2013 Annual Growth Report

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This document is available in alternative format upon request.

The 2013 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 2013, Harford County approved 22 residential subdivisions. These subdivisions resulted in the creation of 872 lots/units, of which 850 were located within the County's designated growth areas. This is consistent with the Land Use Element Plan's goal of directing new growth to the Development Envelope.

There were a total of 1,831 building permits issued by Harford County in 2013, of which 576 were for new residential structures. Additionally, the municipalities of Aberdeen, Bel Air, and Havre de Grace issued 161 new residential permits collectively. Approximately 91% of the new construction residential permits were issued for projects within the designated growth areas.

Harford County Public Schools:

Effective July 1, 2014 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 subdivisions of greater than five lots cannot be approved in elementary and 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 33 elementary schools and all 17 middle and high schools meet adequacy standards.

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 2013 was 12.8 MGD (Million Gallons per Day), with a peak day demand of 14.8 MGD. With the completion of the Abingdon Water Treatment Plant (AWTP) expansion to 25 MGD in May of 2012, the total permitted maximum daily water treatment capacity is approximately 30.4 MGD. The County has a maximum day drought demand of 19.75 MGD. Currently it is estimated that there is a need for 5.4 MGD for approved preliminary plans. An additional 6.3 MGD is reserved for planned development in the County's defined service area and 4.0 MGD for internal water treatment use. With the recent expansion of the AWTP, there is adequate planning for the County's water service area.

The Maryland Department of the Environment (MDE) has reviewed the *Water Supply Capacity Management Plan* submitted by the Maryland American Water Company, a private water company which serves the Town of Bel Air and parts of the Greater Bel Air area. MDE has determined that the Maryland American Water Company currently does not have sufficient reserve capacity during times of drought. Currently, all new preliminary plans, recorded plats, and building permits that add to the water demand in the Maryland American service area are on hold until sufficient "drought reserve capacity" has been obtained.

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

Harford County 2013 Sewerage Capacity by Service Area in Million Gallons Per Day (MGD)			
Service Area	**Total Flow**	**System Capacity**	**Average Reserve**
Harford County-Sod Run	12.0	20.0	8.0
Joppatowne	0.76	0.95	0.19
Spring Meadows	0.008	0.01	0.002
Whiteford-Cardiff	0.024	0.12	0.096

The determination of water or sewerage capacity in a specific area of the County can be found in the "Water and Sewer 2013 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 basis. 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 more than 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 standards 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 in all directions from each point of entrance of site through the intersection with the first arterial roadway to the next intersecting collector or higher functional classification road as defined by the Harford County Transportation Plan.
>
> ***Outside the Development Envelope:*** The TIA study area shall include all existing County and State roads in all directions from each point of entrance of the site to the first intersection of a major collector or higher functional classification road as defined by the Harford County Transportation Plan.

Developments which generate 1,500 or more trips per day may be required to expand the study area. 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 two signalized intersections and eight 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 22 and Thomas Run Road / Schucks Road
2. Maryland 715 and Old Philadelphia Road
3. Business US 1 and Henderson Road
4. Maryland 147 and Connolly Road
5. Maryland 23 and Grafton Shop Road
6. Tollgate Road and MacPhail Road
7. US 1 and Reckord Road
8. Maryland 7 and Brass Mill Road
9. Maryland 155 and Earlton Road
10. 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). In addition, HB409 and SB671 require that this report address the implementation status of the County's Master Plan and Land Use Element Plan. The indicators required by this legislation are included in this report, and additional information about Plan implementation is provided in the County's Annual Land Use and Element Plan Implementation Report, which is available on the Department's website.

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 2013 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 8 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 8,097 planned units remaining as of December 31, 2013.

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 Land Use Article §1-207, enacted by Senate Bill 671 and House Bill 409, 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
2009 - 2013

Jurisdiction	2009	2010	2011	2012	2013	Total	Percentage of Baltimore Region
Harford County	587	545	681	588	737	3,138	10.5%
Anne Arundel County	1,178	1,720	2,365	1,657	1,853	8,773	29.4%
Baltimore City	432	380	1,093	642	1,257	3,804	12.7%
Baltimore County	1,020	1,230	488	976	1,101	4,815	16.1%
Carroll County	180	190	183	315	429	1,297	4.3%
Howard County	1,473	1,421	1,178	1,657	2,288	8,017	26.9%
Total	**4,870**	**5,486**	**5,988**	**5,835**	**7,665**	**29,844**	100.0%

Source: Baltimore Metropolitan Council, May 2014.

Note: Includes municipal permit activity.

Table 2
Harford County - Baltimore Region
Population and Household Projections
2013 - 2023

Jurisdiction	2013 Population	2013 Households	2018 Population	2018 Households	2023 Population	2023 Households
Harford County	247,970	91,951	261,226	98,374	270,138	103,126
Anne Arundel County	546,534	203,616	561,629	210,679	573,146	217,742
Baltimore City	630,418	254,104	643,058	259,586	652,701	263,610
Baltimore County	816,094	321,207	828,284	326,108	839,567	330,567
Carroll County	169,184	63,460	173,760	65,394	178,027	67,299
Howard County	296,158	111,771	313,704	122,665	329,543	131,007
Total	**2,706,358**	**1,046,109**	**2,781,661**	**1,082,806**	**2,843,122**	**1,113,351**

Source: Baltimore Metropolitan Council, Round 8 Forecast.

Table 3
Harford County - Baltimore Region
Employment Projections
2013 - 2023

Jurisdiction	2013 Employment	2018 Employment	2023 Employment
Harford County	111,205	121,849	131,881
Anne Arundel County	334,466	353,817	370,326
Baltimore City	385,184	395,789	409,404
Baltimore County	457,114	475,467	488,997
Carroll County	72,190	74,883	77,492
Howard County	190,381	205,381	220,381
Total	**1,550,540**	**1,627,186**	**1,698,481**

Source: Baltimore Metropolitan Council, Round 8 Forecast.

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

	2009		2010		2011		2012		2013	
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	18	376,243	13	469,461	11	78,641	24	576,114	6	113,272
Industrial	1	564	2	59,232	2	14,450	0	0	2	1,601,520
Institutional	10	151,389	1	42,144	5	30,779	5	71,992	5	90,238
Utilities	2	4,856	2	8,640	10	61,027	1	2,674	0	0
Other	0	0	4	11,991	3	3,130	2	16,911	0	0
Total	**31**	**533,052**	**22**	**591,468**	**31**	**188,027**	**32**	**667,691**	**13**	**1,805,030**

Source: Baltimore Metropolitan Council, May 2014.

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

Permit Type	2009		2010		2011		2012		2013	
	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	16	NA	24	NA	56	NA	50	NA	4	NA
Industrial	3	NA	2	NA	7	NA	1	NA	2	NA
Institutional	16	NA	14	NA	20	NA	26	NA	4	NA
Utilities	3	NA	3	NA	7	NA	5	NA	3	NA
Total	**38**	NA	**43**	NA	**90**	NA	**82**	NA	**13**	NA

NA: Data Not Available

Source: Baltimore Metropolitan Council, May 2014.

New Subdivisions

In 2013, Harford County approved 22 residential subdivisions involving a total of 393 acres. The residential subdivisions resulted in the creation of 872 lots/units (See Appendix A). While eight of the subdivisions occurred within the County's designated Priority Funding Area, they yielded 850 units or 97% of the new lots/units approved. This percentage is consistent with the 2012 Land Use Element Plan's intent of directing new growth to designated growth areas. The data reflects no changes in development patterns.

The remaining 14 residential subdivisions, located outside of the designated growth area, created 22 lots. Of these, 85% were two lots or less (eight single-lot subdivisions, four two-lot subdivisions, and two three-lot subdivisions). The single non-residential plan was 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 1,831 building permits were issued by Harford County in 2013. This is up from 1,757 in 2012. This number includes residential, non-residential, and accessory structure permits. Of these, 576 were for new residential structures. Additionally, the municipalities of Aberdeen, Bel Air, and Havre de Grace issued 161 new residential permits collectively. Approximately 91% of the 737 new residential permits were located within the County's designated growth area. The County issued a total of 129 new non-residential permits. Of these, the largest numbers of permits issued were for industrial (105) with 55 being for new industrial structures, 29 being for storage/warehousing, and 21 for modular/industrialized structures. The remaining 1,126 non-residential permits were for a variety of commercial and industrial uses; 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 20,420 units in the Development Envelope.

Zoning Map Amendment(s)

For 2013, there were 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 2013, Harford County enacted eight amendments to its Development Regulations, which were comprehensively revised in 2008. Harford County also adopted one new element plan and completed an update of another element plan. Details are provided below.

Zoning Code Amendments

In 2013, eight bills were enacted that resulted in changes to the County's Zoning Code; one bill amended the Subdivision Regulations. A list of the amendments is provided in Appendix B. Bill 12-48AA established a definition and development standards for animal shelters. Bill 13-04AA addressed airport and aviation standards and allowed them in the agricultural zone as a Special Exception. Bill 13-17 focused on electronic message boards in the agricultural and residential districts, and Bill 13-35 revised the height limitations for garden and mid-rise apartments associated with Continuing Care Retirement Communities located in residential zones. Bill 13-36 reduced the development adjustment to 25% for the Natural Resource District (NRD) for residential zoning, and Bill 13-50 removed the maximum length and waiver requirements for panhandle lots. Bills 13-51 and 13-52 provided for an increase in the size and height for accessory structures in the agricultural zone if the properties are five or more acres, and revised the buffer yard requirements in the agricultural zone. The County's Subdivision Regulations were amended by Bill 13-37AA which revised the tenure of preliminary plans to three years and the timeframe for recording plats to one year.

Comprehensive Plan and Element Plan Updates

Harford County last updated its Master Plan and Land Use Element Plan in 2012. This update incorporated the requirements of the Smart, Green and Growing legislative package adopted by the Maryland General Assembly in 2009. The County's Water and Sewer Master Plan was updated in the spring and fall as required.

In 2013, the Department of Parks and Recreation completed the update of the Land Preservation, Parks, and Recreation Plan. The plan was adopted by County Council Bill 13-15, and the County's first Bicycle and Pedestrian Master Plan was adopted by County Council Bill 13-13.

In addition, an annual Implementation Report was prepared for the Land Use Element Plan and all other element plans under the purview of the Department of Planning and Zoning. This report details the percentage of strategies addressed and legislation and other initiatives undertaken to achieve the goals outlined in the plans. It also identifies any issues that impact the implementation of plan strategies. This report is presented to the Planning Advisory Board and the County Council. This report, combined with the Annual Report, addresses the requirements of HB 409 and SB 671.

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 Appendices 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 a given year 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 based on the attendance area where the students reside. 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.

The actual enrollment of Harford County Public Schools (HCPS) is retained as base enrollment for the modified enrollment projections. HCPS first-year projected enrollment figures are also retained as they have been shown to be historically accurate.

Table 6
Harford County Elementary Schools
Utilization Chart
2013

Elementary School	State-Rated Capacity	Actual 2013 - 2014		Projected 2014 - 2015		2015 - 2016		2016 - 2017	
		ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.
Abingdon	864	832	96%	862	100%	881	102%	890	103%
Bakerfield	500	392	78%	385	77%	384	77%	390	78%
Bel Air	500	516	103%	516	103%	502	100%	511	102%
Church Creek	793	787	99%	776	98%	769	97%	766	97%
Churchville	388	378	97%	383	99%	379	98%	378	97%
Darlington	192	131	68%	130	68%	139	72%	146	76%
Deerfield	816	803	98%	810	99%	813	100%	811	99%
Dublin	295	301	102%	293	99%	289	98%	289	98%
Edgewood	511	421	82%	422	83%	421	82%	407	80%
Emmorton	549	551	100%	526	96%	511	93%	505	92%
Forest Hill	581	492	85%	471	81%	458	79%	445	77%
Forest Lakes	546	482	88%	454	83%	436	80%	421	77%
Fountain Green	571	521	91%	508	89%	491	86%	502	88%
G. Lisby at Hillsdale	455	425	93%	431	95%	472	104%	493	108%
Hall's Cross Roads	562	507	90%	502	89%	490	87%	489	87%
Havre de Grace	566	402	71%	406	72%	400	71%	407	72%
Hickory	655	687	105%	679	104%	654	100%	641	98%
Homestead/Wakefield	907	900	99%	900	99%	900	99%	888	98%
Jarrettsville	548	460	84%	470	86%	474	86%	464	85%
Joppatowne	653	596	91%	583	89%	577	88%	590	90%
Magnolia	518	490	95%	495	96%	499	96%	505	97%
Meadowvale	568	551	97%	560	99%	575	101%	596	105%
Norrisville	252	182	72%	181	72%	181	72%	180	71%
North Bend	500	360	72%	346	69%	344	69%	338	68%
North Harford	500	421	84%	422	84%	411	82%	414	83%
Prospect Mill	680	558	82%	532	78%	521	77%	518	76%
Red Pump	696	688	99%	690	99%	691	99%	696	100%
Ring Factory	548	557	102%	575	105%	569	104%	569	104%
Riverside	522	520	100%	513	98%	501	96%	506	97%
Roye-Williams	683	540	79%	580	85%	630	92%	690	101%
Wm. Paca / Old Post Rd.	954	805	84%	809	85%	831	87%	836	88%
Wm. S. James	522	421	81%	399	76%	384	74%	376	72%
Youth's Benefit	958	961	100%	955	100%	934	97%	902	94%
TOTAL	19,353	17,638	91%	17,564	91%	17,511	90%	17,559	91%

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2013.

Table 7

Harford County Middle Schools

Utilization Chart

2013

Middle School	State-Rated Capacity	Actual 2013 - 2014 ENROLL	Actual 2013 - 2014 %UTIL	Projected 2014 - 2015 ENROLL	Projected 2014 - 2015 %UTIL	Projected 2015 - 2016 ENROLL	Projected 2015 - 2016 %UTIL	Projected 2016 - 2017 ENROLL	Projected 2016 - 2017 %UTIL
Aberdeen	1,444	1,115	77%	1,102	76%	1,105	77%	1,077	75%
Bel Air	1,318	1,285	97%	1,261	96%	1,275	97%	1,284	97%
Edgewood	1,370	1,103	81%	1,080	79%	1,097	80%	1,075	78%
Fallston	1,105	874	79%	875	79%	895	81%	888	80%
Havre de Grace	775	541	70%	544	70%	539	70%	537	69%
Magnolia	1,073	715	67%	736	69%	742	69%	722	67%
North Harford	1,243	974	78%	967	78%	987	79%	990	80%
Patterson Mill	711	684	96%	681	96%	684	96%	700	98%
Southampton	1,540	1,261	82%	1,248	81%	1,264	82%	1,256	82%
Total	10,579	8,552	81%	8,494	80%	8,588	81%	8,529	81%

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2013.

Table 8

Harford County High Schools

Utilization Chart

2013

High School	State-Rated Capacity	Actual		Projected					
		2013 - 2014		2014 - 2015		2015 - 2016		2016 - 2017	
		ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1,679	1,418	84%	1,399	83%	1,392	83%	1,399	83%
Bel Air	1,668	1,655	99%	1,682	101%	1,647	99%	1,666	100%
C. Milton Wright	1,678	1,401	83%	1,399	83%	1,417	84%	1,414	84%
Edgewood	1,743	1,280	73%	1,274	73%	1,283	74%	1,279	73%
Fallston	1,529	1,072	70%	1,065	70%	1,077	70%	1,084	71%
Harford Technical	920	1,012	110%	1,011	110%	1,008	110%	1,007	109%
Havre de Grace	850	583	69%	583	69%	598	70%	588	69%
Joppatowne	1,126	761	68%	740	66%	759	67%	758	67%
North Harford	1,603	1,358	85%	1,340	84%	1,320	82%	1,337	83%
Patterson Mill	924	919	99%	905	98%	900	97%	908	98%
Total	13,720	11,459	84%	11,398	83%	11,401	83%	11,440	83%

Source: Harford County Public Schools & Dept. of Planning and Zoning, December 2013.

Table 9

Harford County
Modified Elementary School Enrollment Projections

School District	2013	2014	2015	2016	2017	2018	2019	2020
ABINGDON	832	862	881	890	885	887	893	889
modified	**832**	**862**	**874**	**872**	**877**	**886**	**885**	**884**
BAKERSFIELD	392	385	384	390	392	381	382	383
modified	**392**	**385**	**403**	**418**	**419**	**433**	**448**	**463**
BEL AIR	516	516	502	511	509	504	503	502
modified	**516**	**516**	**531**	**536**	**537**	**542**	**547**	**553**
CHURCH CREEK	787	776	769	766	756	747	751	751
modified	**787**	**776**	**802**	**822**	**844**	**881**	**915**	**951**
CHURCHVILLE	378	383	379	378	387	390	391	392
modified	**378**	**383**	**387**	**401**	**410**	**416**	**422**	**429**
DARLINGTON	131	130	139	146	146	149	146	147
modified	**131**	**130**	**138**	**140**	**145**	**144**	**147**	**150**
DEERFIELD	803	810	813	811	825	823	824	823
modified	**803**	**810**	**826**	**859**	**875**	**895**	**914**	**933**
DUBLIN	301	293	289	289	293	299	297	298
modified	**301**	**293**	**296**	**303**	**313**	**314**	**318**	**322**
EDGEWOOD	421	422	421	407	404	409	408	406
modified	**421**	**422**	**409**	**407**	**413**	**413**	**412**	**411**
EMMORTON	551	526	511	505	495	506	492	495
modified	**551**	**526**	**531**	**532**	**556**	**553**	**568**	**584**
FOREST HILL	492	471	458	445	434	451	446	443
modified	**492**	**471**	**460**	**450**	**470**	**467**	**466**	**465**
FOREST LAKES	482	454	436	421	406	401	400	400
modified	**482**	**454**	**439**	**425**	**421**	**421**	**422**	**423**
FOUNTAIN GREEN	521	508	491	502	486	495	493	491
modified	**521**	**508**	**520**	**505**	**515**	**514**	**513**	**512**
G. LISBY AT HILLSDALE	425	431	472	493	498	513	511	511
modified	**425**	**431**	**452**	**458**	**474**	**474**	**476**	**478**
HALLS CROSS ROADS	507	502	490	489	494	485	486	486
modified	**507**	**502**	**505**	**514**	**509**	**514**	**519**	**523**
HAVRE DE GRACE	402	406	400	407	418	422	420	421
modified	**402**	**406**	**439**	**479**	**514**	**543**	**578**	**615**
HICKORY	687	679	654	641	627	614	619	618
modified	**687**	**679**	**681**	**682**	**684**	**707**	**723**	**739**
HOMESTEAD/WAKEFIELD	900	900	900	888	895	900	894	895
modified	**900**	**900**	**906**	**932**	**955**	**968**	**989**	**1,010**
JARRETTSVILLE	460	470	474	464	468	471	468	469
modified	**460**	**470**	**467**	**478**	**488**	**492**	**501**	**509**
JOPPATOWNE	596	583	577	590	591	601	599	598
modified	**596**	**583**	**606**	**618**	**638**	**647**	**657**	**667**
MAGNOLIA	490	495	499	505	511	508	502	506
modified	**490**	**495**	**507**	**519**	**522**	**522**	**532**	**543**
MEADOWVALE	551	560	575	596	595	596	600	598
modified	**551**	**560**	**584**	**587**	**592**	**600**	**602**	**604**
NORRISVILLE	182	181	181	180	177	184	186	184
modified	**182**	**181**	**183**	**183**	**193**	**199**	**200**	**201**
NORTH BEND	360	346	344	338	339	338	337	338
modified	**360**	**346**	**345**	**351**	**355**	**359**	**366**	**372**
NORTH HARFORD	421	422	411	414	411	404	409	408
modified	**421**	**422**	**432**	**436**	**436**	**449**	**456**	**463**
PROSPECT MILL	558	532	521	518	502	499	499	499
modified	**558**	**532**	**533**	**521**	**522**	**526**	**530**	**534**
RED PUMP	**688**	**690**	**691**	**696**	**688**	**696**	**695**	**695**
modified	**688**	**690**	**707**	**711**	**732**	**743**	**756**	**769**
RING FACTORY	557	575	569	569	578	580	580	580
modified	**557**	**575**	**582**	**598**	**608**	**615**	**623**	**630**
RIVERSIDE	520	513	501	506	514	507	507	509
modified	**520**	**513**	**523**	**537**	**535**	**540**	**547**	**555**
ROYE-WILLIAMS	540	580	630	690	689	699	690	695
modified	**540**	**580**	**635**	**634**	**644**	**635**	**640**	**644**
WM PACA/OLD POST RD	805	809	831	836	836	822	823	828
modified	**805**	**809**	**832**	**851**	**856**	**877**	**903**	**929**
W.S. JAMES	421	399	384	376	374	372	373	372
modified	**421**	**399**	**392**	**391**	**390**	**392**	**392**	**392**
YOUTHS BENEFIT	961	955	934	902	883	880	885	881
modified	**961**	**955**	**936**	**929**	**940**	**959**	**969**	**979**
Total	17,638	17,564	17,511	17,559	17,506	17,533	17,509	17,511
Total - modified	**17,638**	**17,564**	**17,866**	**18,080**	**18,381**	**18,641**	**18,934**	**19,234**

Source: Harford County Dept. of Planning and Zoning, May 2014.

Table 10

Harford County
Modified Secondary School Enrollment Projections

Middle School

School District	2013	2014	2015	2016	2017	2018	2019	2020
Aberdeen	1,115	1,102	1,105	1,077	1,079	1,085	1,084	1,086
modified	**1,115**	**1,102**	**1,135**	**1,138**	**1,172**	**1,210**	**1,243**	**1,279**
Bel Air	1,285	1,261	1,275	1,284	1,280	1,276	1,274	1,278
modified	**1,285**	**1,261**	**1,289**	**1,312**	**1,322**	**1,333**	**1,345**	**1,364**
Edgewood	1,103	1,080	1,097	1,075	1,075	1,082	1,081	1,082
modified	**1,103**	**1,080**	**1,119**	**1,120**	**1,142**	**1,173**	**1,196**	**1,221**
Fallston	874	875	895	888	884	884	885	887
modified	**874**	**875**	**905**	**908**	**914**	**924**	**936**	**949**
Havre de Grace	541	544	539	537	540	544	542	540
modified	**541**	**544**	**554**	**568**	**586**	**607**	**622**	**637**
Magnolia	715	736	742	722	721	727	730	728
modified	**715**	**736**	**750**	**738**	**745**	**760**	**771**	**778**
North Harford	974	967	987	990	984	983	982	985
modified	**974**	**967**	**1,001**	**1,018**	**1,026**	**1,040**	**1,054**	**1,072**
Patterson Mill	**684**	**681**	**684**	**700**	**693**	**689**	**689**	691
modified	**684**	**681**	**691**	**714**	**714**	**717**	**724**	**734**
Southampton	1,261	1,248	1,264	1,256	1,251	1,252	1,253	1,255
modified	**1,261**	**1,248**	**1,275**	**1,278**	**1,284**	**1,296**	**1,309**	**1,322**
Total	8,552	8,494	8,588	8,529	8,507	8,523	8,520	8,533
Total - modified	**8,552**	**8,494**	**8,718**	**8,793**	**8,906**	**9,061**	**9,199**	**9,355**

High School

School District	2013	2014	2015	2016	2017	2018	2019	2020
Aberdeen	1,418	1,399	1,392	1,399	1,392	1,391	1,389	1,392
modified	**1,418**	**1,399**	**1,431**	**1,478**	**1,512**	**1,554**	**1,595**	**1,643**
Bel Air	1,655	1,682	1,647	1,666	1,660	1,657	1,659	1,658
modified	**1,655**	**1,682**	**1,664**	**1,700**	**1,712**	**1,726**	**1,746**	**1,763**
C. Milton Wright	1,401	1,399	1,417	1,414	1,435	1,423	1,422	1,422
modified	**1,401**	**1,399**	**1,430**	**1,440**	**1,475**	**1,476**	**1,488**	**1,502**
Edgewood	1,280	1,274	1,283	1,279	1,276	1,280	1,283	1,283
modified	**1,280**	**1,274**	**1,309**	**1,331**	**1,355**	**1,387**	**1,419**	**1,447**
Fallston	1,072	1,065	1,077	1,084	1,074	1,077	1,078	1,079
modified	**1,072**	**1,065**	**1,089**	**1,108**	**1,110**	**1,126**	**1,139**	**1,153**
Havre de Grace	583	583	598	588	609	597	598	598
modified	**583**	**583**	**616**	**624**	**666**	**672**	**694**	**714**
Joppatowne	761	740	759	758	777	765	764	766
modified	**761**	**740**	**769**	**778**	**808**	**806**	**815**	**828**
North Harford	1,358	1,340	1,320	1,337	1,357	1,346	1,345	1,343
modified	**1,358**	**1,340**	**1,337**	**1,371**	**1,409**	**1,416**	**1,432**	**1,448**
Patterson Mill	919	905	900	908	919	912	909	909
modified	**919**	**905**	**909**	**926**	**947**	**949**	**955**	**964**
Total	10,447	10,387	10,394	10,432	10,498	10,448	10,446	10,449
Total - modified	**10,447**	**10,387**	**10,554**	**10,758**	**10,994**	**11,111**	**11,283**	**11,463**

Source: Harford County Dept. of Planning and Zoning, May, 2014.

Table 11

Harford County Residential Building Permit Activity

by Elementary School District

2009 - 2013

	2009					2010					2011					2012					2013				
	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Bakerfield	3	0	0	0	3	3	4	0	0	7	14	0	0	0	14	28	0	0	0	28	16	0	96	0	112
Bel Air	1	0	0	0	1	1	12	0	0	13	1	24	0	0	25	0	0	0	0	0	2	0	0	0	2
Church Creek	1	62	0	0	63	0	51	0	0	51	2	12	212	0	226	0	6	0	0	6	0	19	188	0	207
Churchville	7	0	0	0	7	5	0	0	1	6	4	0	0	0	4	4	0	0	0	4	2	0	0	2	4
Darlington	2	0	0	0	2	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	1	0	0	0	1
Deerfield	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dublin	2	0	0	2	4	2	0	0	1	3	5	0	0	1	6	12	0	0	1	13	4	0	0	1	5
Edgewood	0	4	0	0	4	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Emmorton	3	30	0	0	33	2	94	0	0	96	1	36	12	0	49	0	36	24	0	60	0	29	0	0	29
Forest Hill	1	0	0	0	1	2	0	0	0	2	2	0	0	0	2	4	0	0	1	5	1	0	0	0	1
Forest Lakes	3	0	0	0	3	2	0	0	0	2	2	0	0	0	2	5	0	0	0	5	2	0	0	0	2
Fountain Green	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0
G. Lisby at Hillsdale	2	0	0	0	2	2	18	0	0	20	20	28	0	0	48	17	33	0	0	50	17	30	0	0	47
Hall's Cross Roads	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0
Havre de Grace	55	40	0	0	95	71	50	0	0	121	33	39	0	0	72	33	36	0	0	69	31	0	0	0	31
Hickory	3	0	0	0	3	15	0	0	0	15	2	0	0	0	2	29	27	21	0	77	43	13	0	0	56
Homestead/Wakefield	17	0	0	0	17	15	0	0	0	15	35	10	0	0	45	34	0	0	0	34	31	6	0	0	37
Jarrettsville	14	0	0	0	14	10	0	0	0	10	5	0	0	0	5	17	0	0	0	17	6	0	0	0	6
Joppatowne	3	0	84	0	87	6	0	0	0	6	5	0	0	0	5	2	0	0	0	2	4	0	0	0	4
Magnolia	0	0	0	0	0	2	22	0	0	24	1	20	0	0	21	1	45	0	0	46	2	23	0	0	25
Meadowvale	2	0	0	0	2	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	4	0	0	0	4
Norrisville	3	0	0	0	3	2	0	0	0	2	3	0	0	0	3	6	0	0	2	8	9	0	0	0	9
North Bend	8	0	0	0	8	10	0	0	1	11	4	0	0	0	4	22	0	0	1	23	8	0	0	0	8
North Harford	10	0	0	1	11	12	0	0	0	12	11	0	0	1	12	8	0	0	0	8	9	0	0	1	10
Prospect Mill	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1
Red Pump	11	71	28	0	110	6	28	28	0	62	16	0	14	0	30	19	0	0	0	19	52	0	0	0	52
Ring Factory	2	0	0	0	2	3	0	0	0	3	5	0	0	0	5	1	0	0	0	1	0	0	0	0	0
Riverside	25	0	0	0	25	20	0	0	0	20	17	0	0	0	17	8	0	0	0	8	0	0	0	0	0
Roye-Williams	0	0	0	0	0	0	0	0	1	1	5	0	0	4	9	7	0	0	0	7	11	0	0	0	11
Wm. Paca/Old Post Rd	24	26	0	0	50	10	0	0	0	10	23	10	0	0	33	16	6	0	0	22	23	0	0	0	23
Wm. S. James	0	3	0	0	3	1	3	0	0	4	1	10	0	0	11	2	7	0	0	9	0	0	0	0	0
Youth's Benefit	16	0	0	0	16	12	5	0	0	17	11	13	0	0	24	15	23	1	0	39	12	38	0	0	50
TOTAL	220	236	128	3	587	218	295	28	4	545	234	202	238	7	681	296	241	46	5	588	291	158	284	4	737

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2014.

Table 12

Harford County Residential Building Permit Activity

by Middle School District

2009 - 2013

	2009					2010					2011					2012					2013				
	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	8	62	0	0	70	5	88	0	1	94	41	56	212	4	313	52	78	0	0	130	45	49	284	0	378
Bel Air	10	87	28	0	125	26	134	28	0	188	27	63	26	0	116	59	36	45	0	140	105	29	0	0	134
Edgewood	25	30	0	0	55	13	8	0	0	21	23	10	0	0	33	17	6	0	0	23	22	0	0	0	22
Fallston	38	14	0	0	52	21	5	0	0	26	30	13	0	0	43	34	23	1	1	59	19	38	0	0	57
Havre de Grace	60	40	0	0	100	75	35	0	0	110	35	23	0	1	59	37	19	0	0	56	36	0	0	1	37
Magnolia	28	0	84	0	112	28	22	0	0	50	20	20	0	0	40	9	45	0	0	54	3	23	0	0	26
North Harford	29	0	0	3	32	33	0	0	1	34	27	0	0	2	29	59	0	0	3	62	34	0	0	2	36
Patterson Mill	15	3	0	0	18	14	3	0	0	17	22	17	0	0	39	20	7	0	0	27	20	6	0	0	26
Southampton	7	0	16	0	23	3	0	0	2	5	9	0	0	0	9	9	27	0	1	37	7	13	0	1	21
TOTAL	220	236	128	3	587	218	295	28	4	545	234	202	238	7	681	296	241	46	5	588	291	158	284	4	737

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2014.

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

2009-2013

	2009					2010					2011					2012					2013				
	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	8	62	0	0	70	5	88	0	1	94	41	56	212	4	313	52	78	0	0	130	45	49	284	0	378
Bel Air	10	87	28	0	125	26	134	28	0	188	27	63	26	0	116	59	36	45	0	140	105	29	0	0	134
C.M. Wright	7	0	16	0	23	3	0	0	2	5	9	0	0	0	9	9	27	0	1	37	7	13	0	1	21
Edgewood	25	30	0	0	55	13	8	0	0	21	23	10	0	0	33	17	6	0	0	23	22	0	0	0	22
Fallston	38	14	0	0	52	21	5	0	0	26	30	13	0	0	43	34	23	1	1	59	19	38	0	0	57
Havre de Grace	60	40	0	0	100	75	35	0	0	110	35	23	0	1	59	37	19	0	0	56	36	0	0	1	37
Joppatowne	28	0	84	0	112	28	22	0	0	50	20	20	0	0	40	9	45	0	0	54	3	23	0	0	26
North Harford	29	0	0	3	32	33	0	0	1	34	27	0	0	2	29	59	0	0	3	62	34	0	0	2	36
Patterson Mill	15	3	0	0	18	14	3	0	0	17	22	17	0	0	39	20	7	0	0	27	20	6	0	0	26
TOTAL	220	236	128	3	587	218	295	28	4	545	234	202	238	7	681	296	241	46	5	588	291	158	284	4	737

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2014.

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*

2009 - 2013

SCHOOL	2009*		2010*		2011*		2012*		2013*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Abingdon	4,783	12,992	4,781	11,593	4,781	12,933	4,781	12,906	4,782	12,875
Bakerfield	2,270	6,168	2,274	5,581	2,281	6,170	2,294	6,193	2,321	6,249
Bel Air	3,011	8,181	3,013	7,731	3,025	8,184	3,049	8,231	3,049	8,210
Church Creek	3,449	9,369	3,538	9,248	3,587	9,703	3,802	10,263	3,808	10,252
Churchville	2,456	6,673	2,463	6,808	2,469	6,678	2,473	6,675	2,476	6,667
Darlington	1,003	2,726	1,007	2,646	1,007	2,724	1,009	2,724	1,009	2,716
Deerfield	3,262	8,862	3,263	9,506	3,265	8,832	3,265	8,814	3,265	8,791
Dublin	1,651	4,485	1,658	4,490	1,661	4,493	1,667	4,499	1,679	4,521
Edgewood	1,244	3,381	1,248	3,523	1,256	3,397	1,256	3,390	1,256	3,381
Emmorton	2,229	6,056	2,274	6,159	2,366	6,400	2,412	6,512	2,470	6,650
Forest Hill	2,397	6,512	2,409	7,004	2,411	6,522	2,413	6,513	2,418	6,509
Forest Lakes	2,836	7,705	2,837	7,785	2,839	7,680	2,841	7,669	2,846	7,662
Fountain Green	1,892	5,140	1,892	5,742	1,892	5,118	1,896	5,118	1,899	5,112
G. Lisby at Hillsdale	2,256	6,128	2,264	5,693	2,283	6,176	2,329	6,287	2,377	6,399
Hall's Cross Roads	1,934	5,253	1,951	5,350	1,951	5,278	1,951	5,267	1,972	5,310
Havre de Grace	3,326	9,035	3,388	7,890	3,504	9,478	3,572	9,643	3,638	9,796
Hickory	2,759	7,495	2,761	7,994	2,775	7,508	2,777	7,497	2,851	7,676
Homestead/Wakefield	5,271	14,319	5,287	14,411	5,301	14,341	5,344	14,427	5,377	14,476
Jarrettsville	2,725	7,403	2,738	7,730	2,748	7,432	2,752	7,430	2,769	7,454
Joppatowne	3,834	10,416	3,843	9,801	3,849	10,411	3,853	10,403	3,855	10,380
Magnolia	1,621	4,404	1,639	4,670	1,662	4,496	1,682	4,540	1,726	4,647
Meadowvale	2,621	7,119	2,622	6,963	2,624	7,098	2,625	7,086	2,625	7,067
Norrisville	1,255	3,409	1,258	3,496	1,260	3,408	1,263	3,409	1,270	3,421
North Bend	2,220	6,032	2,226	6,214	2,237	6,050	2,240	6,048	2,262	6,091
North Harford	2,302	6,253	2,316	6,599	2,327	6,296	2,339	6,314	2,347	6,318
Prospect Mill	2,829	7,686	2,858	7,418	2,858	7,731	2,858	7,715	2,860	7,700
Red Pump	3,720	10,107	3,776	10,127	3,835	10,375	3,864	10,430	3,882	10,452
Ring Factory	2,712	7,368	2,712	7,349	2,715	7,344	2,720	7,342	2,721	7,325
Riverside	2,453	6,663	2,454	6,532	2,473	6,690	2,489	6,720	2,497	6,723
Roye-Williams	1,844	5,010	1,844	5,901	1,845	4,991	1,854	5,004	1,860	5,009
Wm. Paca/Old Post Rd	1,911	5,191	4,528	12,516	4,538	12,275	4,569	12,334	4,590	12,358
Wm. S. James	4,521	12,283	1,950	5,712	1,954	5,285	1,964	5,303	1,973	5,312
Youth's Benefit	5,138	13,957	5,146	14,644	5,162	13,965	5,185	13,997	5,222	14,061
TOTAL	89,733	243,779	90,218	244,826	90,739	245,460	91,387	246,700	91,951	247,570

* 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 2014.

Table 15
Harford County Population and Households
by Middle School District

2009 - 2013

SCHOOL	2009*		2010*		2011*		2012*		2013*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	12,318	33,465	12,456	33,298	12,546	33,938	12,844	34,671	12,968	34,916
Bel Air	13,511	36,706	13,594	35,055	13,774	37,259	13,884	37,480	14,018	37,743
Edgewood	13,764	37,393	13,809	37,068	13,829	37,408	13,860	37,415	13,882	37,376
Fallston	8,788	23,875	8,826	25,102	8,851	23,943	8,892	24,004	8,948	24,093
Havre de Grace	7,222	19,620	7,271	18,129	7,376	19,954	7,433	20,064	7,486	20,156
Magnolia	7,800	21,189	7,827	21,071	7,875	21,303	7,913	21,361	7,965	21,444
North Harford	10,268	27,895	10,313	29,368	10,346	27,987	10,373	28,003	10,433	28,090
Patterson Mill	6,147	16,699	6,170	17,460	6,187	16,736	6,224	16,801	6,250	16,828
Southampton	9,916	26,938	9,952	28,275	9,956	26,933	9,965	26,901	10,000	26,925
TOTAL	89,733	243,779	90,218	244,826	90,739	245,460	91,387	246,700	91,951	247,570

* 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 2014.

Table 16
Harford County Population and Households
by High School District

2009 - 2013

SCHOOL	2009*		2010*		2011*		2012*		2013*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	12,318	33,465	12,456	33,298	12,546	33,938	12,844	34,671	12,968	34,916
Bel Air	13,511	36,706	13,594	35,055	13,774	37,259	13,884	37,480	14,018	37,743
C. Milton Wright	9,916	26,938	9,952	28,275	9,956	26,933	9,965	26,901	10,000	26,925
Edgewood	13,764	37,393	13,809	37,068	13,829	37,408	13,860	37,415	13,882	37,376
Fallston	8,788	23,875	8,826	25,102	8,851	23,943	8,892	24,004	8,948	24,093
Havre de Grace	7,222	19,620	7,271	18,129	7,376	19,954	7,433	20,064	7,486	20,156
Joppatowne	7,800	21,189	7,827	21,071	7,875	21,303	7,913	21,361	7,965	21,444
North Harford	10,268	27,895	10,313	29,368	10,346	27,987	10,373	28,003	10,433	28,090
Patterson Mill	6,147	16,699	6,170	17,460	6,187	16,736	6,224	16,801	6,250	16,828
TOTAL	89,733	243,779	90,218	244,826	90,739	245,460	91,387	246,700	91,951	247,570

* 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 2014.

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 2012 Harford County Land Use Element Plan. Additional information is included in this report on water/sewage usage for residential and 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 "2013 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.

The County water system's average daily usage in 2013 was 12.8 MGD (Million Gallons Per Day), with a peak day demand of 14.8 MGD. With the completion of the Abingdon Water Treatment Plant (AWTP) in May of 2012, the total permitted maximum daily water treatment capacity is approximately 30.4 MGD. The County has a maximum day drought demand of 19.75 MGD. Currently it is estimated that there is a need for 5.4 MGD for approved preliminary plans. An additional 6.3 MGD is reserved for planned development in the County's defined service area and 4.0 MGD for internal water treatment use. With the further expansion of the AWTP to 25 MGD the County's water service area is adequately planned for. 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.

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

The Maryland Department of the Environment is currently reviewing the *Water Supply Capacity Management Plan* submitted by the Maryland American Water Company, a private water company which serves the Town of Bel Air and parts of the Greater Bel Air area. MDE has determined that the Maryland American Water Company currently does not have sufficient reserve capacity during times of drought. Currently, all new preliminary plans, recorded plats, and building permits that add to the water demand in the Maryland American service area are on hold until sufficient “drought reserve capacity” has been obtained.

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 “2013 Water and Sewer Adequate Public Facilities Report.”

The average daily influent flow to the Sod Run WWTP in 2013 was approximately 12.0 MGD, exclusive of recycle flows and septage. The average daily influent flow to the Joppatowne WWTP in 2013 was approximately 0.76 MGD. The average daily influent flow for Spring Meadows in 2013 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.)
- Dembytowne/Hanson Road Petition S.P.S. (2)
- Forest Greens S.P.S.
- Harford Square 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, before programmed improvements are completed. 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.

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 2013
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.

	2013
Total Number of Connections*	43,763
WATER	
Total Number of Connections**	40,636
Average Water Production	12.8 MGD
Maximum Day Water Production	14.8 MGD
Average Water Usage per Connection (gal/day)	315
Residential Unit Water Usage (gal/day)	151
Average Commercial/Industrial Water Usage (gal/day)	6,182
SEWAGE	
Total Number of Sewer Connections***	40,953
Average Sewage Flows	12.8 MGD
Maximum Day Sewage Flows	21.8 MGD
Average Sewage per Connection (gal/day)	313
Residential Sewage Generation (gal/day)	151
Average Commercial/Industrial Sewage Generation (gal/day)	6,182

- MGD = Million Gallons per Day

Notes: * Includes Water/Sewer service, Water service only, and Sewer service only
** Includes Water/Sewer service and Water service only
*** Includes Water/Sewer service and Sewer service only

Source: 2013 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	2012	2013	2015	2020	2025
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	6.5	6.0	7.6	8.4	9.0
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	8.4	7.4	11.0	12.1	13.0
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	6.0	6.1	7.3	7.5	7.95
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	7.7	7.4	10.7	11.0	11.6
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	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*	0.9*	0.9*	0.9	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	0.2	0.15	0.2	0.2	0.2
* 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*	1.7*	1.7*	2.0	2.0	2
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	0.0	0.01	0.3	0.3	0.35
* 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*	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	13.0	12.6	15.7	16.7	17.8
Max. Day, mgd	8.5	12.1	11.2	14.3	14.5	14.8	12.5	17.2	16.9	14.9	14.0	15.4	15.0	16.6	15.4	15.1	17.1	15.5	16.1	14.8	25.1	27.1	28.6

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

Source: 2013 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
	2010	37,000	8.1	1.7	2.8	12.6	20
	2011	37,261	8.1	1.7	3.6	13.4	20
	2012	37,711	8.2	1.7	1.9	11.7	20
	2013	37,711	8.2	1.7	2.1	12.0	20
	2025	46,517	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
	2010	3,209	0.64	0.04	0.08	0.76	0.95
	2011	3,224	0.66	0.04	0.02	0.90	0.95
	2012	3,242	0.55	0.04	0.2	0.79**	0.95
	2013	3,242	0.52	0.04	0.2	0.76	0.95
	2025	3,339	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
	2010	53	0.01	0	NC	0.01	0.01
	2011	53	0.01	0	NC	0.01	0.01
	2012	53	0.01	0	NC	0.008	0.01
	2013	53	0.01	0	NC	0.008	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
	2010	179	0.023	0	0.01	0.03	0.12
	2011	179	0.023	0	0.014	0.024	0.12
	2012	178	0.022	0	0.005	0.027	0.12
	2013	179	0.022	0	0.002	0.024	0.12
	2025	179	0.09	0.01	0.02	0.12	0.12

NC = Not Computed

** Due to ENR construction project at Joppatowne WWTP, Pump Station 47 was sending some flow to Harford County Sod Run for treatment.

Source: 2013 Harford County Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer.

Table 20
2013 EXISTING WATER & SEWER CAPITAL PROJECTS

The Capital Improvement Program establishes projects for expanding and improving water and sewer facilities. This list of 2013 Capital Projects includes the project status.

PROJECT NO.	PROJECT NAME	PROJECT STATUS
6440	Infiltration/Inflow	Flow Monitoring, Manhole Rehabilitation, Televising & Smoke Testing: on-going
6627	Country Walk Water Transmission Main Parallel	Design Phase Complete / On hold
6632	Bear Cabin Pump Station	Construction Complete
6634	Lower Bynum Run Interceptor Parallel	Construction Phase
6637	Sod Run ENR	Under Construction
6665	Joppa Farm Road Pump Station # 47 Redirection & Parallel Sewer	Bid Phase
6687	Abingdon Road Water Main	Design Phase & Easement Acquisition Completed
6690	MD Route 24 Water Transmission Main	Study Phase
6692 A	Bush Creek Pump Station Force Main Replacement	Bid Phase
6701	Tollgate Road Water Main	Scope of Services Phase
6703	Bynum Run Parallel Phase 6 & 7	Finalizing Bid Documents for Phase 7 Finalizing Easement Acquisition
6705	Joppatowne ENR	Construction Complete
6707	Infiltration / Inflow in Bynum Run Drainage Area	Preparing Implementation Phase and Recommended Improvements
6711	Swan Creek Water Tank	Site Acquisition
6712	Edgewood Interceptor Parallel	Design Phase
6713	Greenridge Pump Station Replacement	Under Construction
6715	Bill Bass Outfall Sewer Replacement	Under Construction
6730	Bill Bass Pump Station Force Main Parallel / Replacement	Scope of Services Phase
6737	Towne Center Drive Pump Station	Scope of Services 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 14 (Table 24)**,** and a list of State Consolidated Transportation Program (CTP) projects funded for construction in FY 14 (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 in all directions from each point of entrance of site through the intersection with the first arterial roadway to the next intersecting collector or higher functional classification road. 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 in all directions from each point of entrance of the site to the first intersection of a major collector or higher functional classification road as defined by the Harford County Transportation Plan.

- 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.

Developments which generate 1,500 or more trips per day may be required to expand the study area. 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.

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 two signalized intersections and eight 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 22 and Thomas Run Road / Schucks Road
2. Maryland 715 and Old Philadelphia Road
3. Business US 1 and Henderson Road
4. Maryland 147 and Connolly Road
5. Maryland 23 and Grafton Shop Road
6. Tollgate Road and MacPhail Road
7. US 1 and Reckord Road
8. Maryland 7 and Brass Mill Road
9. Maryland 155 and Earlton Road
10. Maryland 22 and Aldino-Stepney Road

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

To address operational issues and impacts associated with BRAC, the Maryland State Highway Administration completed construction on the US 40 and MD 715 interchange project in 2013. This project added 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 has added capacity to MD 715 at the Old Philadelphia intersection and was completed in 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

2010 - 2013

Intersection	2010 Peak Hour Level Of Service / Delay In Seconds	2011 Peak Hour Level Of Service / Delay In Seconds	2012 Peak Hour Level Of Service / Delay In Seconds	2013 Peak Hour Level Of Service / Delay In Seconds
Maryland Route 7 and U.S. Route 40	C / 29.2		D / 52.6	
Maryland Route 924 and Moores Mill Road	B / 19.8		C / 22.0	
Maryland Route 24 and Trimble Road	D / 40.6		C / 27.4	
Maryland Route 152 and U.S. Route 1	D / 48.6		D / 45.3	
Maryland Route 24 and U.S. Route 1	E / 59.6		D / 43.4	
Maryland Route 152 and Trimble Road	C / 23.6		D / 36.2	
Maryland Route 24 and Jarrettsville Road	C / 23.8		C / 22.9	
Maryland Route 152 and Hanson Road	C / 27.9		C / 27.2	
Maryland Route 152 and Singer Road	D / 37.6		C / 31.6	
Maryland 22 and Thomas Run Road/Schucks Road	D / 41.8		D / 48.8	
Maryland 715 and Old Philadelphia Road*	C / 23.3		F / 279.0	
Maryland Route 22 and Brier Hill Road		C / 24.7		B / 11.4
Maryland Route 22 and Maryland Route 136		C / 31.9		C / 28.9
Maryland Route 24 and Bel Air South Parkway		D / 40.7		D /39.2
Maryland Route 24 and Forest Valley Drive		B / 18.0		C / 24.0
Maryland Route 24 and Plumtree Road		C / 26.4		C /32.3
Maryland Route 24 and Ring Factory Road		C / 28.5		D / 41.7
MD 924 @ MD 24 North Bound Ramp		C / 28.6		D / 53.0
Tollgate Rd @ MD 24 Southbound Ramp		C / 20.1		C /20.1
Maryland Route 543 and U.S. Route 1		D / 35.7		C / 24.5
Maryland Route 543 and Maryland Route 22		C / 34.1		D / 38.5
Maryland Route 924 and Abingdon Road **		D / 47.1		B / 18.4

* SHA improvement at this intersection

** Improvement funded by developer at this intersection

Source: Harford County Dept. of Planning and Zoning, May 2014

Table 22

Unsignalized Intersection Capacity Analyses

Level Of Service And Delay In Seconds

2010- 2013

Intersection	2010 Peak Hour Level Of Service / Delay In Seconds	2011 Peak Hour Level Of Service / Delay In Seconds	2012 Peak Hour Level Of Service / Delay In Seconds	2013 Peak Hour Level Of Service / Delay In Seconds
Maryland Route 24 @ I-95 Northbound On/Off Ramp&	Under Construction		D / 45.1	
Maryland Route 24 @ I-95 Southbound Ramp*	Under Construction		B / 18.2	
Business US 1 and Henderson Road	E / 40.0		E / 35.6	
Maryland 147 and Connolly Road	E / 49.6		F / 165.5	
Maryland 23 and Grafton Shop Road	F / 55.6		F / 138.9	
Tollgate Road and MacPhail Road**	E / 36.0		E / 35.2	
US 1 and Reckord Road	F / 56.2		F / 128.9	
Maryland 7 and Brass Mill Road	F / 221.4		F / 83.1	
Woodsdale Road and Box Hill Corporate Center Drive	D / 27.8		D / 29.3	
Maryland Route 7 and Maryland Route 159		B / 12.4		C / 16.9
Maryland Route 7 and Joppa Farm Road		E / 38.5		D / 27.2
Maryland Route 159 and Spesutia Road		C / 15.2		B / 12.4
Maryland 155 and Earlton Road		E / 40.0		D / 33.6
Maryland 543 and Henderson Road ***		F / 56.8		D / 28.8
Tollgate Road and Ring Factory Road		A / 7.8		A / 7.5
Maryland 22 and Aldino-Stepney Road ***		F / 56.9		E / 48.6
Macphail and Ring Factory Road		B / 12.3		B / 14.8

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

Source: Harford County Dept. of Planning and Zoning, May 2014.

Table 23

48 Hour Average Weekday Daily Traffic Volume And Locations

2010 - 2013

Road Name	Location	2010 Average Daily Count	2011 Average Daily Count	2012 Average Daily Count	2013 Average Daily Count
Beards Hill Road	North of Churchville Road	13,503		12,538	
Carrs Mill Road	North of Maryland Route 152	9,434		9,783	
Chapel Road	North of Interstate 95	2,510		2,588	
Jarrettsville Road	East of Maryland Route 24	6,962		6,273	
Jarrettsville Road	West of Maryland Route 24	4,886		5,259	
Maryland Route 7	West of Maryland Route 24	7,341		7,230	
Moores Mill Road	West of Coconut Court	9,624		9,726	
Moores Mill Road	West of Old English Court	7,944		7,781	
Pleasantville Road	North of Putnam Road	3,521		3,547	
U.S. Route 1	North of Maryland Route 152	26,650		26,552	
U.S. Route 40	North of Maryland Route 24	22,212		22,802	
Abingdon Road	North of Interstate 95		13,217		12,394
Hanson Road	South of Silverbell Road		2,714		2,493
Hanson Road	West of Maryland Route 24		10,425		10,693
Maryland Route 24	North of Singer Road		39,821		39,900
Maryland Route 152	South of U.S. Route 1		24,701		23,330
Maryland Route 543	South of Maryland Route 22		17,670		17,572
Plumtree Road	East of Maryland Route 24		7,229		7,651
Ring Factory Road	West of Maryland Route 24		3,603		4,469
Ring Factory Road	East of Maryland Route 24		8,700		9,288
Singer Road	West of Maryland Route 24		10,576		11,541
Singer Road	East of Maryland Route 24		9,837		10,429
Trimble Road	East of Maryland Route 24		7,152		6,975
Trimble Road	West of Maryland Route 24		8,917		9,971
Vale Road	West of U.S. Route 1 Overpass		8,555		8,718

Source: Harford County Dept. of Planning and Zoning, May 2014.

Table 24

List of Approved County Capital Projects

Funded for Construction in FY 14

Bridge and Road Scours	**Repairs**
Bridge Rehabilitation	**Repairs**
Carrs Mill Road Bridge #216	**Replacement**
Green Road Bridge #122	**Replacement**
Harford Creamery Road Bridge #104	**Replacement**
Jericho Road Bridge #3	**Improve / Maintain**
Robinson Mill Road Bridge #154	**Replacement**
Md 152 / Oakmont Road / Port Lane	**Intersection Improvements**
Abingdon Road Bridge #169 over CSX	**Replacement**
Watervale Road Bridge #63	**Replacement**
Hess Road Bridge #82	**Replacement**
Macton Road Bridge #145	**Replacement**
Moores Mill Road – MD 924 to Southampton MS	**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 14

MD 7, Philadelphia Road Bridge over James Run	**Replacement**
MD 22, Aberdeen Thruway at Old Post Road	**Interchange Improvements**
US 40 / MD 715 Interchange	**Construction Completed**
US 40 at MD 7 / MD 159 in Aberdeen	**Construction Underway**
US 40: Pulaski Highway; MD 132 to Plater Street	**Resurfacing Under Construction**
Conowingo Road – south of Conowingo Dam	**Repair Slide Completed**
MD 155 – Superior Street – Bayview Drive/Graceview Drive – provide a left turn lane from MD 155 into School on Graceview Drive	**Construction Completed**
MD 543, Riverside Parkway; I 95 Off Ramp to north of MD 7.	**Geometric Improvements**
MD 543: Riverside Parkway; Gilmer Way to Church Creek Road - Bicycle/Pedestrian Route	**Construction Completed**
Edgewood Road; Willoughby Beach Road to MARC Train Station	**Pedestrian safety / drainage improvements**
MD 23, Norrisville Road; Magness Farm Stream Restoration	**Wetlands replacement**
Bynum Run at St. Andrew's Way Stream Restoration	**Mitigation**

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 many factors. The changes must be in line with each other, the recommendations from the previous report, and the adopted plans of the jurisdiction and the adjoining jurisdictions. They must also be consistent with State and local jurisdiction plans that are responsible for financing or constructing public improvements that are necessary for the local plan implementation. 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 of consistency is part of the plan approval process. As recommended in previous reports, the County continues to direct the majority of new development and redevelopment (97% in 2013) 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 2013, 591 acres were preserved countywide, bringing the total protected land in the County to 47,753 acres. Of the acreage protected in 2013, all 591 acres were located in the County's Priority Preservation Area, bringing the total amount of protected land in the PPA to just over 34,600 acres.

The subdivisions noted in Appendix A are consistent with the intent and policies of the 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 must be reviewed by the County's Development Advisory Committee. Any of these plans, 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 2013 was consistent with the plans of adjoining jurisdictions.

The Department continues to track plans grandfathered through SB 236. In 2013, the Department had nine preliminary plans comprised of 146 lots submitted for processing. All are still proceeding through the review and approval process. There were also three grandfathered subdivisions yielding six lots that were approved in 2013, but none of these subdivisions have been recorded as of April 1, 2014.

During 2013, the County coordinated with the City of Aberdeen on the development of regulations for Transit Oriented Development – Form Based Code Amendments. The County also participated in work sessions for the development of the Town of Bel Air's Bicycle and Pedestrian Plan, and coordination was ongoing with Bel Air for the next phase of the MD Route 22 Study. This second phase will encompass a portion of the MD Route

22 corridor between MD Route 543 and Tollgate Road. It will also include a portion of US Business 1 through the Town of Bel Air.

Harford County also worked with the Health Department and Healthy Harford to continue implementation of the Obesity Task Force's final report which was presented to the County Council in October 2012. The report included recommendations on the role of the built environment, and the appointment of a Healthy Community Planning Board (Bill 13-28AA). The Board was appointed by the County Council in early 2014.

A Sustainable Community application was submitted for the Edgewood area, and the designation was confirmed in 2014. In addition, an application requesting an additional ten year designation for the Edgewood Enterprise Zone was prepared for submittal.

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 the Land Use Article.

During 2013, no changes were made to the County's 2012 Master Plan and Land Use Element Plan. However, the County did adopt its Bicycle and Pedestrian Master Plan (Bill 13-13) and its Land Preservation, Parks, and Recreation Plan (Bill 13-15).

In 2013, implementation of the Harford County Phase II Watershed Implementation Plan (WIP) for the Chesapeake Bay TMDL (Total Maximum Daily Load) progressed. This Plan was completed in 2012 by a Core Team of County, municipal, State and Federal staff with expertise in the various nutrient source sectors (agriculture, septic systems, urban stormwater, and wastewater treatment plants) to meet the nutrient reduction goals that were assigned to Harford County for the Chesapeake Bay TMDL. Strategies to meet these goals by 2025 were presented in the Plan, with two-year milestones identified to track progress. In 2013, a progress report for the 2012-2013 milestones was submitted to the State, along with the development of 2014-2015 milestones. During 2013, legislation passed by the Harford County Council established a stormwater fee to assist the County in addressing the urban stormwater sector.

In addition, Planning and Zoning staff worked with the Emergency Operations Center to develop a new Hazard Mitigation Plan. They also continued to work with FEMA on the development of state-of-the art floodplain mapping. The County's MALPF recertification was also completed in 2013.

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 its designated growth area.

In February 2013, Harford County Planning and Zoning; Public Works; Inspections, Licenses, and Permits; and Information Systems Departments began a scheduled 18 month implementation of Tyler Technologies' ***EnerGov Permitting and Land Management*** software suite.

The ***EnerGov*** solution will modernize the County's permitting, subdivision review, and plan management systems. Disparate departments, agencies, and citizens will access a central "location-based" system utilizing the County's extensive Geographic Information System.

Code enforcement, permit inspections, and construction management systems will all utilize the ***EnerGov*** solution to streamline and automate many time-consuming processes from intake, citizen requests, and pre-applications to fee calculations and review, task and field inspection routing. This will create a completely paperless and fully automated regulatory environment.

The County anticipates this centralized system will significantly improve the life cycle of land management throughout the County and will provide enhanced services to citizens and to construction and service professionals. The ***EnerGov*** project is proceeding on schedule and is expected to be fully implemented by Fall 2014.

ORDINANCES AND/OR REGULATIONS THAT IMPLEMENT THE STATE PLANNING VISIONS

Harford County has updated several of its element plans (Master Plan and Land Use Element Plan; Natural Resources and Water Resources Element Plan; Historic Preservation Element Plan; Transportation Element Plan; and the Land Preservation, Parks, and Recreation Element Plan) to include the planning visions contained in the Land Use Article. The plans also include strategies that address these visions. The County's Chesapeake Bay Critical Area Program and its Bicycle and Pedestrian Master Plan are also consistent with the visions.

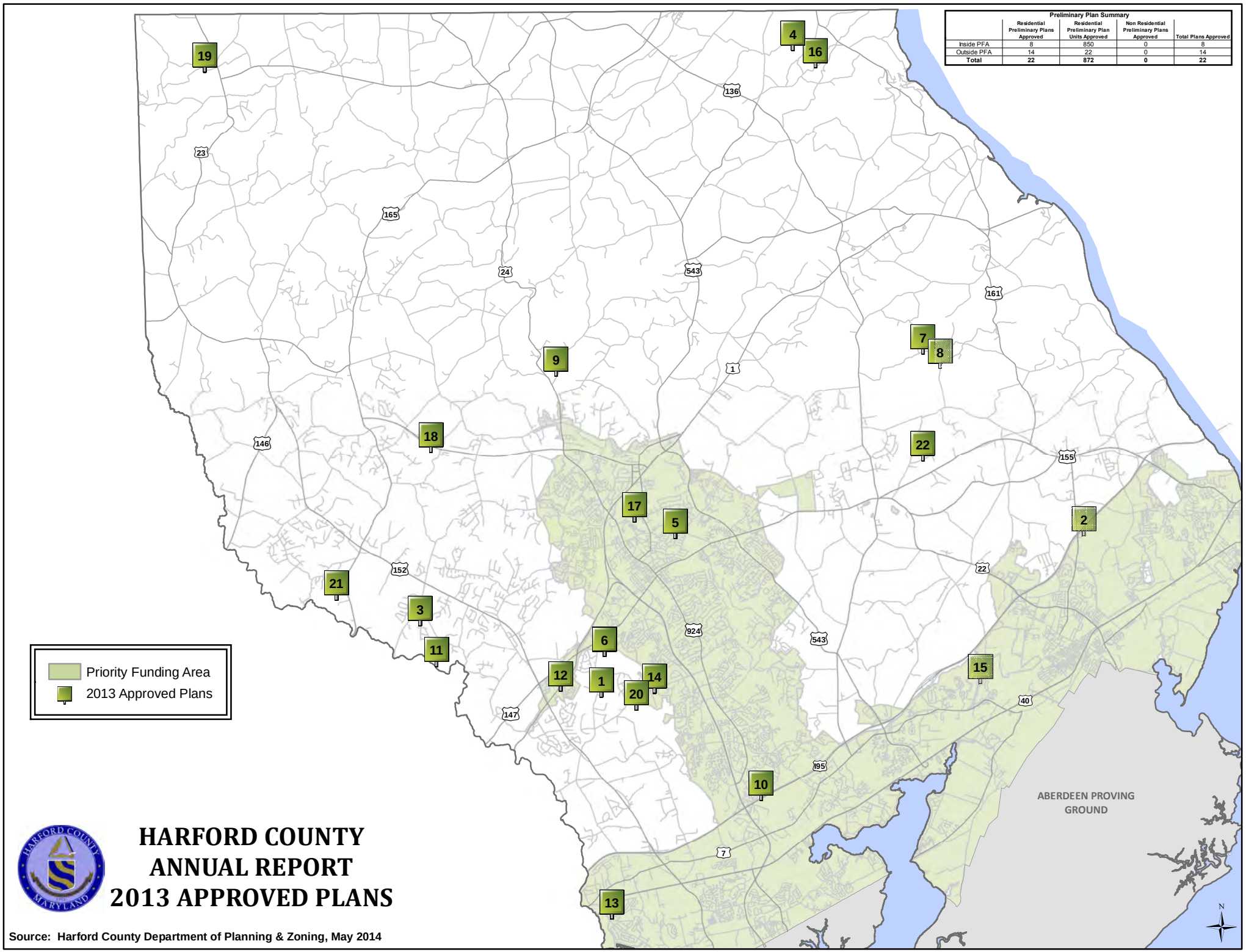
APPENDIX A

Appendix A

HARFORD COUNTY
APPROVED
SUBDIVISION PLANS: 2013

MAP #	PLAN NAME	ACREAGE	LOT ACREAGE	TOTAL UNITS	SF UNITS	TH UNITS	APT UNITS	CONDO UNITS	TYPE OF USE	PFA	ZONING
1	ADAMS, LDS OF RONALD AND BEVERLY	14.3	14.3	1	1	0	0	0	RESIDENTIAL	NO	AG
2	BOWMAN, LDS OF DONALD & SANDRA	7.0	7.0	3	3	0	0	0	RESIENTIAL	NO	AG
3	BREIDENBAUGH, LD OF - LOT 2	2.1	2.1	1	1	0	0	0	RESIDENTIAL	NO	AG
4	CICONE, LAND OF - LOTS 2 & 3	20.5	20.5	2	2	0	0	0	RESIDENTIAL	NO	AG
5	CONNOR, LANDS OF LOT 1	3.2	3.2	1	1	0	0	0	RESIDENTIAL	YES	R1
6	COUNTRY LIFE FARM, INC. - LOT 4	3.0	3.0	1	1	0	0	0	RESIDENTIAL	NO	AG
7	DUKE FARM, LLC-LOT 1	5.0	5.0	1	1	0	0	0	RESIDENTIAL	NO	AG
8	DUKE FARM, LLC-LOT 2	4.8	4.8	1	1	0	0	0	RESIDENTIAL	NO	AG
9	DURHAM, LANDS OF MARTHA M.	28.2	2.0	1	1	0	0	0	RESIDENTIAL	NO	AG
10	ENCLAVE AT BOX HILL	38.9	38.9	389	0	0	389	0	RESIDENTIAL	YES	CI
11	FALLSBROOKE MANOR - LOTS 23 & 24	19.5	19.5	1	1	0	0	0	RESIDENTIAL	NO	AG
12	HAMILTON RESERVE	28.5	28.5	61	61	0	0	0	RESIDENTIAL	YES	R2COS/B3
13	JOPPA CROSSING	4.5	4.5	59	0	0	0	59	RESIDENTIAL	YES	B3
14	MAGNESS EXEMPTION	124.7	124.7	302	127	175	0	0	RESIDENTIAL	YES	R1
15	MILLER PROPERTY, ALLAN & KAREN	3.3	3.3	3	3	0	0	0	RESIDENTIAL	YES	R1
16	NOVAK & HUGHES, LDS OF	24.9	24.9	2	2	0	0	0	RESIDENTIAL	NO	AG
17	PALM DEVELOPMENT SERVICES, LLC-LOTS 1 & 2	0.7	0.7	2	2	0	0	0	RESIDENTIAL	YES	R2
18	PLEASANT VALLEY MILLS AND FARMS - LOT 2	55.6	4.1	1	1	0	0	0	RESIDENTIAL	NO	AG
19	SCOTT, LANDS OF LOTS 1 & 2	6.1	6.1	2	2	0	0	0	RESIDENTIAL	NO	AG
20	SOMERSET HILL	21.9	21.9	33	33	0	0	0	RESIDENTIAL	YES	R1/R2COS
21	THOMAS, LANDS OF	28.1	28.1	3	3	0	0	0	RESIDENTIAL	NO	AG
22	WOOLSEY HEIGHTS-LOTS 6 & 7	25.9	25.9	2	2	0	0	0	RESIDENTIAL	NO	AG
		470	**393**	**872**	**249**	**175**	**389**	**59**			

Source: Harford County Dept. of Planning and Zoning, May 2014.


Preliminary Plan Summary
Residential Preliminary Plans Approved
Residential Preliminary Plan Units Approved
Non Residential Preliminary Plans Approved
Total Plans Approved
Inside PFA 8 850 0 8
Outside PFA 14 22 0 14
Total 22 872 0 22
Priority Funding Area
2013 Approved Plans
ABERDEEN PROVING GROUND
HARFORD COUNTY
ANNUAL REPORT
2013 APPROVED PLANS
Source: Harford County Department of Planning & Zoning, May 2014

APPENDIX B

Appendix B

DEVELOPMENT REGULATIONS – LIST OF AMENDMENTS

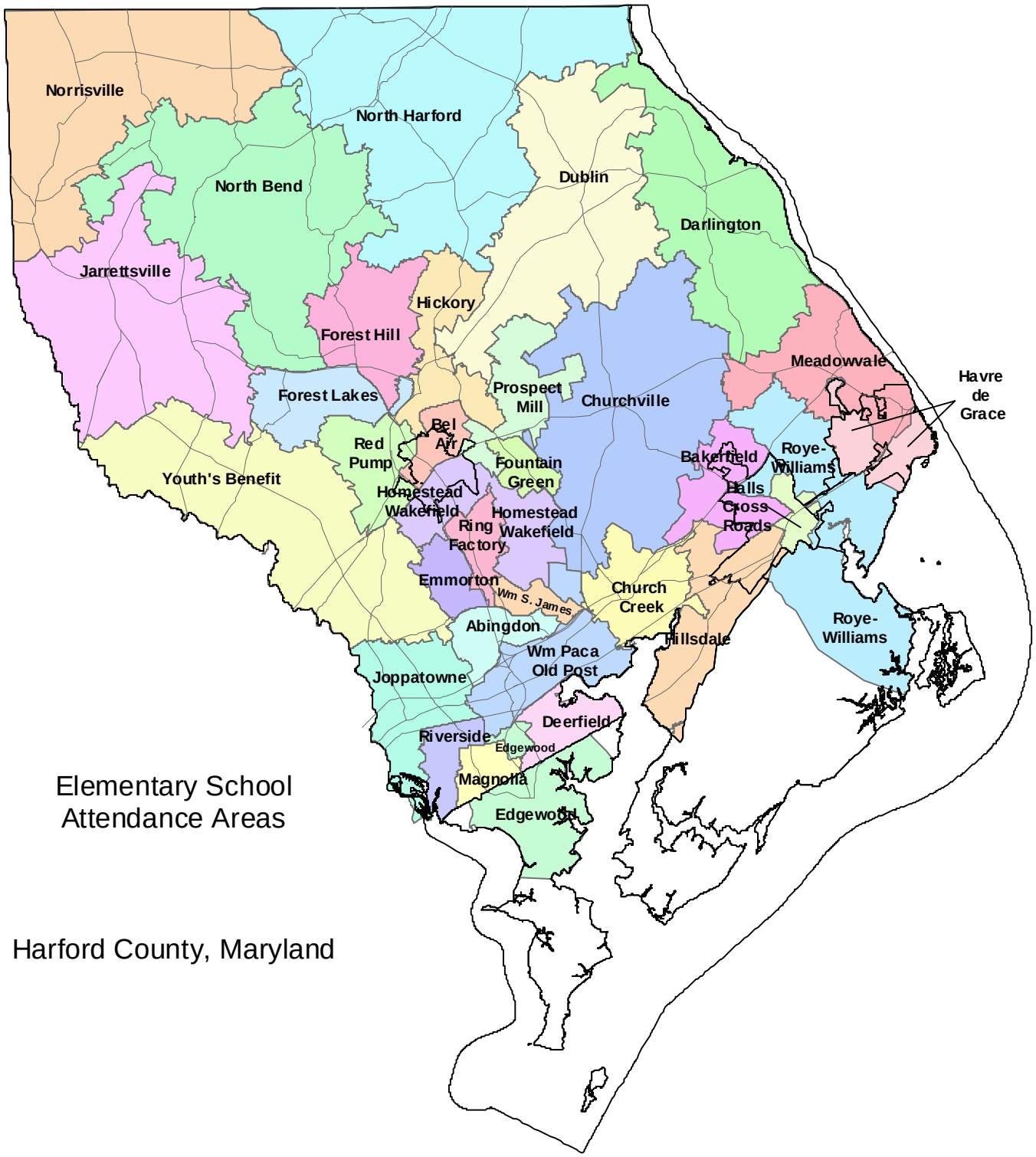
Zoning Code

Effective	Bill	Description
2/11/13	12-48AA	Animal shelter definitions and standards.
5/6/13	13-04AA	Airports and general aviation standards; allow in the AG as SE.
7/22/13	13-17	Signs – Electronic message boards in the AG, RR, R1, R2, R3, and R4.
1/21/14	13-35	CCRC- Revision to height limitation of garden and mid-rise apartments in the R1, R2, R3, and R4.
1/21/14	13-36	Reduce development adjustment to 25% in the NRD for residential zoning.
2/18/14	13-50	Remove the maximum length and waiver requirements for a panhandle lot.
3/18/14	13-51	Allowed increase in size and height of accessory structures in AG for properties 5 or more acres.
3/18/14	13-52	Revise buffer yard requirements in AG.

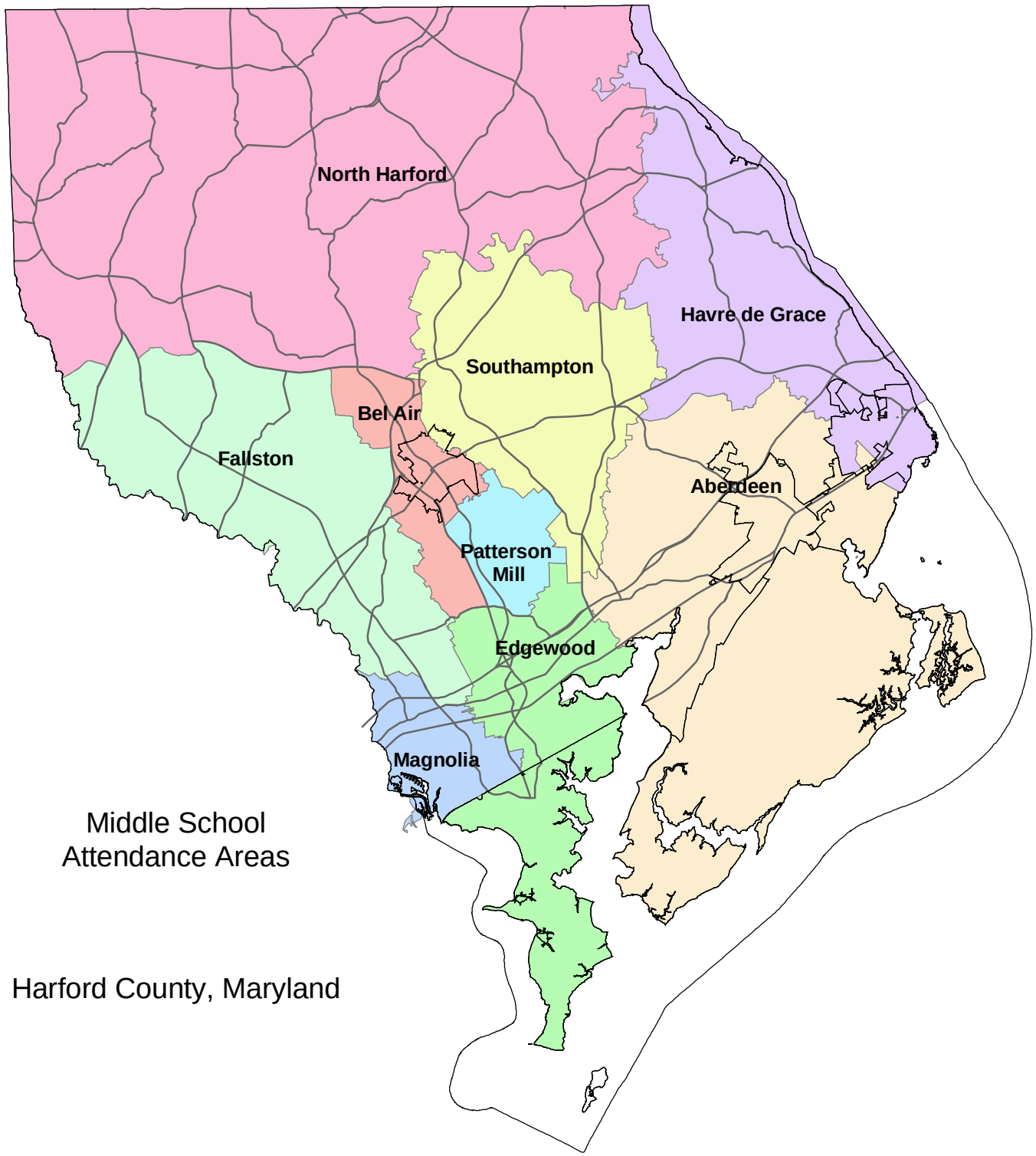
Subdivision Regulations

Effective	Bill	Description
1/21/14	13-37AA	Revise tenure of preliminary plans to 3 years and timeframe for recording plats to 1 year.

APPENDIX C



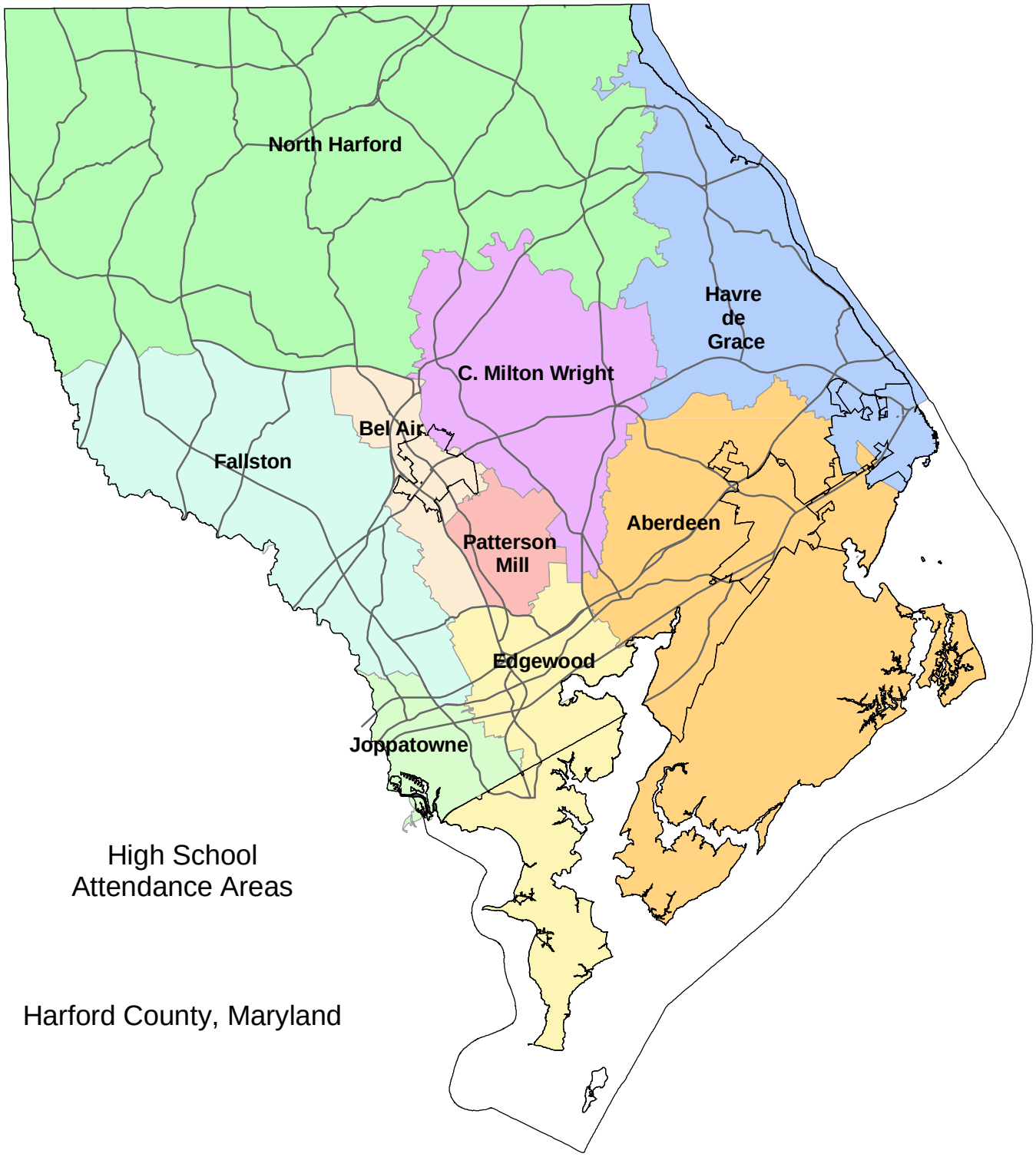
SOURCE: Harford County Public Schools, March 2011.



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 represent 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