided below.

Zoning Code Amendments

Seven bills were enacted in 2011 that resulted in changes to the County's Development Regulations. Five of the bills resulted in amendments to the Zoning Code, and the other two amended the Subdivision Regulations. A list of the amendments is provided in Appendix B. One of the bills (Bill 11-04AA) was adopted in May 2011 and addressed housekeeping items, corrections, and clarifications. Bill 11-05AA, also adopted in May 2011, resulted in changes to the Critical Area Legislation. Bill 11-03 added fortune telling as a permitted use in B2 and B3 zoning districts. Bill 11-32 added the definition of transient dwelling and clarified the definition of lodging house. Bill 11-44 added Dembytown Church to the historic landmarks section. The County's Subdivision Regulations were amended by Bills 11-06 and 11-13. Bill 11-06 updated the Critical Area Overlay District concurrent with Bill 11-05AA, and makes revisions pertaining to Preliminary and Site Plans to provide for compliance with State-mandated changes as provided by the Critical Area Commission. Bill 11-13 provides a one-time one-year extension to site plans if APF is met.

Comprehensive Plan and Element Plan Updates

The 2012 Master Plan and Land Use Element Plan update was initiated in 2011. The public participation process provided opportunities for interested parties to express their ideas through a series of public meetings and workshops to address issues regarding the 2012 Land Use Element Plan. Utilizing a combination of meetings and technology based communication options, citizens were able to participate and follow the plan development process. The 2012 Master Plan and Land Use Plan Element was adopted on March 20, 2012 and incorporated the requirements of the Smart, Green, and Growing legislative package adopted in 2009 by the Maryland General Assembly.

The Kick-off Meeting for the update of the 2012 Land Preservation, Parks and Recreation Plan (LPPRP) was held in August 2011, with adoption anticipated by the summer of 2012. In addition, the Harford County Bicycle and Pedestrian Master Plan development was initiated in 2011, with adoption anticipated by early 2013

The Water and Sewer Master Plan was updated in the spring and fall as required.

ADEQUATE PUBLIC FACILITIES

The County's Annual Growth Report must be updated annually to identify any facilities that are below the County's adopted minimum standards. This year's Annual Growth Report includes information and analysis regarding Public Schools, the Water and Sewerage System, and Road Intersections.

This report also addresses State reporting requirements for Adequate Public Facilities Ordinances (APFO) including reporting requirements for roads, transportation facilities and schools as they relate to development patterns. Since July 1, 2010, local jurisdictions have been required to submit an APFO report to the Maryland Department of Planning with future reports being due every two years thereafter. In the report, Harford County must identify any restrictions that occur within a Priority Funding Area as a result of APFO restrictions, and the report must address how the restrictions will be resolved.

Public Schools

To assess current and future adequacy of the public school facilities, the capacities of existing schools, school utilization and future populations are analyzed. The data in this report regarding the public school system are aggregated by the elementary/middle/high school districts, and include school enrollments, County-rated capacities for each school facility, utilization of each school facility, and three-year projected school enrollments (See Tables 6, 7, and 8). Modified school enrollment projections are included and take into account planned units remaining and projected units from vacant residential zoned land (See Tables 9 and 10). In addition, development information such as building permits issued by dwelling type (See Tables 11, 12, and 13) and population and household estimates (See Tables 14, 15, and 16) are included in this report. School maps and pupil yield factors by dwelling unit type are included in Appendix C and D, respectively.

Analysis

Each school facility has been analyzed in terms of past growth trends, current conditions, and future enrollment projections. The information is based on factual data and is aggregated by current school districts. Based on the Adequate Public Facilities provision of the County Code (Section 267-126), the level of service standard for Public Schools are:

Elementary – 110 percent of rated capacity within 3 years
Secondary – 110 percent of rated capacity within 3 years

Elementary Schools

Under current law, preliminary plans for subdivisions of greater than five lots cannot be approved in elementary school districts where the full-time enrollment currently exceeds, or is projected to exceed, 110 percent of the capacity within three years. Currently, all 33 elementary schools meet adequacy standards.

Secondary Schools

Under current law, preliminary plans for subdivisions of greater than five lots cannot be approved in secondary school districts where the full-time enrollment currently exceeds, or is projected to exceed, 110 percent of the capacity within three years. Currently, all 17 middle and high schools meet adequacy standards.

School Enrollment Projection Methodology

The methodology for projecting students utilizes historical data for live births and the number of children enrolled in public schools. Using these data, a series of ratios that reflect grade cohort survival are developed. These ratios include consideration of a number of factors:

1. Births in a given year which affect subsequent kindergarten and first grade enrollments.
2. Net migration of school age children.
3. Net transfer of children between public and private schools.
4. Non-promotion of children to the next grade level.
5. Dropouts in the later years of secondary school.
6. Shifts between regular grade and upgraded groups other than special education.

This technique of establishing a ratio is used for each successive grade. For example, a ratio is developed between the number of children actually in first grade in 2000 and the number in second grade the following year. The ratio, therefore, represents the number of first graders who advance to second grade. If significant variations exist (such as a rapid increase in home building), then factors such as pupil yields for subdivision activity and development trends must be measured.

In order to ensure accurate projections, development monitoring is a key activity because housing expansion periods have a direct impact on school enrollments. A primary means of calculating projected student enrollment due to a housing expansion period is by using pupil yield factors for new developments.

Pupil yield factors are determined by researching the number of students from a particular community/subdivision who are actually attending their home school. By dividing the number of students accounted for by the number of dwelling units, a pupil

generation factor is determined. It is important to note that different pupil yield factors are generated depending on housing type (single family, townhouse, apartment, etc.) and school level (elementary, middle, and high). Surveys of sample subdivisions to assess an accurate yield factor are completed on a regular basis. (See Appendix D)

Modified School Enrollment Methodology

Utilizing our regional cooperative forecast methodology, a projection of housing units was determined for each school district. It is imperative to note that these projections are constrained by Countywide estimates. The number and type of units were based on the existing zoning. After the number and type of units were determined and projected by year, a pupil yield factor was applied to determine the total number of new pupils by school district.

The methodology for determining a growth factor included a multi-step process. The process included utilization of the existing grade cohort succession methodology and the pupil yield factor. A factor was applied to the existing grade cohort succession ratio per school if the pupil yield factor identified an increase in the average number of students. In order to maintain a consistent application, all calculations were based on the Harford County Public School system's definition of "unadjusted" enrollment projections. No assumptions were made in terms of school capacities or utilization of existing facilities.

Table 6
Harford County Elementary Schools
Utilization Chart
2011

Elementary School	State-Rated Capacity	Actual 2011 - 2012 ENROLL	Actual 2011 - 2012 % UTIL.	Projected 2012 - 2013 ENROLL	Projected 2012 - 2013 % UTIL.	Projected 2013 - 2014 ENROLL	Projected 2013 - 2014 % UTIL.	Projected 2014 - 2015 ENROLL	Projected 2014 - 2015 % UTIL.
Abingdon	864	875	101%	903	105%	883	102%	887	103%
Bakerfield	500	352	70%	352	70%	327	65%	316	63%
Bel Air	500	474	95%	498	100%	500	100%	501	100%
Church Creek	793	682	86%	638	80%	641	81%	645	81%
Churchville	388	375	97%	359	92%	352	91%	352	91%
Darlington	192	124	65%	117	61%	125	65%	127	66%
Deerfield	816	778	95%	745	91%	743	91%	763	94%
Dublin	295	279	95%	286	97%	286	97%	281	95%
Edgewood	511	413	81%	413	81%	409	80%	412	81%
Emmorton	549	539	98%	521	95%	527	96%	529	96%
Forest Hill	581	557	96%	551	95%	550	95%	521	90%
Forest Lakes	546	511	94%	502	92%	481	88%	484	89%
Fountain Green	571	562	98%	544	95%	533	93%	526	92%
G. Lisby at Hillsdale	455	406	89%	411	90%	417	92%	405	89%
Hall's Cross Roads	562	443	79%	459	82%	451	80%	454	81%
Havre de Grace	566	424	75%	441	78%	446	79%	458	81%
Hickory	655	653	100%	667	102%	666	102%	668	102%
Homestead/Wakefield	907	869	96%	904	100%	898	99%	903	100%
Jarrettsville	548	470	86%	482	88%	466	85%	474	87%
Joppatowne	653	654	100%	696	107%	692	106%	680	104%
Magnolia	518	361	70%	372	72%	384	74%	384	74%
Meadowvale	568	524	92%	472	83%	469	83%	464	82%
Norrisville	252	199	79%	195	77%	199	79%	190	76%
North Bend	500	366	73%	368	74%	361	72%	336	67%
North Harford	500	420	84%	419	84%	406	81%	399	80%
Prospect Mill	680	640	94%	624	92%	603	89%	591	87%
Red Pump	696	596	86%	631	91%	637	92%	635	91%
Ring Factory	548	542	99%	564	103%	577	105%	585	107%
Riverside	522	485	93%	454	87%	452	87%	461	88%
Roye-Williams	683	424	62%	432	63%	432	63%	436	64%
Wm. Paca / Old Post Rd.	954	626	66%	619	65%	621	65%	629	66%
Wm. S. James	522	514	98%	480	92%	474	91%	463	89%
Youth's Benefit	958	998	104%	1,002	105%	993	104%	1,005	105%
TOTAL	19,353	17,131	89%	17,120	88%	17,001	88%	16,966	88%

* 2011/12 enrollment figures reflect half-day pre-kindergarten classes.

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2011.

Table 7

Harford County Middle Schools

Utilization Chart

2011

Middle School	State-Rated Capacity	Actual 2011 - 2012 ENROLL	Actual 2011 - 2012 %UTIL	Projected 2012 - 2013 ENROLL	Projected 2012 - 2013 %UTIL	Projected 2013 - 2014 ENROLL	Projected 2013 - 2014 %UTIL	Projected 2014 - 2015 ENROLL	Projected 2014 - 2015 %UTIL
Aberdeen	1,444	1,043	72%	1,013	70%	988	68%	955	66%
Bel Air	1,318	1,296	98%	1,306	99%	1,300	99%	1,265	96%
Edgewood	1,370	1,073	78%	1,069	78%	1,155	84%	1,195	87%
Fallston	1,105	929	84%	890	81%	949	86%	876	79%
Havre de Grace	775	529	68%	538	69%	561	72%	578	75%
Magnolia	1,073	710	66%	665	62%	709	66%	766	71%
North Harford	1,243	1,019	82%	995	80%	992	80%	1,004	81%
Patterson Mill	711	732	103%	710	100%	704	99%	684	96%
Southampton	1,540	1,276	83%	1,228	80%	1,218	79%	1,187	77%
Alternative Education/RAACS	50	16							
Total	10,629	8,623	81%	8,414	80%	8,576	81%	8,510	80%

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2011.

Table 8

Harford County High Schools

Utilization Chart

2011

High School	State-Rated Capacity	Actual 2011 - 2012 ENROLL	Actual 2011 - 2012 %UTIL	Projected 2012 - 2013 ENROLL	Projected 2012 - 2013 %UTIL	Projected 2013 - 2014 ENROLL	Projected 2013 - 2014 %UTIL	Projected 2014 - 2015 ENROLL	Projected 2014 - 2015 %UTIL
Aberdeen	1,679	1,411	84%	1,386	83%	1,341	80%	1,304	78%
Bel Air	1,668	1,633	98%	1,686	101%	1,679	101%	1,720	103%
C. Milton Wright	1,678	1,491	89%	1,560	93%	1,503	90%	1,532	91%
Edgewood	1,743	1,211	69%	1,262	72%	1,250	72%	1,216	70%
Fallston	1,529	1,090	71%	1,100	72%	1,089	71%	1,145	75%
Harford Technical	920	1,019	111%	1,010	110%	1,013	110%	1,009	110%
Havre de Grace	850	691	81%	670	79%	636	75%	606	71%
Joppatowne	1,126	872	77%	847	75%	811	72%	756	67%
North Harford	1,603	1,447	90%	1,424	89%	1,354	84%	1,338	83%
Patterson Mill	924	991	107%	972	105%	951	103%	941	102%
Alternative Education	200	97							
Total	13,920	11,953	86%	11,917	87%	11,627	85%	11,567	84%

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2011.

Table 9

Harford County

Modified Elementary School Enrollment Projections

School District	2011	2012	2013	2014	2015	2016	2017	2018	2019
ABINGDON	875	903	883	887	886	883	857	840	836
modified	**875**	**903**	**886**	**893**	**895**	**895**	**872**	**858**	**857**
BAKERSFIELD	352	352	327	316	309	310	316	310	309
modified	**352**	**352**	**340**	**342**	**347**	**362**	**382**	**390**	**404**
BEL AIR	474	498	500	501	487	497	483	470	468
modified	**474**	**498**	**506**	**513**	**505**	**522**	**513**	**506**	**510**
CHURCH CREEK	682	638	641	645	644	635	625	618	618
modified	**682**	**638**	**670**	**704**	**735**	**758**	**781**	**809**	**847**
CHURCHVILLE	375	359	352	352	347	336	336	366	364
modified	**375**	**359**	**357**	**362**	**362**	**356**	**361**	**399**	**402**
DARLINGTON	124	117	125	127	134	131	125	140	138
modified	**124**	**117**	**127**	**131**	**140**	**139**	**135**	**153**	**153**
DEERFIELD	778	745	743	763	758	743	756	824	817
modified	**778**	**745**	**761**	**800**	**813**	**817**	**851**	**946**	**958**
DUBLIN	279	286	286	281	275	279	283	276	276
modified	**279**	**286**	**289**	**287**	**284**	**291**	**298**	**294**	**298**
EDGEWOOD	413	413	409	412	413	409	399	392	390
modified	**413**	**413**	**410**	**414**	**416**	**413**	**404**	**398**	**397**
EMMORTON	539	521	527	529	534	531	522	506	501
modified	**539**	**521**	**538**	**552**	**568**	**576**	**579**	**573**	**580**
FOREST HILL	557	551	550	521	528	521	520	509	505
modified	**557**	**551**	**552**	**525**	**534**	**529**	**530**	**521**	**519**
FOREST LAKES	511	502	481	484	481	489	486	474	470
modified	**511**	**502**	**481**	**484**	**481**	**489**	**486**	**474**	**470**
FOUNTAIN GREEN	562	544	533	526	530	541	544	530	527
modified	**562**	**544**	**534**	**528**	**533**	**545**	**549**	**536**	**534**
G. LISBY AT HILLSDALE	406	411	417	405	419	417	408	399	398
modified	**406**	**411**	**419**	**409**	**425**	**425**	**418**	**411**	**412**
HALLS CROSS ROADS	443	459	451	454	455	468	468	458	456
modified	**443**	**459**	**455**	**462**	**467**	**484**	**489**	**483**	**485**
HAVRE DE GRACE	424	441	446	458	462	468	465	451	450
modified	**424**	**441**	**471**	**512**	**544**	**581**	**611**	**627**	**662**
HICKORY	653	667	666	668	666	659	654	639	636
modified	**653**	**667**	**681**	**699**	**712**	**720**	**732**	**732**	**746**
HOMESTEAD/WAKEFIELD	869	904	898	903	898	896	900	882	877
modified	**869**	**904**	**916**	**940**	**953**	**970**	**994**	**994**	**1,009**
JARRETTSVILLE	470	482	466	474	468	452	464	451	448
modified	**470**	**482**	**473**	**489**	**489**	**480**	**500**	**494**	**499**
JOPPATOWNE	654	696	692	680	681	669	669	652	648
modified	**654**	**696**	**702**	**700**	**712**	**710**	**720**	**713**	**720**
MAGNOLIA	361	372	384	384	392	401	412	406	406
modified	**361**	**372**	**389**	**395**	**410**	**426**	**444**	**444**	**450**
MEADOWVALE	524	472	469	464	451	463	458	493	489
modified	**524**	**472**	**473**	**472**	**463**	**479**	**478**	**519**	**519**
NORRISVILLE	199	195	199	190	193	191	193	189	188
modified	**199**	**195**	**202**	**196**	**202**	**203**	**208**	**207**	**210**
NORTH BEND	366	368	361	336	336	333	341	332	331
modified	**366**	**368**	**366**	**346**	**351**	**354**	**367**	**363**	**367**
NORTH HARFORD	420	419	406	399	393	403	414	403	402
modified	**420**	**419**	**413**	**414**	**414**	**432**	**451**	**447**	**454**
PROSPECT MILL	640	624	603	591	587	600	593	578	574
modified	**640**	**624**	**607**	**599**	**599**	**616**	**613**	**602**	**602**
RED PUMP	**596**	**631**	**637**	**635**	**640**	**640**	**645**	**631**	**627**
modified	**596**	**631**	**649**	**659**	**677**	**689**	**708**	**706**	**715**
RING FACTORY	542	564	577	585	576	574	581	566	563
modified	**542**	**564**	**584**	**599**	**597**	**602**	**617**	**609**	**613**
RIVERSIDE	485	454	452	461	439	432	443	478	474
modified	**485**	**454**	**457**	**471**	**454**	**452**	**469**	**511**	**512**
ROYE-WILLIAMS	424	432	432	436	438	442	429	421	420
modified	**424**	**432**	**432**	**436**	**438**	**442**	**429**	**421**	**420**
WM PACA/OLD POST RD	626	619	621	629	643	670	702	690	686
modified	**626**	**619**	**641**	**670**	**705**	**757**	**814**	**823**	**843**
W.S. JAMES	514	480	474	463	459	449	435	472	466
modified	**514**	**480**	**475**	**465**	**462**	**453**	**440**	**478**	**473**
YOUTHS BENEFIT	998	1,002	993	1,005	1,008	993	991	967	962
modified	**998**	**1,002**	**1,006**	**1,031**	**1,048**	**1,046**	**1,057**	**1,046**	**1,055**
Total	17,131	17,120	17,001	16,966	16,930	16,924	16,917	16,813	16,720
Total - modified	**17,131**	**17,120**	**17,264**	**17,498**	**17,737**	**18,014**	**18,301**	**18,487**	**18,693**

Source: Harford County Dept. of Planning and Zoning, May 2012.

Table 10

Harford County
Modified Secondary School Enrollment Projections

Middle School

School District	2011	2012	2013	2014	2015	2016	2017	2018	2019
Aberdeen	1,043	1,013	988	955	912	872	892	932	945
modified	**1,043**	**1,013**	**996**	**996**	**986**	**979**	**1,036**	**1,118**	**1,172**
Bel Air	1,296	1,306	1,300	1,265	1,295	1,292	1,326	1,372	1,387
modified	**1,296**	**1,306**	**1,308**	**1,287**	**1,332**	**1,343**	**1,392**	**1,454**	**1,485**
Edgewood	1,073	1,069	1,155	1,195	1,211	1,163	1,198	1,158	1,181
modified	**1,073**	**1,069**	**1,269**	**1,336**	**1,378**	**1,349**	**1,415**	**1,394**	**1,448**
Fallston	929	890	949	876	905	912	928	968	954
modified	**929**	**890**	**1,023**	**955**	**998**	**1,016**	**1,044**	**1,100**	**1,096**
Havre de Grace	529	538	561	578	600	598	631	579	595
modified	**529**	**538**	**600**	**633**	**673**	**686**	**742**	**700**	**737**
Magnolia	710	665	709	766	826	825	820	792	791
modified	**710**	**665**	**763**	**832**	**905**	**913**	**917**	**895**	**903**
North Harford	1,019	995	992	1,004	1,015	988	906	941	942
modified	**1,019**	**995**	**1,003**	**1,029**	**1,054**	**1,043**	**971**	**1,023**	**1,040**
Patterson Mill	**732**	**710**	**704**	**684**	**732**	**765**	**785**	**755**	751
modified	**732**	**710**	**705**	**692**	**747**	**787**	**815**	**792**	**795**
Southampton	1,276	1,228	1,218	1,187	1,195	1,143	1,156	1,165	1,196
modified	**1,276**	**1,228**	**1,219**	**1,200**	**1,219**	**1,177**	**1,202**	**1,222**	**1,266**
Total	8,607	8,414	8,576	8,510	8,691	8,558	8,642	8,662	8,742
Total - modified	**8,607**	**8,414**	**8,886**	**8,960**	**9,292**	**9,293**	**9,535**	**9,699**	**9,940**

High School

School District	2011	2012	2013	2014	2015	2016	2017	2018	2019
Aberdeen	1,411	1,386	1,341	1,304	1,275	1,252	1,219	1,157	1,116
modified	**1,411**	**1,386**	**1,385**	**1,396**	**1,414**	**1,422**	**1,396**	**1,393**	**1,116**
Bel Air	1,633	1,686	1,679	1,720	1,702	1,720	1,716	1,714	1,726
modified	**1,633**	**1,686**	**1,755**	**1,754**	**1,790**	**1,803**	**1,819**	**1,850**	**1,726**
C. Milton Wright	1,491	1,560	1,503	1,532	1,499	1,468	1,454	1,437	1,404
modified	**1,491**	**1,560**	**1,558**	**1,538**	**1,520**	**1,519**	**1,514**	**1,493**	**1,404**
Edgewood	1,211	1,262	1,250	1,216	1,258	1,322	1,346	1,382	1,389
modified	**1,211**	**1,262**	**1,268**	**1,339**	**1,435**	**1,489**	**1,557**	**1,595**	**1,389**
Fallston	1,090	1,100	1,089	1,145	1,133	1,128	1,115	1,073	1,116
modified	**1,090**	**1,100**	**1,170**	**1,170**	**1,177**	**1,176**	**1,144**	**1,203**	**1,116**
Havre de Grace	691	670	636	606	613	623	644	677	678
modified	**691**	**670**	**642**	**668**	**699**	**742**	**801**	**824**	**678**
Joppatowne	872	847	811	756	743	763	802	855	884
modified	**872**	**847**	**775**	**772**	**804**	**855**	**922**	**964**	**884**
North Harford	1,447	1,424	1,354	1,338	1,242	1,242	1,278	1,251	1,252
modified	**1,447**	**1,424**	**1,372**	**1,291**	**1,309**	**1,365**	**1,354**	**1,373**	**1,252**
Patterson Mill	991	972	951	941	902	884	889	914	959
modified	**991**	**972**	**959**	**928**	**919**	**934**	**969**	**1,027**	**959**
Total	10,837	10,907	10,614	10,558	10,367	10,402	10,463	10,460	10,524
Total - modified	**10,837**	**10,907**	**10,883**	**10,856**	**11,065**	**11,304**	**11,477**	**11,722**	**10,524**

Source: Harford County Dept. of Planning and Zoning, May, 2012.

Table 11

Harford County Residential Building Permit Activity

by Elementary School District

2007 - 2011

	2007					2008					2009					2010					2011				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
SCHOOL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL
Abingdon	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bakerfield	2	0	12	0	14	2	2	0	0	4	3	0	0	0	3	3	4	0	0	7	14	0	0	0	14
Bel Air	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	1	12	0	0	13	1	24	0	0	25
Church Creek	0	126	12	0	138	1	79	14	0	94	1	62	0	0	63	0	51	0	0	51	2	12	212	0	226
Churchville	10	0	0	0	10	7	0	0	0	7	7	0	0	0	7	5	0	0	1	6	4	0	0	0	4
Darlington	3	0	0	0	3	3	0	0	1	4	2	0	0	0	2	0	0	0	0	0	1	0	0	1	2
Deerfield	3	0	0	0	3	1	0	0	0	1	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0
Dublin	8	0	0	0	8	7	0	0	0	7	2	0	0	2	4	2	0	0	1	3	5	0	0	1	6
Edgewood	0	24	0	0	24	0	4	0	0	4	0	4	0	0	4	0	8	0	0	8	0	0	0	0	0
Emmorton	7	50	0	0	57	13	6	28	0	47	3	30	0	0	33	2	94	0	0	96	1	36	12	0	49
Forest Hill	4	0	0	0	4	1	12	0	0	13	1	0	0	0	1	2	0	0	0	2	2	0	0	0	2
Forest Lakes	6	0	0	0	6	1	0	0	0	1	3	0	0	0	3	2	0	0	0	2	2	0	0	0	2
Fountain Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4
G. Lisby at Hillsdale	4	0	0	0	4	9	0	0	0	9	2	0	0	0	2	2	18	0	0	20	20	28	0	0	48
Hall's Cross Roads	1	18	0	0	19	1	17	0	0	18	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Havre de Grace	25	73	48	0	146	22	44	0	0	66	55	40	0	0	95	71	50	0	0	121	33	39	0	0	72
Hickory	5	0	0	1	6	2	0	0	0	2	3	0	0	0	3	15	0	0	0	15	2	0	0	0	2
Homestead/Wakefield	19	11	0	0	30	15	4	0	0	19	17	0	0	0	17	15	0	0	0	15	35	10	0	0	45
Jarrettsville	18	0	0	1	19	14	0	0	0	14	14	0	0	0	14	10	0	0	0	10	5	0	0	0	5
Joppatowne	9	0	0	0	9	9	0	0	0	9	3	0	84	0	87	6	0	0	0	6	5	0	0	0	5
Magnolia	5	28	0	0	33	3	16	0	0	19	0	0	0	0	0	2	22	0	0	24	1	20	0	0	21
Meadowvale	2	11	0	0	13	1	0	0	0	1	2	0	0	0	2	2	0	0	0	2	1	0	0	0	1
Norrisville	10	0	0	0	10	2	0	0	1	3	3	0	0	0	3	2	0	0	0	2	3	0	0	0	3
North Bend	7	0	0	0	7	6	0	0	0	6	8	0	0	0	8	10	0	0	1	11	5	0	0	0	5
North Harford	16	0	0	0	16	12	0	0	3	15	10	0	0	1	11	12	0	0	0	12	11	0	0	1	12
Prospect Mill	0	0	31	0	31	0	0	30	0	30	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0
Red Pump	12	41	0	0	53	7	51	0	0	58	11	71	28	0	110	6	28	28	0	62	16	0	14	0	30
Ring Factory	34	0	0	0	34	0	0	0	0	0	2	0	0	0	2	3	0	0	0	3	5	0	0	0	5
Riverside	2	0	0	0	2	1	0	0	0	1	25	0	0	0	25	20	0	0	0	20	17	0	0	0	17
Roye-Williams	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	0	0	4	9
Wm. Paca/Old Post Rd	6	45	0	0	51	19	22	0	0	41	24	26	0	0	50	10	0	0	0	10	23	10	0	0	33
Wm. S. James	4	15	0	0	19	1	6	0	0	7	0	3	0	0	3	1	3	0	0	4	1	10	0	0	11
Youth's Benefit	17	0	0	0	17	8	0	0	1	9	16	0	0	0	16	12	5	0	0	17	11	13	0	0	24
TOTAL	241	442	103	2	788	170	263	72	6	511	220	236	128	3	587	218	295	28	4	545	235	202	238	7	682

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2012

KEY:

SF = Single Family Dwelling
TH = Townhouse
APT/CO = Apartment/Condominium
MH = Mobile Home

Table 12

Harford County Residential Building Permit Activity

by Middle School District

2007 - 2011

	2007					2008					2009					2010					2011				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
SCHOOL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL
Aberdeen	7	168	48	0	223	14	117	14	0	145	8	62	0	0	70	5	88	0	1	94	41	56	212	4	313
Bel Air	10	84	0	0	94	14	45	28	0	87	10	87	28	0	125	26	134	28	0	188	27	63	26	0	116
Edgewood	15	69	0	0	84	21	26	0	0	47	25	30	0	0	55	13	8	0	0	21	23	10	0	0	33
Fallston	55	7	0	0	62	27	12	0	1	40	38	14	0	0	52	21	5	0	0	26	30	13	0	0	43
Havre de Grace	30	53	32	0	115	26	25	0	1	52	60	40	0	0	100	75	35	0	0	110	35	23	0	1	59
Magnolia	9	28	0	0	37	13	16	0	0	29	28	0	84	0	112	28	22	0	0	50	20	20	0	0	40
North Harford	48	0	0	1	49	32	12	0	4	48	29	0	0	3	32	33	0	0	1	34	28	0	0	2	30
Patterson Mill	53	26	0	0	79	15	10	0	0	25	15	3	0	0	18	14	3	0	0	17	22	17	0	0	39
Southampton	13	0	31	1	45	8	0	30	0	38	7	0	16	0	23	3	0	0	2	5	9	0	0	0	9
TOTAL	240	435	111	2	788	170	263	72	6	511	220	236	128	3	587	218	295	28	4	545	235	202	238	7	682

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2012

KEY:

SF = Single Family Dwelling
TH = Townhouse
APT/CO = Apartment/Condominium
MH = Mobile Home

Table 13

Harford County Residential Building Permit Activity

by High School District

2007-2011

	2007					2008					2009					2010					2011			
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSU BY DWELLING TYPE			
SCHOOL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH
Aberdeen	7	168	48	0	223	14	117	14	0	145	8	62	0	0	70	5	88	0	1	94	41	56	212	4
Bel Air	10	84	0	0	94	14	45	28	0	87	10	87	28	0	125	26	134	28	0	188	27	63	26	0
C.M. Wright	13	0	31	1	45	8	0	30	0	38	7	0	16	0	23	3	0	0	2	5	9	0	0	0
Edgewood	15	69	0	0	84	21	26	0	0	47	25	30	0	0	55	13	8	0	0	21	23	10	0	0
Fallston	55	7	0	0	62	27	12	0	1	40	38	14	0	0	52	21	5	0	0	26	30	13	0	0
Havre de Grace	30	53	32	0	115	26	25	0	1	52	60	40	0	0	100	75	35	0	0	110	35	23	0	1
Joppatowne	9	28	0	0	37	13	16	0	0	29	28	0	84	0	112	28	22	0	0	50	20	20	0	0
North Harford	48	0	0	1	49	32	12	0	4	48	29	0	0	3	32	33	0	0	1	34	28	0	0	2
Patterson Mill	53	26	0	0	79	15	10	0	0	25	15	3	0	0	18	14	3	0	0	17	22	17	0	0
TOTAL	240	435	111	2	788	170	263	72	6	511	220	236	128	3	587	218	295	28	4	545	235	202	238	7

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2012

KEY:

SF = Single Family Dwelling
TH = Townhouse
APT/CO = Apartment/Condominium
MH = Mobile Home

Table 14
Harford County Population and Households
by Elementary School District*

2007 - 2011

	2007*		2008*		2009*		2010*		2011*	
SCHOOL	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Abingdon	4,781	13,017	4,781	12,998	4,783	12,992	4,781	11,593	4,781	12,933
Bakerfield	2,254	6,137	2,257	6,138	2,270	6,168	2,274	5,581	2,281	6,170
Bel Air	2,995	8,155	3,011	8,189	3,011	8,181	3,013	7,731	3,025	8,184
Church Creek	3,278	8,924	3,317	9,023	3,449	9,369	3,538	9,248	3,587	9,703
Churchville	2,436	6,633	2,447	6,655	2,456	6,673	2,463	6,808	2,469	6,678
Darlington	998	2,716	1,000	2,721	1,003	2,726	1,007	2,646	1,007	2,724
Deerfield	3,259	8,874	3,259	8,864	3,262	8,862	3,263	9,506	3,265	8,832
Dublin	1,634	4,449	1,643	4,471	1,651	4,485	1,658	4,490	1,661	4,493
Edgewood	1,199	3,264	1,222	3,322	1,244	3,381	1,248	3,523	1,256	3,397
Emmorton	2,085	5,676	2,175	5,916	2,229	6,056	2,274	6,159	2,366	6,400
Forest Hill	2,373	6,462	2,393	6,508	2,397	6,512	2,409	7,004	2,411	6,522
Forest Lakes	2,827	7,696	2,831	7,698	2,836	7,705	2,837	7,785	2,839	7,680
Fountain Green	1,892	5,151	1,892	5,146	1,892	5,140	1,892	5,742	1,892	5,118
G. Lisby at Hillsdale	2,246	6,116	2,252	6,124	2,256	6,128	2,264	5,693	2,283	6,176
Hall's Cross Roads	1,899	5,171	1,915	5,211	1,934	5,253	1,951	5,350	1,951	5,278
Havre de Grace	2,899	7,893	3,187	8,667	3,326	9,035	3,388	7,890	3,504	9,478
Hickory	2,720	7,406	2,753	7,489	2,759	7,495	2,761	7,994	2,775	7,508
Homestead/Wakefield	5,169	14,074	5,242	14,253	5,271	14,319	5,287	14,411	5,301	14,341
Jarrettsville	2,661	7,246	2,707	7,361	2,725	7,403	2,738	7,730	2,748	7,432
Joppatowne	3,746	10,198	3,825	10,405	3,834	10,416	3,843	9,801	3,849	10,411
Magnolia	1,590	4,328	1,590	4,323	1,621	4,404	1,639	4,670	1,662	4,496
Meadowvale	2,602	7,083	2,608	7,095	2,621	7,119	2,622	6,963	2,624	7,098
Norrisville	1,225	3,334	1,245	3,388	1,255	3,409	1,258	3,496	1,260	3,408
North Bend	2,200	5,991	2,214	6,021	2,220	6,032	2,226	6,214	2,237	6,050
North Harford	2,270	6,181	2,286	6,219	2,302	6,253	2,316	6,599	2,327	6,296
Prospect Mill	2,799	7,620	2,800	7,615	2,829	7,686	2,858	7,418	2,858	7,731
Red Pump	3,616	9,845	3,670	9,983	3,720	10,107	3,776	10,127	3,835	10,375
Ring Factory	2,676	7,286	2,680	7,288	2,712	7,368	2,712	7,349	2,715	7,344
Riverside	2,432	6,621	2,451	6,666	2,453	6,663	2,454	6,532	2,473	6,690
Roye-Williams	1,844	5,021	1,844	5,015	1,844	5,010	1,844	5,901	1,845	4,991
Wm. Paca/Old Post Rd	1,850	5,037	1,862	12,077	1,911	5,191	4,528	12,516	4,538	12,275
Wm. S. James	4,484	12,209	4,503	5,236	4,521	12,283	1,950	5,712	1,954	5,285
Youth's Benefit	5,097	13,877	5,121	13,929	5,138	13,957	5,146	14,644	5,162	13,965
TOTAL	88,033	239,692	88,984	242,012	89,733	243,779	90,218	244,826	90,739	245,460

* Note: Population and household figures have been revised to reflect 2010 Census data (April 1 of each year).

Source: Harford County Dept. of Planning and Zoning, May 2011.

Table 15
Harford County Population and Households
by Middle School District

2007 - 2011

SCHOOL	2007*		2008*		2009*		2010*		2011*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	11,986	32,634	12,106	32,926	12,318	33,465	12,456	33,298	12,546	33,938
Bel Air	13,245	36,063	13,422	36,504	13,511	36,706	13,594	35,055	13,774	37,259
Edgewood	13,647	37,157	13,684	37,217	13,764	37,393	13,809	37,068	13,829	37,408
Fallston	8,599	23,413	8,729	23,741	8,788	23,875	8,826	25,102	8,851	23,943
Havre de Grace	6,864	18,688	7,113	19,344	7,222	19,620	7,271	18,129	7,376	19,954
Magnolia	7,723	21,027	7,764	21,117	7,800	21,189	7,827	21,071	7,875	21,303
North Harford	10,126	27,571	10,221	27,799	10,268	27,895	10,313	29,368	10,346	27,987
Patterson Mill	5,980	16,283	6,072	16,513	6,147	16,699	6,170	17,460	6,187	16,736
Southampton	9,863	26,855	9,873	26,851	9,916	26,938	9,952	28,275	9,956	26,933
TOTAL	88,033	239,692	88,984	242,012	89,733	243,779	90,218	244,826	90,739	245,460

* Note: Population and household figures have been revised to reflect 2010 Census data (April 1 of each year).

Source: Harford County Dept. of Planning and Zoning, May 2012.

Table 16
Harford County Population and Households
by High School District

2007 - 2011

SCHOOL	2007*		2008*		2009*		2010*		2011*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	11,986	32,634	12,106	32,926	12,318	33,465	12,456	33,298	12,546	33,938
Bel Air	13,245	36,063	13,422	36,504	13,511	36,706	13,594	35,055	13,774	37,259
C. Milton Wright	9,863	26,855	9,873	26,851	9,916	26,938	9,952	28,275	9,956	26,933
Edgewood	13,647	37,157	13,684	37,217	13,764	37,393	13,809	37,068	13,829	37,408
Fallston	8,599	23,413	8,729	23,741	8,788	23,875	8,826	25,102	8,851	23,943
Havre de Grace	6,864	18,688	7,113	19,344	7,222	19,620	7,271	18,129	7,376	19,954
Joppatowne	7,723	21,027	7,764	21,117	7,800	21,189	7,827	21,071	7,875	21,303
North Harford	10,126	27,571	10,221	27,799	10,268	27,895	10,313	29,368	10,346	27,987
Patterson Mill	5,980	16,283	6,072	16,513	6,147	16,699	6,170	17,460	6,187	16,736
TOTAL	88,033	239,692	88,984	242,012	89,733	243,779	90,218	244,826	90,739	245,460

* Note: Population and household figures have been revised to reflect 2010 Census data (April 1 of each year).

Source: Harford County Dept. of Planning and Zoning, May 2012.

Water and Sewerage

The data included in this section for the water and sewerage system are aggregated by the water and sewer service area, which essentially reflects the Development Envelope as defined in the 2004 Harford County Land Use Element Plan. Additional information is included in this report on water/sewage usage by dwelling type for non-residential uses, an inventory of existing water consumption/sewage flows, demand projections (including the basis for their computation), and a list of capital projects is contained in the County's Capital Improvements Program for expanding facilities, including project status (See Tables 17-20). This information is extracted from the "2011 Water and Sewer Adequate Public Facilities Report," and is consistent with the County's Water Resources Element Plan.

Water and Sewer Facility Projection Methodology

Water:

The Harford County water service area is divided into four pressure zones because of varying topography within the Development Envelope. To provide an adequate supply of water, the transmission lines, and pumping and storage facilities for all zones must be sized for estimated future demands. In 1997, the average daily water demand by customers served by the County's central system was approximately 9.6 MGD, with a corresponding maximum day demand of approximately 14.3 MGD. In 2011, the County's average day and maximum day demands were 12.1 MGD and 15.5 MGD, respectively. The total maximum daily water treatment capacity is approximately 20.4 MGD.

Per the Maryland Department of the Environment's Water Supply Capacity Management Plan, the County has a maximum day drought demand of 18.7 MGD, leaving an excess capacity of 1.7 MGD for additional growth. To keep pace with the projected growth, staged construction programs are established that distribute required capital costs for improvements and/or additions to the County's system over a period of years.

Expansion of the existing Abingdon Water Treatment Plant is currently under construction and is anticipated to be completed by May 2012, bringing an additional 10 MGD of source capacity online. The County's total maximum daily water treatment capacity will increase to 30.4 MGD upon completion of the Abingdon Water Treatment Plant expansion.

There are 13 community water systems that are not maintained or operated by Harford County, but are subject to the APF provision of the County Code. These private systems, which are monitored and evaluated by the Maryland Department of the Environment, are as follows:

1) Maryland-American Water Co.
2) Campus Hills Water Works Inc.
3) Clear View Court Mobile Home Park
4) Darlington
5) Darlington Mobile Estates
6) Fountain Green Mobile Home Park
7) Greenridge Utilities Inc.
8) Hart Heritage
9) Lakeside Vista
10) Queens Castle Mobile Home Park
11) R & R Estates Mobile Home Park
12) Swan Harbor Mobile Home Park
13) Williams Mobile Home Park

Sewerage:

The sewage flows to Harford County's existing Sod Run and Joppatowne Wastewater Treatment Plants (WWTP) originate from a portion of the Development Envelope. The area between the municipalities of Aberdeen and Havre de Grace, as well as the cities themselves, are within the Development Envelope and are served by the municipal sewerage facilities. A complete "Sewer System Capacity Analysis" is included in the "2011 Water and Sewer Adequate Public Facilities Report."

The average daily influent flow to the Sod Run WWTP in 2011 was approximately 13.4 MGD, exclusive of recycle flows and septage. The average daily influent flow to the Joppatowne WWTP in 2011 was approximately 0.90 MGD. The average daily influent flow for Spring Meadows in 2011 was 0.01 MGD. The determination of future wastewater flows to wastewater treatment plants is made by using population and household projections developed by the Harford County Department of Planning and Zoning for the years 2000 through 2025. The projections were distributed by transportation analysis zones (TAZs) by aggregating the ultimate development in terms of equivalent dwelling units into sewerage drainage areas. In order to keep pace with projected growth, the expansion of the Sod Run Wastewater Treatment Plant from 12 MGD in 1995 to 20 MGD was completed in 2000. A sanitary sewer collection system has also been established in Whiteford-Cardiff, which serves the properties within an established sanitary subdistrict. This system was made operational in 2001 with 172 mandatory hook-ups completed in 2002. Treatment for this subdistrict is provided by Delta Borough, Pennsylvania, with a current permitted average flow of 0.12 MGD.

In addition to the major publicly owned wastewater treatment plants, there are multiple private wastewater treatment systems, including mobile home parks and other commercial/community establishments, plus a larger population on private individual septic systems outside the Development Envelope. In addition, many of the schools outside the public sewerage service area are on publicly owned multi-use wastewater treatment systems. Since 1972, the County has prohibited any additional privately

owned community or multi-use treatment plants with a peak capacity larger than 10,000 gallons per day (GPD) outside the Development Envelope. This encourages growth to remain within the growth corridor, maintains financial stability, and protects the environment.

The Division of Water and Sewer has identified sewage pumping stations that do not have any additional reserve capacity and that may impact future development in the vicinity of these pumping stations. These pumping stations include:

- Brentwood Park Sewage Pumping Station (S.P.S.)
- Cedarwood S.P.S.
- Dembytowne/Hanson Road Petition S.P.S. (3)
- Farwind Farms S.P.S.
- Forest Greens S.P.S.
- Greenridge S.P.S.
- Harford Square S.P.S.
- Haverhill Road S.P.S.
- Parliament Ridge S.P.S.
- Perry Avenue S.P.S.
- Singer Woods S.P.S.
- West Baker Avenue S.P.S.
- Woodland Hills S.P.S.

The non-inclusive listings of the sewage pumping stations above have no available capacity. This listing does not preclude the possibility of finding adequate capacity in other sewage pumping stations should a development request approval for more flow capacity than that available, prior to any programmed improvements. It is imperative to note that mechanisms exist to cure such APF problem areas. Such remedies may include an upgrade to the pumping station by a development entity or by development of a recoupment\surcharge policy which specifies design, construction, and financial responsibilities.

In order to alleviate the capacity issues at the Cedarwood and Parliament Ridge Sewage Pumping Stations, the construction of a new regional pumping station, Bear Cabin Branch Pumping Station was bid for construction in 2010 and is planned to be completed in 2012. The sewer system in Fallston is sized to service the development potential within the original sanitary subdistrict established in the County Code. In 2010, an evaluation of existing capacity was completed and reported that there was a small amount of reserve capacity available. In March 2011, the County Council expanded the subdistrict to include three additional parcels of land. Any further expansion of the existing sanitary subdistrict would require a re-evaluation of the capacity of the Fallston sewer system and County Council approval.

There is a sanitary sewer within the Bynum Ridge subdivision that does not have adequate capacity as defined by the APF Ordinance. This has the potential to affect

development in the Bynum Run Collector Sewer drainage area north of Bynum Ridge Road. The Division of Water and Sewer is currently studying the sewers to determine the best method of eliminating the capacity issue. It is possible that this capacity issue could be resolved by a development entity or by development of a recoupment/ surcharge policy which specifies design, construction, and financial responsibilities.

Table 17
JANUARY - DECEMBER 2011
WATER CONSUMPTION & SEWAGE GENERATIONS

This table reflects the total number of water and sewer customers and the water consumption and sewage generations for residential and commercial/industrial users.

	2011
Total Number of Connections	43,106
WATER	
Total Number of Connections	39,987
Average Water Production	12.1 MGD
Maximum Day Water Production	15.5 MGD
Average Water Usage per Connection (gal/day)	303
Residential Unit Water Usage (gal/day)	149
Average Commercial/Industrial Water Usage (gal/day)	6,949
SEWAGE	
Total Number of Sewer Connections	41,479
Average Sewage Flows	14.3 MGD
Maximum Day Sewage Flows	28.0 MGD
Average Sewage per Connection (gal/day)	353
Residential Sewage Generation (gal/day)	149
Average Commercial/Industrial Sewage Generation (gal/day)	6,949

- MGD = Million Gallons per Day

Source: 2011 Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer.

Table 18

HARFORD COUNTY SYSTEM WATER PRODUCTION PROJECTIONS

SYSTEM WIDE RESIDENTIAL/ COMMERCIAL INDUSTRIAL WATER DEMAND	1993	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2015	2020
First Zone																				
Avg. Day, mgd	3.2	4.1	4.05	4.5	4.5	4.6	3.5	5.1	5.7	3.6	3.8	4.2	3.6	4.2	5.3	5.3	5.7	5.8	7.6	8.4
Max. Day, mgd	4.6	6	4.8	6.5	6.6	6.5	4.6	9.1	7.8	4.7	4.8	5.9	4.9	5.8	6.9	7.26	9.1	9.3	11.0	12.1
Total of Second, Third and Fourth Zones																				
Avg. Day, mgd	3.5	3.8	4.5	5	5	5.7	5.9	6.4	5.8	7.5	7.5	7.7	8.0	7.8	6.8	6.0	6.0	5.8	7.3	7.5
Max. Day, mgd	3.9	5.6	5.9	6.8	6.9	7.3	6.9	7.1	8.1	8.2	8.2	8.5	9.1	8.8	7.5	6.8	8.0	6.2	10.7	11.0
Aberdeen																				
Avg. Day, mgd	0	0.5	0.05	0.03	0.01	0.3	0.26	0.26	0.47	0.5	0.21	0.2	0.2	0.5	0.2	0.2	0.4	0.3	0.3	0.3
* Max. Day, mgd	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.54	0.6*	0.6*	1.5	1.5
Chapel Hill																				
Avg. Day, mgd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0
* Max. Day, mgd	0	0	0	0	0	0	0	0	0	0	0	1.5*	1.5*	1.0 A	1.5*	1.5*	1.5*	1.5*	1.5	1.5
Maryland-American Water Co.																				
Avg. Day, mgd	0	0	0	0.07	0.01	0.01	0.19	0.01	0.16	0.001	0.02	0.03	0.03	0.4 A	0.01	0.03	0.0	0.0	0.3	0.3
* Max. Day, mgd	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5*	0.5*	0.5	0.5
Total																				
Avg. Day, mgd	6.7	8.4	8.6	9.6	9.5	10.6	9.9	11.8	12.1	11.6	11.6	12.1	11.8	12.9	12.3	11.5	12.1	12.1	15.5	16.5
Max. Day, mgd	8.5	12.1	11.2	14.3	14.5	14.8	12.5	17.2	16.9	13.9	14.0	15.4	15.0	16.6	15.4	15.1	17.1	15.5	25.2	26.6

*-Allocated maximum day flow projections based on service agreements.
A - Actual flows

Source: 2011 Harford County Adequate Public Facilities Report, Dept. of Public Works, Water and Sewer Division.

Table 19

Harford County Present and Projected Sewerage Demands and Planned Capacities in Million Gallons Per Day (MGD)

SERVICE AREA	PLANNING YEAR	NUMBER OF CONNECTIONS	DOMESTIC FLOW (ADF)	INDUSTRIAL FLOW (ADF)	INFILTRATION / INFLOW (ADF)	TOTAL FLOW	SYSTEM CAPACITY
SOD RUN	1993	17,684	7.7	0.4	1	9.1	10
	1995	22,050	7.7	0.5	1.4	9.6	12
	2000	27,561	9.3	0.6	1.7	11.6	20
	2008	36,530	8.4	1.3	1.8	11.5	20
	2009	36,658	8.4	1.3	2.8	12.5	20
	2010	37,176	8.1	1.7	2.8	12.6	20
	2011	37,418	8.1	1.7	3.6	13.4	20
	2025	45,872	10.3	2.58	4.0	16.88	20
JOPPATOWNE	1993	2,607	0.59	0	0.19	0.78	0.75
	1995	2,607	0.56	0	0.19	0.75	0.75
	2000	3,107	0.65	0	0.19	0.84	0.95
	2008	3,264	0.60	0.04	0.09	0.73	0.95
	2009	3,294	0.58*	0.03*	0.08*	0.69*	0.95
	2010	3,033	0.64	0.04	0.08	0.76	0.95
	2011	3,048	0.66	0.04	0.2	0.90	0.95
	2025	3,251	0.71	0.04	0.2	0.95	0.95
SPRING MEADOWS	1993	51	0.01	0	NC	0.01	0.01
	1995	51	0.01	0	NC	0.01	0.01
	2000	52	0.01	0	NC	0.01	0.01
	2008	53	0.01	0	NC	0.01	0.01
	2009	53	0.01	0	NC	0.01	0.01
	2010	53	0.01	0	NC	0.01	0.01
	2011	53	0.01	0	NC	0.01	0.01
	2025	53	0.01	0	NC	0.01	0.01
WHITEFORD-CARDIFF	2004	178	0.02	0	0.01	0.03	0.12
	2008	179	0.02	0	0.01	0.03	0.12
	2009	179	0.023	0	0.01	0.03	0.12
	2010	179	0.023	0	0.001	0.024	0.12
	2011	179	0.023	1.7	0.014	0.0	0.12
	2025	179	0.09	0.01	0.02	0.12	0.12

NC = Not Computed

* During the last 6 months of 2009, the clarifiers at the Joppatowne WWTP were being worked on, so Pump Station 47 was sending some flow to the Harford County Sod Run drainage area for treatment.

Source: 2011 Harford County Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer.

Table 20
2011 EXISTING WATER & SEWER CAPITAL PROJECTS

The Capital Improvement Program establishes projects for expanding and improving water and sewer facilities. This list of 2011 Capital Projects includes the project status.

PROJECT NO.	PROJECT NAME	PROJECT STATUS
6440	Infiltration/Inflow	Flow Monitoring, Manhole Rehabilitation, Televising & Smoke Testing: on-going
6613	Church Creek Pump Station	Construction Phase
6627	Country Walk Water Transmission Main Parallel	Design Phase Complete / On hold
6632	Bear Cabin Pump Station	Construction Bid Phase
6634	Lower Bynum Run Interceptor Parallel	Construction Phase
6637	Sod Run ENR	Bid Phase
6665	Joppa Farm Road Pump Station # 47 Redirection & Parallel Sewer	Design Phase Complete / On hold
6671	Abingdon Water Treatment Plant Expansion	Construction Phase
6687	Abingdon Road Water Main	Design Phase & Easement Acquisition Completed
6690	MD Route 24 Water Transmission Main	Study Phase
6692	Bush Creek Pump Station Upgrade	Construction Phase
6699	Winters Run Pump Station Outfall Sewer	Construction Phase
6700	Hickory Bypass Water Transmission Main (Rte. 1 to Vineyard Oaks)	Construction Phase Complete
6703	Bynum Run Parallel Phase 6 & 7	Alignment Study, Wetland Permitting & Easement Acquisition
6705	Joppatowne ENR	Bid Phase
6707	Infiltration / Inflow in Bynum Run Drainage Area	Study Phase
6711	Swan Creek Water Tank	Site Acquisition
6712	Edgewood Interceptor Parallel	Funding Phase
6713	Greenridge Pump Station Replacement	Design Phase
6715	Bill Bass Outfall Sewer Replacement	Design Phase

Road System

The information for the APF Road System contained in this section includes the following: signalized and unsignalized intersection capacity analysis results - existing conditions (Tables 21 and 22), average daily count locations (Table 23), a list of approved County capital projects funded for construction in FY 12 (Table 24), and a list of State Consolidated Transportation Program (CTP) projects funded for construction in FY 12 (Table 25). This information will help identify existing deficiencies in the road system and guide both County and State capital project funding to the most critical road projects.

The intent of the APF Roads provisions of the County Code is to create a mechanism that requires proposed development to make appropriate and reasonable road improvements, based on the proposed development's impact to the road.

Road Intersection Analysis Methodology

A key feature of the APF Road Intersection regulations is the requirement for preparation of a Traffic Impact Analysis (TIA) for residential and non-residential uses that generate more than 249 trips per day. Proposed development located within the Chesapeake Science and Security Corridor will not be required to submit a Traffic Impact Analysis unless the proposed use will generate 1,500 trips per day at the time of preliminary/site plan review. The TIA provides information regarding the impact of generated trips from proposed land uses on traffic safety and traffic operation within a designated area, and recommends solutions to mitigate the impact. The method of conducting a Traffic Impact Analysis is outlined in the "Harford County Traffic Impact Analysis Guidelines."

A complete TIA includes the following:

- The designation of the study area as required in the APF regulations based on whether the proposed development is inside or outside the Development Envelope.

Inside the Development Envelope:

The TIA shall include all the existing County and State roads from the point of entrance of site to the second intersection of an arterial roadway or higher functional classification road, in all directions. Developments which generate 1,500 or more trips per day may be required to expand the study area.

Outside the Development Envelope:

The TIA shall include all existing County and State roads from point of entrance to the first intersection of a major collector or higher classification road, in all directions.

- An analysis of existing conditions including traffic counts, lane configuration, and signal timings.

- An analysis of background conditions without site development, including growth in background traffic, future traffic generated by nearby proposed developments and the determination of Levels of Service with any approved/funded State and County Capital projects.

- An analysis of the projected conditions with site development, including the traffic being generated by the proposed development and background traffic.

- An explanation of the results with recommended improvements as necessary.

The developer is required to provide improvements where the trips generated by the development reduce the Level of Service (LOS) from adequate to a LOS below the standard. The standard for intersections within the Development Envelope will be LOS D. If existing LOS is E or F at an intersection within the Development Envelope, then the developer must mitigate the impact of the development's new trips. The standard for intersections outside the Development Envelope will be LOS C. If the existing LOS is D or lower, then the developer must mitigate the impact of the development's new trips.

In addition to the review of individual Traffic Impact Analyses, the Departments of Planning and Zoning and Public Works have studied a number of major roads and intersections to identify existing conditions. This list represents a cross section of key intersections located inside, outside, and on the fringes of the Development Envelope. There are three signalized intersections and ten unsignalized intersections with one or more movements operating at a LOS E (LOS D outside the Development Envelope) or lower during peak hours. The evaluation of the LOS is determined by performance of the intersection during one hour peak traffic periods in the a.m. and/or p.m. The following intersections contain one or more movements that operate at an unacceptable LOS:

1. Maryland 24 and US 1
2. Maryland 152 and Singer Road
3. Maryland 22 and Thomas Run Road / Schucks Road
4. Business US 1 and Henderson Road
5. Maryland 147 and Connolly Road
6. Maryland 23 and Grafton Shop Road
7. Tollgate Road and MacPhail Road
8. US 1 and Reckord Road
9. Maryland 7 and Brass Mill Road
10. Maryland 7 and Joppa Farm Road
11. Maryland 155 and Earlton Road
12. Maryland 543 and Henderson Road
13. Maryland 22 and Aldino-Stepney Road

Developments that impact these intersections will be required to mitigate their impacts to the intersection. The Interstate-95 / MD 24 Improvement Project construction was completed in October 2011 and has improved the LOS at the MD 24 / MD 924/Tollgate Road intersection and the Interstate 95 and MD 24 Ramp.

To address operational issues and impacts associated with BRAC, the Maryland State Highway Administration began construction on the US 40 and MD 715 interchange project in the fall of 2010. This project will add a spur to the eastbound US 40 ramp which will allow vehicles to access northbound MD 715 and eliminate the U-turn movement on US 40. The project will also add capacity to MD 715 at the Old Philadelphia intersection. The anticipated completion date for this project is 2013. Tables 24 and 25 detail County Capital Projects and State Consolidated Transportation Projects relative to this reporting period.

Table 21

Signalized Intersection Capacity Analyses

Level Of Service And Delay In Seconds

2008 - 2011

Intersection	2008 Peak Hour Level Of Service / Delay In Seconds	2009 Peak Hour Level Of Service / Delay In Seconds	2010 Peak Hour Level Of Service / Delay In Seconds	2011 Peak Hour Level Of Service / Delay In Seconds
Maryland Route 7 and U.S. Route 40	C / 30.1		C / 29.2	
Maryland Route 924 and Moores Mill Road	C / 33.4		B / 19.8	
Maryland Route 24 and Trimble Road	B / 19.5		D / 40.6	
Maryland Route 152 and U.S. Route 1	E / 61.0		D / 48.6	
Maryland Route 24 and U.S. Route 1	E / 61.8		E / 59.6	
Maryland Route 152 and Trimble Road	C / 32.7		C / 23.6	
Maryland Route 24 and Jarrettsville Road	C / 24.6		C / 23.8	
Maryland Route 152 and Hanson Road	B / 19.3		C / 27.9	
Maryland Route 152 and Singer Road	D / 40.2		D / 37.6	
Maryland 22 and Thomas Run Road/Schucks Road	D / 41.2		D / 41.8	
Maryland 715 and Old Philadelphia Road	C / 24.9		C / 23.3	
Maryland Route 22 and Brier Hill Road		B / 15.1		C / 24.7
Maryland Route 22 and Maryland Route 136		C / 29.6		C / 31.9
Maryland Route 24 and Bel Air South Parkway *		E / 52.7		D / 40.7
Maryland Route 24 and Forest Valley Drive		C / 20.3		B / 18.0
Maryland Route 24 and Plumtree Road		C / 34.0		C / 26.4
Maryland Route 24 and Ring Factory Road		C / 33.7		C / 28.5
MD 924 @ MD 24 North Bound Ramp		Under Construction		C / 28.6
Tollgate Rd @ MD 24 Southbound Ramp		Under Construction		C / 20.1
Maryland Route 543 and U.S. Route 1		C / 23.2		D / 35.7
Maryland Route 543 and Maryland Route 22		D / 43.8		C / 34.1
Maryland Route 924 and Abingdon Road **		D / 41.0		D / 47.1

* SHA improvement at this intersection

** Improvement funded by developer at this intersection

Source: Harford County Dept. of Planning and Zoning, May 2012

Table 22

Unsignalized Intersection Capacity Analyses

Level Of Service And Delay In Seconds

2008 - 2011

Intersection	2008 Peak Hour Level Of Service / Delay In Seconds	2009 Peak Hour Level Of Service / Delay In Seconds	2010 Peak Hour Level Of Service / Delay In Seconds	2011 Peak Hour Level Of Service / Delay In Seconds
Interstate 95 and Maryland Route 24 Ramp*	F / >60		Under Construction	
Business US 1 and Henderson Road	D / 28.5		E / 40.0	
Maryland 147 and Connolly Road	F / 55.5		E / 49.6	
Maryland 23 and Grafton Shop Road	F / 76.2		F / 55.6	
Tollgate Road and MacPhail Road	F / 57.6		E / 36.0	
US 1 and Reckord Road	F / 143.1		F / 56.2	
Maryland 7 and Brass Mill Road	E / 38.6		F / 221.4	
Woodsdale Road and Box Hill Corporate Center Drive	D / 25.8		D / 27.8	
Maryland Route 7 and Maryland Route 159		B / 11.4		B / 12.4
Maryland Route 7 and Joppa Farm Road		F / 84.8		E / 38.5
Maryland Route 159 and Spesutia Road		C / 16.8		C / 15.2
Maryland 155 and Earlton Road		D / 34.8		E / 40.0
Maryland 543 and Henderson Road **		C / 24.8		F / 56.8
Tollgate Road and Ring Factory Road		A / 7.9		A / 7.8
Maryland 22 and Aldino-Stepney Road **		E / 38.5		F / 56.9
Macphail and Ring Factory Road		C / 15.0		B / 12.3

* Major interchange improvements for the I-95 / MD 24 / MD 924 interchange completed in November, 2011.
** Improvements funded by developers at these intersections.

Source: Harford County Dept. of Planning and Zoning, May 2012.

Table 23

48 Hour Average Weekday Daily Traffic Volume And Locations

2007 - 2010

Road Name	Location	2007 Average Daily Count	2008 Average Daily Count	2009 Average Daily Count	2010 Average Daily Count
Beards Hill Road	North of Churchville Road		7,167		13,503
Carrs Mill Road	North of Maryland Route 152		9,609		9,434
Chapel Road	North of Interstate 95		2,228		2,510
Jarrettsville Road	East of Maryland Route 24		7,284		6,962
Jarrettsville Road	West of Maryland Route 24		5,063		4,886
Maryland Route 7	West of Maryland Route 24		7,612		7,341
Moores Mill Road	West of Coconut Court		11,568		9,624
Moores Mill Road	West of Old English Court		8,694		7,944
Pleasantville Road	North of Putnam Road		3,251		3,521
U.S. Route 1	North of Maryland Route 152		28,011		26,650
U.S. Route 40	North of Maryland Route 24		22,540		22,212
Abingdon Road	North of Interstate 95	10,396		12,414	
Hanson Road	South of Silverbell Road	2,740		2,775	
Hanson Road	West of Maryland Route 24	11,960		10,740	
Maryland Route 24	North of Singer Road	44,410		43,082	
Maryland Route 152	South of U.S. Route 1	24,570		23,832	
Maryland Route 543	South of Maryland Route 22	18,982		18,667	
Plumtree Road	East of Maryland Route 24	6,071		6,418	
Ring Factory Road	West of Maryland Route 24	4,596		4,709	
Ring Factory Road	East of Maryland Route 24	8,924		8,646	
Singer Road	West of Maryland Route 24	8,556		9,902	
Singer Road	East of Maryland Route 24	9,832		8,933	
Trimble Road	East of Maryland Route 24	5,179		8,298	
Trimble Road	West of Maryland Route 24	7,321		6,959	
Vale Road	West of U.S. Route 1 Overpass	8,697		8,819	

Source: Harford County Dept. of Planning and Zoning, May 2011.

Table 24
List of Approved County Capital Projects

Funded for Construction in FY 12

Bridge and Road Scours	**Repairs**
Bridge Rehabilitation	**Repairs**
Road and Bridge Scours	**Repairs**
Harford Creamery Road Bridge #104	**Replacement**
Jericho Road Bridge #3	**Improve / Maintain**
North Avenue/Henderson Road Bridge #215	**Under Construction**
St. Clair Bridge Road Bridge #99	**Rehabilitation**
Ruff's Mill Road Bridge #190	**Replacement**
Watervale Road Bridge #63	**Replacement**
Cedar Lane – MD 136 to Cedarday	**Upgrade / Realignment**
MacPhail Road @ Tollgate Road	**Roundabout**
Moores Mill Road – MD 924 to Southampton MS	**Upgrade**
Thomas Run Road Improvements – Harford Community College	**Roundabout**
Schucks Road at Edwards Lane	**Culvert Replacement**
Wheel Road – Laurel Bush Road to Fairway Drive	**Upgrade**
Road Reconstruction and Rehabilitation*	**Reconstruct and rehabilitate**
Roadways Resurfacing*	**Resurfacing**

***Note: These are ongoing county-wide project activities that include repairs, upgrades, and resurfacing of roads and bridges selected each spring dependent upon severity of roadway problems and cost for repairs.

Table 25
List of State Consolidated Transportation Program

Funded for Construction in FY 12

US 40 / MD 715 Interchange	**Interchange Improvements**
MD 924: N. Main Street – Gordon Street to US 1 Business	**Resurfacing**
MD 924 South Main Street – E. MacPhail Road to MD 22	**Resurfacing**
Bel Air Bypass – MD 24 to MD 924	**Installation of Median Barrier System**
Conowingo Road – south of Conowingo Dam	**Repair Slide**
Pulaski Highway – Lewis Lane to Erie Street	**ADA Improvements**
MD 132 West Bel Air Avenue – MD 462 to Beard's Hill Road	**ADA Improvements**
MD 155 – Superior Street – Bayview Drive/Graceview Drive – provide a left turn lane from MD 155 into School on Graceview Drive	**Left Turn Lane**
MD 462 – Paradise Road; MD 132 to over Carsin's Run	**ADA Improvements**
MD 763 – Superior Street; East of Ohio Street to Juniata Street	**ADA Improvements**
Edgewood MARC Train Station	**Replacement of Existing Train Station & Site Enhancements**

PLANNING CONSISTENCY REVIEW

Maryland's Smart, Green, and Growing regulations require that local jurisdictions, as part of their annual report, must determine if all of the changes in development patterns reported are consistent with each other, the recommendations from the last annual report, the adopted plans of the jurisdiction and adjoining jurisdictions, and the plans of the State and local jurisdictions that are responsible for financing or constructing public improvements that are necessary for the implementation of local plans. To address this requirement the following is provided:

All of the development noted in this report has been determined to be consistent with the surrounding land uses. A review for consistency is part of the plan approval process. As recommended in previous reports, the County continues to direct the majority of its new development and redevelopment (91% in 2011) to the designated growth areas.

Preservation efforts were continued through a variety of State and local programs. While participation in agricultural preservation programs is available to all property owners with agriculturally zoned land, the County's primary focus remains on protecting the Priority Preservation Area (PPA). During 2011, 351 acres were protected, all of which were in the PPA. This brings the total protected land in the County to 45,672 acres, including over 33,000 acres in the Priority Preservation Area.

The subdivisions noted in Appendix A are consistent with the intent and policies of the recently adopted 2012 Land Use Element Plan, the Water and Sewer Master Plan, and the Adequate Public Facilities regulations. All roadway improvements are consistent with the State Consolidated Transportation Plan, the Transportation Improvement Program, and the County's Transportation Element Plan.

In addition, all major subdivisions or development plans that must be reviewed by the County's Development Advisory Committee, along with requests for rezoning that are located within one mile of a local jurisdiction, are submitted to that jurisdiction for review and comment. All development activity approved during 2011 was consistent with the plans of adjoining jurisdictions. During 2011, the County participated in work sessions for development of the Aberdeen Transit Oriented Development (TOD) Plan. Coordination between the municipalities and the County will continue as the 2012 Land Use Element Plan is implemented.

PROCESS IMPROVEMENTS

As part of the annual report, local jurisdictions must identify any changes that will improve the planning and development process, and any zoning ordinances or regulations that have been adopted during the reporting period that specifically address the planning visions in §1.01 of Article 66B.

With the adoption of the 2012 Master Plan and Land Use Element Plan (adopted March 20, 2012), the remaining major program improvements to be addressed are the update of the 2005 Land Preservation, Parks, and Recreation Plan (LPPRP) and the development of the Harford County Bicycle and Pedestrian Master Plan. The kick-off meeting for the update of the 2012 LPPRP was held in August 2011. The adoption of the 2012 LPPRP is anticipated by the summer of 2012. The Harford County Bicycle and Pedestrian Master Plan was initiated in 2011 with adoption anticipated by early 2013.

In 2011, work also began on the Harford County Phase II Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL (Total Maximum Daily Load). Harford County's approach to address the development of the Phase II WIP was to establish a Core Team of County, municipal, State and federal staff with expertise in the various nutrient source sectors identified by the US Environmental Protection Agency. The Core Team met on a monthly basis to discuss current capacity, strategies to meet the nutrient load allocations, and two-year milestones. Core Team meetings will continue as the County develops its Phase II WIP by July 2, 2012. The County continues to focus its effort and resources into the Bay TMDL and Watershed Implementation Plan process. This process is evolving, and the County will continue to work to address water quality improvements in the coming years.

The County does not anticipate making any changes to the development review process in the immediate future, and will continue to direct the majority of development and redevelopment to designated growth areas.

ORDINANCES AND/OR REGULATIONS THAT IMPLEMENT THE STATE PLANNING VISIONS

As noted previously in the 2010 Annual Growth Report, the Department of Planning and Zoning has updated several of its element plans (Master Plan and Land Use Element Plan, Natural Resources and Water Resources Element Plan, Transportation Element Plan and Historic Element Plan). Each of these plans include the planning visions contained in §1.01 of Article 66B, and strategies that address these visions. The County has also completed the update of its Chesapeake Bay Critical Area Program. The planning visions will also be incorporated into the Harford County Land Preservation, Parks, and Recreation Plan update as well as Bicycle and Pedestrian Master Plan, which are currently being developed.

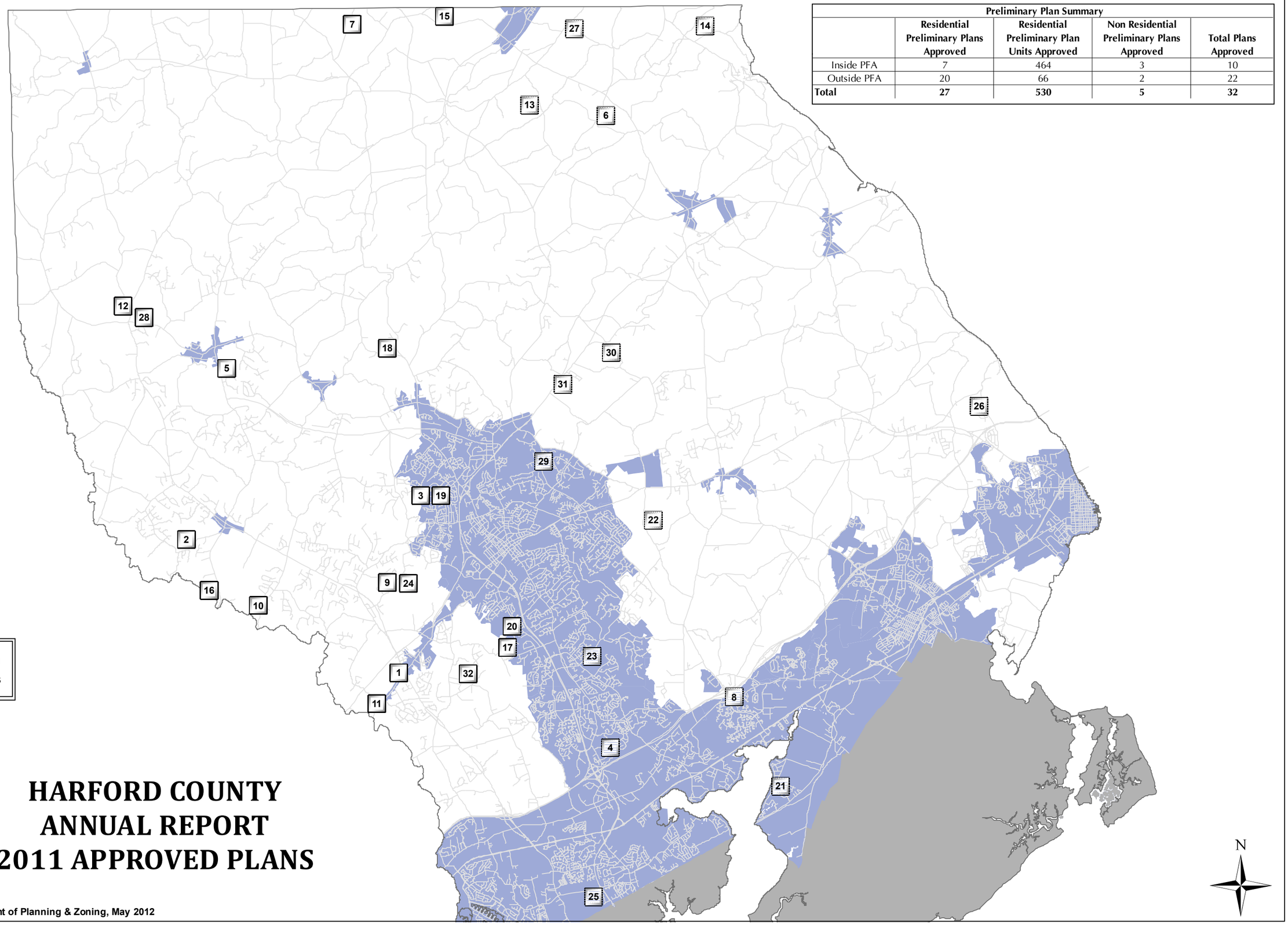
APPENDIX A

Appendix A
HARFORD COUNTY
APPROVED SUBDIVISION PLANS: 2011

MAP #	PLAN NAME	ACREAGE	LOT ACREAGE	TOTAL UNITS	SF UNITS	TH UNITS	APT UNITS	CONDO UNITS	TDR UNITS	TYPE OF USE	PFA	ZONING
1	AUMAR VILLAGE - LOTS 3, 4 & 5	47.75	12.45	0	0	0	0	0	0	NON RESIDENTIAL		B3/AG
2	BALDWIN RESERVE, LOTS 5-14	49.55	49.55	10	10	0	0	0	0	RESIDENTIAL		AG
3	BLAKE'S LEGACY	81.36	81.36	115	115	0	0	0	0	RESIDENTIAL	YES	R1 COS
4	BOULEVARD AT BOX HILL	49.01	49.01	0	0	0	0	0	0	NON RESIDENTIAL		CI
5	CLAIRE'S MEADOW	23.87	23.87	10	10	0	0	0	10	RESIDENTIAL		RR*
6	D AND D FARM, LLC - LOT 1	5.114	5.114	1	1	0	0	0	0	RESIDENTIAL		AG
7	DAVIS, LDS OF CHARLES & ELIZABETH	5.7	2.296	1	1	0	0	0	0	RESIDENTIAL		AG
8	EAST PROPERTY - LOTS 1 & 2 AND DEMETRIUS WAY	2.83	2.83	0	0	0	0	0	0	NON RESIDENTIAL		B3
9	FALLSTON GLEN - LOTS 3,4 & 11	15.045	15.045	1	1	0	0	0	1	RESIDENTIAL		AG
10	HARLAN, LAND OF	4	4	1	1	0	0	0	1	RESIDENTIAL		AG
11	HARRIS, LANDS OF- LOTS 1 & 2	26.142	26.142	2	2	0	0	0	0	RESIDENTIAL		AG
12	HERRMANN, LANDS OF - LOT 1	2	2	1	1	0	0	0	0	RESIDENTIAL		AG
13	JONES, LDS OF NANCY & WILSON - LOTS 7,8 & 11-13	17.57	17.57	5	5	0	0	0	0	RESIDENTIAL		AG
14	KNIGHT, LD OF ROLAND - LOT 2 & 7	53.86	2	1	1	0	0	0	0	RESIDENTIAL		AG
15	LAWRENCE, LANDS OF , LLC - LOT 2	51.791	2	1	1	0	0	0	0	RESIDENTIAL		AG
16	LYNCH MEADOWS, LOTS 1-4	28.743	28.743	4	4	0	0	0	0	RESIDENTIAL		AG
17	MAGNESS EXEMPTION	124.68	124.68	302	127	175	0	0	0	RESIDENTIAL	YES	R1/R2
18	MARTIN, LAND OF - LOTS 9	2.887	2.887	1	1	0	0	0	0	RESIDENTIAL		AG
19	NATURE'S YOUTH LLC, LAND OF	1.211	1.211	4	4	0	0	0	0	RESIDENTIAL	YES	R2
20	O'CONNELL PROPERTY - LOT 1	0.51	0.51	1	1	0	0	0	0	RESIDENTIAL	YES	R1/R2
21	PERRYMAN FOREST - LOTS 1-21	32.04	32.04	21	21	0	0	0	0	RESIDENTIAL	YES	R1
22	PEVERLY ESTATES	204.81	67.1	16	16	0	0	0	0	RESIDENTIAL		AG/RR
23	PICKETT, LANDS OF CHARLES T. - LOTS 1 & 2	6.3282	6.3282	1	1	0	0	0	0	RESIDENTIAL	YES	R1
24	PROFILI, LAND OF, LOT 1 & 12	67.385	6.051	1	1	0	0	0	0	RESIDENTIAL		AG/RR
25	PROLOGIS PARK EDGEWOOD-LOT 1	70.28	70.28	0	0	0	0	0	0	NON RESIDENTIAL	YES	GI
26	QUAKER HILLS-LOTS 41A 7 41B	13.43	13.43	2	2	0	0	0	0	RESIDENTIAL		AG
27	RICKEY, LANDS OF - LOT 3	6.646	6.646	1	1	0	0	0	0	RESIDENTIAL		AG
28	SADLER, LANDS OF CARL D.	4.352	4.352	0	0	0	0	0	0	NON RESIDENTIAL		AG
29	SANDY RIDGE	8.35	8.35	20	20	0	0	0	0	RESIDENTIAL	YES	R2 COS
30	SCHAFER, LANDS OF - LOT 4	3.64	3.64	1	1	0	0	0	0	RESIDENTIAL		AG
31	WAVERLY ESTATES, LOTS 1-5	14.397	14.397	5	5	0	0	0	0	RESIDENTIAL		AG
32	WEST STREAM ESTATES - LOTS 2 & 5	9.91	9.91	1	1	0	0	0	0	RESIDENTIAL		AG
		1,035	696	530	355	175	0	0	12			

Source: Harford County Dept. of Planning and Zoning, May 2012.

Preliminary Plan Summary				
	Residential Preliminary Plans Approved	Residential Preliminary Plan Units Approved	Non Residential Preliminary Plans Approved	Total Plans Approved
Inside PFA	7	464	3	10
Outside PFA	20	66	2	22
Total	**27**	**530**	**5**	**32**



HARFORD COUNTY ANNUAL REPORT 2011 APPROVED PLANS

Source: Harford County Department of Planning & Zoning, May 2012

APPENDIX B

Appendix B

DEVELOPMENT REGULATIONS – LIST OF AMENDMENTS

Zoning Code

Effective	Bill	Description
5/23/11	11-04AA	Housekeeping items / corrections / clarifications: 267-4 Definitions of high and mid-rise apartments; 267-40 Forest and Tree Conservation - remove fee-in-lieu statement; 267-53 AG - clarify private well setback exception; 267-62 NRD - clarify foot and walking trails and add wording to road and driveway crossings regarding stormwater drainage. Clarify panhandle portion of lots in section G; 267-74 GMA clarify location and density; 267-76 Mixed Use - clarify districts and densities; 267-88 Special Exception, Specific Standards - high rise densities and TCU FAA reference correction; 267-126 APF - remove 4 and 5 year enrollment statement.
5/23/11	11-05AA	Critical Area Legislation including 267-4 Definitions and 267-63 - Major re-written section incorporating “lot coverage”.
5/23/11	11-03	Add fortune telling as “P” in B2 and B3 (permitted use chart change)
12/12/11	11-32	267-4 Add definition of dwelling, transient and modify definition of lodging house
12/19/11	11-44	267-112 Add Dembytown Church to historic landmarks section.

Subdivision Regulations

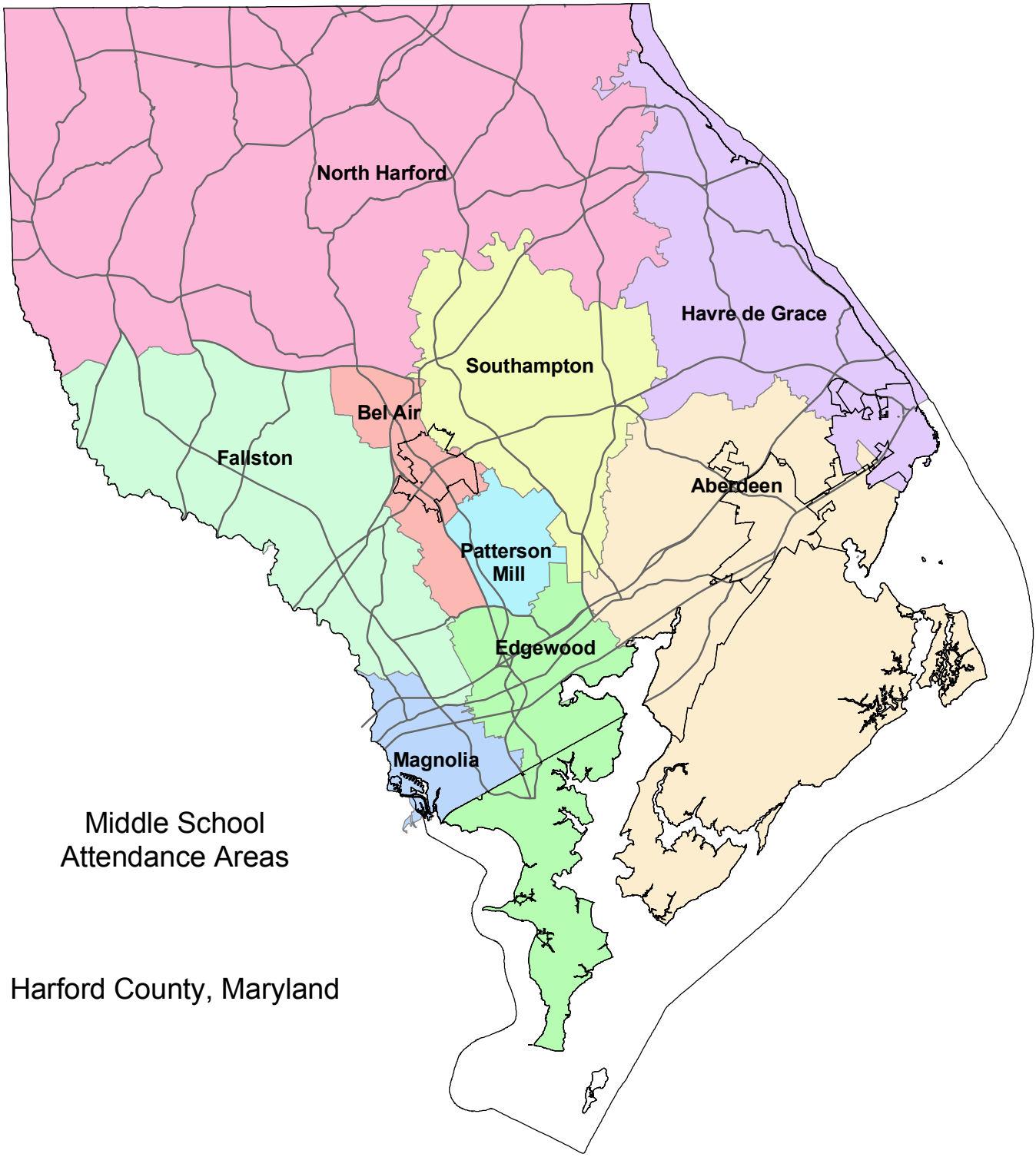
Effective	Bill	Description
5/23/11	11-06	268-10 and 268-19 - Chesapeake Bay Critical Area Overlay District and Preliminary and Site Plans - concurrent with 11-05AA Zoning Code Amendment.
6/27/11	11-13	268-19C(12) - Provide a one-time one-year extension to site plans if APF is met.

APPENDIX C

Elementary School Attendance Areas

Harford County, Maryland

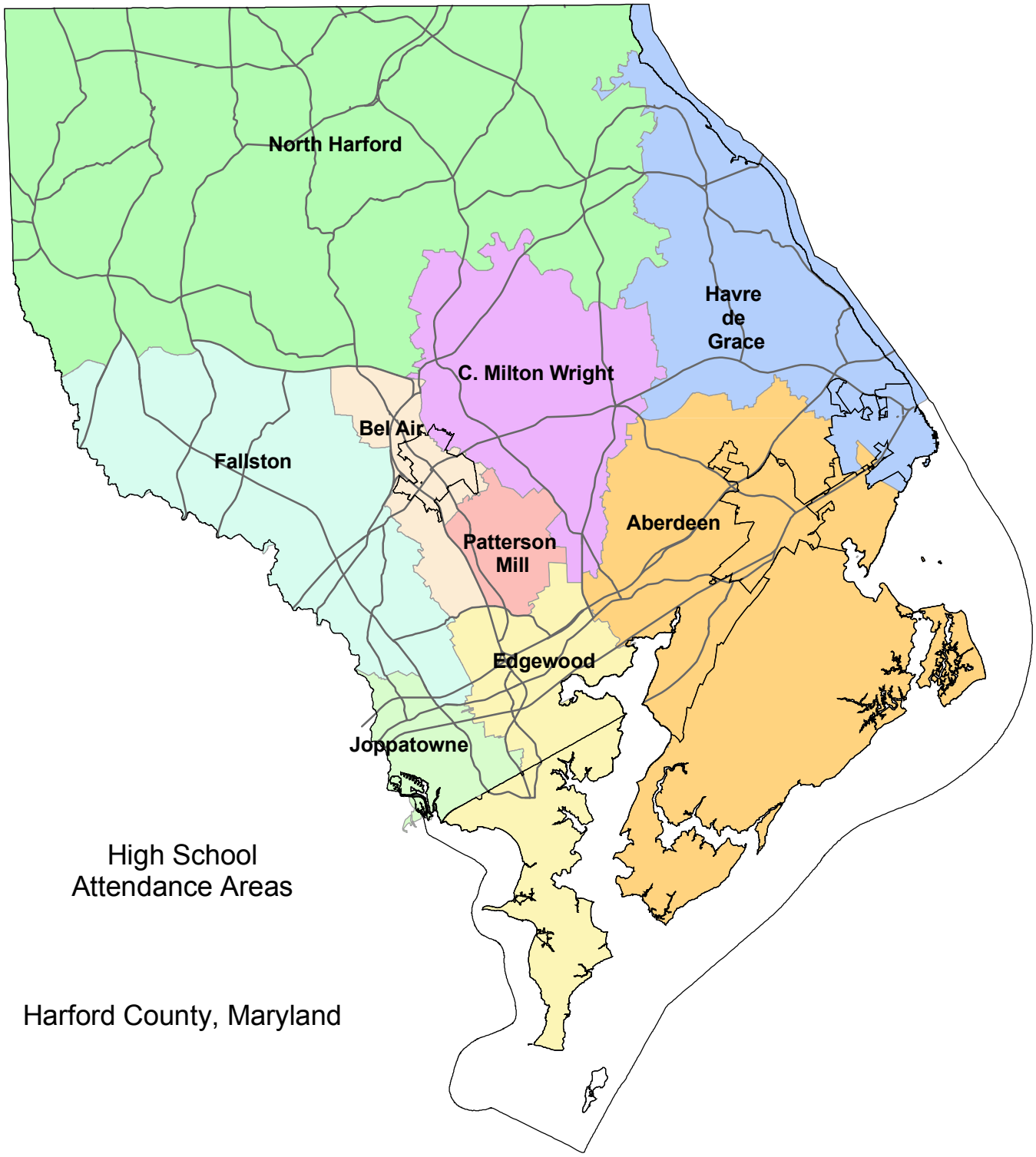
SOURCE: Harford County Public Schools, March 2011.



Middle School Attendance Areas

Harford County, Maryland

SOURCE: Harford County Public Schools, September 2006.



High School
Attendance Areas

Harford County, Maryland

SOURCE: Harford County Public Schools, September 2006.

APPENDIX D

PUPIL YIELD FACTORS

To calculate pupil yield factors forty-eight subdivisions were selected from various geographic locations throughout Harford County, to include single family dwellings, townhouse units, apartments/condominium units, and mobile home units. The subdivisions selected represented newly constructed and established subdivisions ranging in size from 22 units to 2,240 units. Additionally, subdivisions were selected to provide a broad range of attendance areas across the County. A count was made of each student who resided in each of the forty-eight subdivisions studied. The data were tabulated by unit type, and the specific pupil yields were calculated for each subdivision in the elementary, middle, and high schools.

	GRADES		
UNIT TYPE	**K-5**	**6-8**	**9-12**
Single Family	.28	.15	.19
Townhome	.25	.12	.14
Apartments (2 Bdrms)	.04	.01	.02
Condo (2+ Bdrms)	.04	.01	.02
Mobile Home	.16	.07	.06