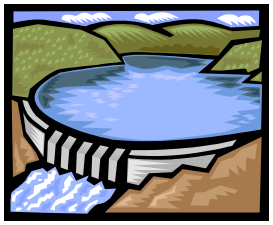
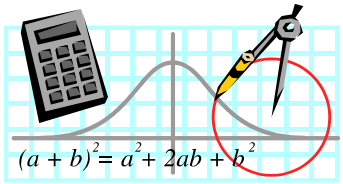
# 2003 Annual Growth Report

**AMENDED JANUARY, 2005**






## Harford County Government
## Department of Planning and Zoning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**AMENDMENT TO 2003 ANNUAL GROWTH REPORT**
**Effective January, 2005**

## Background:

In accordance with the Harford County Adequate Public Facilities provisions (Section 267-104) of the Harford County Code, and Bill No. 04-08 As Amended, testing for adequate school capacities shall occur on June 1 and December 1 of each year. Therefore, amendments to the 2003 Annual Growth Report are required and include updated enrollment figures and projections based on September 30, 2004 enrollment figures. Based on the adequacy standards outlined below, the Annual Growth Report is amended to reflect current enrollments and projections as of September 30, 2004.

## Adequacy Standards:

The adopted adequacy standards for the Public School system are 105% of the rated capacity within 3 years for both elementary and secondary schools. Included with this amendment to the 2003 Annual Growth Report are Tables 6, 7, and 8, the utilization charts for the elementary, middle, and high schools. These tables identify current enrollment figures as of September 30, 2004, and include projections through the 2009/2010 school year. Preliminary plans for new developments cannot be approved in elementary or secondary school districts where full-time enrollment currently exceeds or is projected to exceed 105 percent of the capacity within three years.

## Elementary Schools:

Twenty-six of thirty-two elementary schools in Harford County meet adequacy standards. The schools listed below in Table 1do not meet the adequacy standards established. Major subdivision plans within these attendance areas will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available beginning January 1, 2005.

| School | Year | Actual / Projected Students | Utilization Rate |
|---|---|---|---|
| Deerfield | 2007/2008 | 761 | 130% |
| Emmorton | 2007/2008 | 645 | 112% |
| Forest Lakes | 2007/2008 | 672 | 112% |
| Fountain Green | 2007/2008 | 657 | 110% |
| Prospect Mill | 2007/2008 | 941 | 121% |
| Youth's Benefit | 2007/2008 | 1,045 | 110% |

**Secondary Schools:**

Ten of the seventeen middle and high schools in Harford County meet adequacy standards. The schools listed below in Table 2 do not meet the adequacy standards established. Major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available beginning January 1, 2005.

| School | Year | Actual / Projected Students | Utilization Rate |
|---|---|---|---|
| Bel Air Middle School | 2004/2005 | 1,402 | 107% |
| Fallston Middle School | 2004/2005 | 1,224 | 124% |
| Southampton Middle School | 2007/2008 | 1,684 | 110% |
| Aberdeen High School | 2007/2008 | 1,528 | 112% |
| Bel Air High School | 2006/2007 | 1,744 | 123% |
| C. Milton Wright High School | 2004/2005 | 1,914 | 115% |
| Fallston High School | 2006/2007 | 1,677 | 110% |

The current enrollment for Edgewood High School during the 2004/2005 school year is 1,358 for a utilization rate of 98 percent. The enrollment is not projected to exceed 105% within 3 years; therefore, major subdivision plans within this attendance area will be removed from the waiting list for review and preliminary plan approval beginning January 1, 2005.

# The 2003 Annual Growth Report

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## EXECUTIVE SUMMARY

In accordance with the Harford County Adequate Public Facilities provisions (Section 267-104) 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, Water and Sewerage System, and Road Intersections.

**Harford County Public Schools:**

The adopted adequacy standards for the Public School system are:

Elementary Schools - 115 % of rated capacity within 5 years.*
Secondary Schools - 115 % of rated capacity within 5 years. *

Under current law, preliminary plans for new developments cannot be approved in elementary school districts where the full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. Thirty-one of thirty-two schools meet adequacy standards. The projected enrollment for the Deerfield Elementary School during the 2006/2007 school year is 714 for a utilization rate of 122 percent. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available.

Under current law, preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. Fifteen of the seventeen middle and high schools in Harford County meet adequacy standards. The projected enrollment for the Fallston Middle School during the 2005/2006 school year is 1,265 for a utilization rate of 128 percent. County planning funds have been made available for FY 2004 for a new middle/high school. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available.

Under current law, preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. The projected enrollment for Bel Air High School during the 2006/2007 school year is 1,770 for a utilization rate of 124 percent. County planning funds have been made available for FY 2004 for a new middle/high school. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available for the year.

*Note: The adequacy standards have been changed by Bill 04-08, as amended, which will not become effective until after the effective date of this annual growth report. Bill 04-08 as amended reduces the capacity percentage level from 115% to 105% and reduces the number of years from 5 years to 3 years. This bill also contains a provision that automatically returns the percentage to 115% within 3 years without further action of the County Council.

**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.

Harford County's sewerage system's average flow totals 14.5 Million Gallons per Day (MGD) while the design capacity is 20.96 MGD for a total Average Reserve of 6.46 MGD (as of December 2003). The County water system's current average daily usage is 11.6 MGD with a peak day consumption of 13.9 MGD. The Water Treatment capacity is 21.3 MGD, leaving a total reserve of 7.4 MGD (as of December 2003). These figures refer only to a county-wide total capacity figure.

The determination of water or sewerage capacity in a specific area of the County can be found in the "Water and Sewer 2003 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 with the minimum required pressures for fire flows. Water booster stations and/or transmission lines, service mains, storage tanks, and water treatment plants are evaluated. Areas within the Harford County Development Envelope that exist at the highest elevations of the water pressure zones are evaluated for adequacy on a case-by-case analysis. The anticipated growth within the County is accommodated through a combination of developer funded projects and the County Capital Improvement Program.

The sewer system is evaluated to accommodate expected peak flows through collectors, interceptors, pump stations, force mains, and wastewater treatment plants. Should a problem exist in a collector sewer, it is the developer(s) responsibility to resolve the inadequacy. Inadequacies at major pumping stations and wastewater treatment plants are resolved by programmed capital projects or by projects cooperatively supported by a group of developers.

**Harford County Road System:**

To determine existing service levels at intersections and the impact of additional traffic, a Traffic Impact Analysis (TIA) must be submitted for developments that generate 249 trips per day at the time of preliminary/site plan review. Proposed development located within the Route 40 Overlay District 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, 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 lowers the Level of Service (LOS) below the adopted standards. These improvements must bring the level of service to the adopted standard. If the TIA determines that the existing level of service does not meet the adopted standards, the subdivider must mitigate the impact of the trips generated from the development site. The study area is defined for areas within and outside the development envelope as:

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

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

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

1. Interstate 95 and Maryland 24 Ramp
2. Maryland 24 and Forest Valley Drive
3. Maryland 152 and U.S. 1
4. Maryland 24 and Maryland 924 (Tollgate Rd)

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

## INTRODUCTION

The Annual Growth Report is an on-going analysis of growth trends, facility capacity and service performance. This report was 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;
- 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 2000 Census. This data is adjusted to reflect a number of variables including building permits, average household size and household vacancy rates. The 5 and 10 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 remaining jurisdictions in the Baltimore Region are based on an interpolation of the Baltimore Metropolitan Council's Round 6A 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. Currently there are 8,390 planned units remaining as of December 31, 2003.

The 2000 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, by subdivision name and/or address of each building permit for each year. This provides the needed information on growth trends by facility service area.

# Table 1
# Harford County - Baltimore Region
# Residential Permit Activity
# 1999 - 2003

| Jurisdiction | 1999 | 2000 | 2001 | 2002 | 2003 | Total | Percentage of Baltimore Region |
|---|---|---|---|---|---|---|---|
| Harford County | 1,816 | 1,595 | 1,911 | 1,914 | 2,088 | 9,324 | 15.5% |
| Anne Arundel County | 3,682 | 2,898 | 2,763 | 2,499 | 2,998 | 14,840 | 26.7% |
| Baltimore City | 200 | 212 | 216 | 368 | 817 | 1,813 | 2.0% |
| Baltimore County | 3,309 | 2,916 | 3,618 | 2,949 | 2,817 | 15,609 | 28.1% |
| Carroll County | 1,108 | 1,258 | 1,364 | 1,546 | 988 | 6,264 | 10.6% |
| Howard County | 2,365 | 2,240 | 1,509 | 1,637 | 1,453 | 9,204 | 17.1% |
| **Total** | **12,480** | **11,119** | **11,381** | **10,913** | **11,161** | **57,054** | **100%** |

Source: Baltimore Metropolital Council, March, 2004.

# Table 2
# Harford County - Baltimore Region
# Population and Household Projections
# 2003 - 2013

| Jurisdiction | 2003 Population | 2003 Households | 2008 Population | 2008 Households | 2013 Population | 2013 Households |
|---|---|---|---|---|---|---|
| Harford County | 228,620 | 84,875 | 246,637 | 92,670 | 262,766 | 100,365 |
| Anne Arundel County | 502,793 | 185,830 | 520,700 | 196,901 | 534,210 | 206,500 |
| Baltimore City | 647,042 | 256,944 | 649,520 | 261,369 | 652,610 | 268,304 |
| Baltimore County | 768,967 | 310,076 | 789,580 | 323,667 | 806,580 | 332,201 |
| Carroll County | 161,189 | 56,409 | 173,450 | 61,576 | 178,430 | 64,461 |
| Howard County | 263,177 | 95,987 | 285,640 | 105,200 | 302,380 | 113,950 |
| **Total** | **2,571,787** | **990,121** | **2,665,527** | **1,041,383** | **2,736,976** | **1,085,781** |

Source: Baltimore Metropolitan Council, March, 2004

# Table 3
# Harford County - Baltimore Region
# Employment Projections
# 2003 - 2013

| Jurisdiction | 2003 Employment | 2008 Employment | 2013 Employment |
|---|---|---|---|
| Harford County | 101,460 | 108,700 | 113,740 |
| Anne Arundel County | 309,060 | 328,200 | 344,900 |
| Baltimore City | 464,620 | 474,320 | 485,000 |
| Baltimore County | 462,180 | 480,960 | 493,500 |
| Carroll County | 71,420 | 75,480 | 78,180 |
| Howard County | 172,000 | 192,000 | 209,000 |
| **Total** | **1,580,740** | **1,659,660** | **1,724,320** |

Source: Baltimore Metropolitan Council, March, 2004.

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

| Permit Type | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 29 | 356,896 | 24 | 315,797 | 15 | 345,549 | 17 | 394,900 | 4 | 195,886 |
| Industrial | 9 | 490,502 | 7 | 330,504 | 0 | 0 | 12 | 228,300 | 2 | 604,853 |
| Institutional | 15 | 202,482 | 13 | 213,426 | 7 | 78,480 | 17 | 241,300 | 5 | 114,987 |
| Utiities | 2 | 0 | 1 | 20,000 | 1 | 240 | 5 | 4,600 | 1 | 18,758 |
| Other | 0 | 0 | 0 | 0 | 4 | 87,929 | 1 | 12,000 | 1 | 14,400 |
| **Total** | **55** | **1,049,880** | **45** | **879,727** | **27** | **512,198** | **52** | **881,100** | **13** | **948,884** |

Source: Baltimore Metropolitan Council, March, 2004.

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

| Permit Type | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 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 | 57 | NA | 47 | NA | 65 | NA | 44 | NA | 29 | NA |
| Industrial | 14 | NA | 6 | NA | 3 | NA | 7 | NA | 2 | NA |
| Institutional | 17 | NA | 20 | NA | 30 | NA | 24 | NA | 13 | NA |
| Utiities | 2 | NA | 7 | NA | 8 | NA | 10 | NA | 1 | NA |
| **Total** | **90** | **NA** | **80** | **NA** | **106** | **NA** | **85** | **NA** | **45** | **NA** |

**NA: Data Not Available**

Source: Baltimore Metropolitan Council, March, 2004.

# PUBLIC SCHOOLS

## Introduction

To assess current and future adequacy of the public school facilities, the capacities of the existing schools, the utilization of the schools, 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 5 year projected school enrollments (Tables 6, 7, and 8). Modified school enrollment projections are included and factor in planned units remaining and projected units from vacant land zoned for residential purposes (Tables 9 and 10). In addition, development information such as building permits issued by dwelling type (Tables 11, 12, and 13) and population and households (Tables 14, 15, and 16) are included in this report. School maps and pupil yield factors by dwelling unit type are included in the Appendix.

## 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 the current school districts. The information in this report is based on factual data. Based on the Adequate Public Facilities provision of the County Code, the level of service standard for Public Schools are:

Elementary - 115% of rated capacity within 5 years
Secondary - 115% of rated capacity within 5 years

*Elementary Schools*

Under current law, preliminary Plans for new developments cannot be approved in elementary school districts where the full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. Thirty-one of thirty-two schools meet adequacy standards. The projected enrollment for the Deerfield Elementary School during the 2006/2007 school year is 714 for a utilization rate of 122 percent. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available.

*Middle Schools*

Under current law, preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. Fifteen of the seventeen middle and high schools in Harford County meet adequacy standards. The projected enrollment for the Fallston Middle School during the 2005/2006 school year is 1,265 for a utilization rate of 128 percent. County planning funds have been made available for FY 2004 for a new middle/high school. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available.

*High Schools*

Under current law, preliminary plans for new developments cannot be approved in secondary school districts where full-time enrollment currently exceeds or is projected to exceed 115 percent of the capacity within five years. The projected enrollment for Bel Air High School during the 2006/2007 school year is 1,770 for a utilization rate of 124 percent. County planning funds have been made available for FY 2004 for a new middle/high school. Beginning July 1, 2004, major subdivision plans within this attendance area will not be approved but will continue to be reviewed and placed on a waiting list until capacity is available.

**Impact of Bill 04-08 As Amended on Adequacy Standards**

The adequacy standards have been changed by Bill 04-08, as amended, which will not become effective until after the effective date of this annual growth report. Bill 04-08 as amended reduces the capacity percentage level from 115% to 105% and reduces the number of years from 5 years to 3 years. This bill also contains a provision that automatically returns the percentage to 115% within 3 years without further action of the County Council.

**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 the first grade in 1985 and the number in the second grade the following year. The ratio, therefore, represents the number of first graders who advance to the 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 are by using pupil yield factors for new developments.

Pupil yield factors are determined by researching the number of students from a particular community/subdivision that are actually attending their home school. By dividing the number of students accounted for by the number of dwelling units, a pupil generation factor is determined. It is important to note that different pupil yield factors are generated depending on housing type (single family, townhouse, apartment etc.) and school level (elementary, middle and high). Surveys of sample subdivisions to assess an accurate yield factor are completed on a regular basis. (See Appendix)

**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 unit was based on the existing zoning. Once 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. It is important to note that there is a significant amount of "age targeted" and "age restricted" developments in the Aberdeen and Havre de Grace areas. Pupil yield factors were adjusted in these school districts based on typical age-targeted developments in the State.

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 systems definition of "unadjusted" enrollment projections. The results are reflected in Tables 9 and 10.

# Table 6 (effective 1/05)
## Harford County Elementary Schools
### Utilization Chart
### 2004

| Elementary School | APF Capacity | State-Rated Capacity | Actual | | Projected | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *2004 - 2005 | | *2005 - 2006 | | *2006 - 2007 | | *2007 - 2008 | | *2008 - 2009 | | *2009 - 2010 | |
| | | | ENROLL | % UTIL.* | ENROLL | % UTIL.* | ENROLL | % UTIL.* | ENROLL | % UTIL.* | ENROLL | % UTIL.* | ENROLL | % UTIL.* |
| Abingdon | 900 | 883 | 756 | 84% | 771 | 86% | 820 | 91% | 810 | 90% | 827 | 92% | 818 | 91% |
| Bakerfield | 500 | 489 | 490 | 98% | 480 | 96% | 473 | 95% | 467 | 93% | 461 | 92% | 474 | 95% |
| Bel Air | 550 | 536 | 472 | 86% | 466 | 85% | 500 | 91% | 502 | 91% | 500 | 91% | 503 | 91% |
| Church Creek | 865 | 846 | 735 | 85% | 737 | 85% | 741 | 86% | 741 | 86% | 723 | 84% | 749 | 87% |
| Churchville | 425 | 419 | 357 | 84% | 346 | 81% | 364 | 86% | 346 | 81% | 344 | 81% | 348 | 82% |
| Darlington | 185 | 182 | 135 | 73% | 137 | 74% | 135 | 73% | 135 | 73% | 142 | 77% | 139 | 75% |
| Deerfield | 585 | 576 | 670 | **115%** | 714 | **122%** | 754 | **129%** | 761 | **130%** | 747 | 128% | 756 | 129% |
| Dublin | 325 | 317 | 249 | 77% | 237 | 73% | 226 | 70% | 223 | 69% | 225 | 69% | 230 | 71% |
| Edgewood | 585 | 571 | 461 | 79% | 441 | 75% | 431 | 74% | 431 | 74% | 445 | 76% | 450 | 77% |
| Emmorton | 575 | 566 | 573 | 100% | 578 | 101% | 590 | 103% | 645 | **112%** | 640 | 111% | 641 | 111% |
| Forest Hill | 635 | 626 | 558 | 88% | 568 | 89% | 584 | 92% | 618 | 97% | 636 | 100% | 632 | 100% |
| Forest Lakes | 600 | 586 | 627 | **105%** | 629 | **105%** | 628 | **105%** | 672 | **112%** | 675 | 113% | 683 | 114% |
| Fountain Green | 600 | 591 | 571 | 95% | 599 | 100% | 594 | 99% | 657 | **110%** | 659 | 110% | 654 | 109% |
| G. Lisby at Hillsdale | 475 | 464 | 358 | 75% | 331 | 70% | 315 | 66% | 315 | 66% | 321 | 68% | 313 | 66% |
| Hall's Cross Rds | 570 | 554 | 334 | 59% | 333 | 58% | 317 | 56% | 322 | 56% | 316 | 55% | 314 | 55% |
| Havre de Grace | 625 | 616 | 442 | 71% | 429 | 69% | 419 | 67% | 413 | 66% | 418 | 67% | 413 | 66% |
| Hickory | 700 | 686 | 618 | 88% | 626 | 89% | 645 | 92% | 644 | 92% | 651 | 93% | 644 | 92% |
| Homestead/Wakefield | 1,020 | 1,003 | 880 | 86% | 879 | 86% | 928 | 91% | 925 | 91% | 913 | 90% | 914 | 90% |
| Jarrettsville | 570 | 564 | 421 | 74% | 410 | 72% | 404 | 71% | 436 | 76% | 423 | 74% | 429 | 75% |
| Joppatowne | 570 | 556 | 548 | 96% | 539 | 95% | 538 | 94% | 526 | 92% | 534 | 94% | 530 | 93% |
| Magnolia | 550 | 506 | 556 | 101% | 528 | 96% | 517 | 94% | 501 | 91% | 489 | 89% | 492 | 89% |
| Meadowvale | 625 | 608 | 555 | 89% | 552 | 88% | 558 | 89% | 561 | 90% | 556 | 89% | 561 | 90% |
| Norrisville | 275 | 272 | 171 | 62% | 168 | 61% | 190 | 69% | 189 | 69% | 183 | 67% | 188 | 68% |
| North Bend | 575 | 569 | 436 | 76% | 408 | 71% | 426 | 74% | 407 | 71% | 400 | 70% | 402 | 70% |
| North Harford | 535 | 514 | 514 | 96% | 518 | 97% | 508 | 95% | 487 | 91% | 482 | 90% | 491 | 92% |
| Prospect Mill | 775 | 758 | 822 | **106%** | 862 | **111%** | 882 | **114%** | 941 | **121%** | 945 | 122% | 946 | 122% |
| Ring Factory | 600 | 591 | 511 | 85% | 495 | 83% | 488 | 81% | 531 | 89% | 517 | 86% | 531 | 89% |
| Riverside | 600 | 586 | 541 | 90% | 538 | 90% | 542 | 90% | 523 | 87% | 520 | 87% | 518 | 86% |
| Roye-Williams | 700 | 671 | 623 | 89% | 603 | 86% | 598 | 85% | 606 | 87% | 606 | 87% | 600 | 86% |
| Wm Paca / Old Post Rd | 1,110 | 1,088 | 970 | 87% | 952 | 86% | 956 | 86% | 947 | 85% | 941 | 85% | 948 | 85% |
| Wm. S. James | 575 | 564 | 467 | 81% | 442 | 77% | 465 | 81% | 455 | 79% | 459 | 80% | 454 | 79% |
| Youth's Benefit | 950 | 938 | 933 | 98% | 932 | 98% | 950 | 100% | 1045 | **110%** | 1054 | 111% | 1050 | 111% |
| TOTAL | 19,730 | 19,296 | 17,354 | 88% | 17,248 | 87% | 17,486 | 89% | 17,782 | 90% | 17,752 | 90% | 17,815 | 90% |

*Note: Utilization Percentages are based on APF Capacity.

Source: Harford County Public Schools and Dept. of Planning and Zoning, October, 2004.

## Table 7 (effective 1/05)

## Harford County Middle Schools

### Utilization Chart

### 2004

| Middle School | APF Capacity | State-Rated Capacity | Actual *2004 - 2005 ENROLL | Actual *2004 - 2005 %UTIL* | Projected *2005 - 2006 ENROLL | Projected *2005 - 2006 %UTIL* | Projected *2006 - 2007 ENROLL | Projected *2006 - 2007 %UTIL* | Projected *2007 - 2008 ENROLL | Projected *2007 - 2008 %UTIL* | Projected *2008 - 2009 ENROLL | Projected *2008 - 2009 %UTIL* | Projected *2009 - 2010 ENROLL | Projected *2009 - 2010 %UTIL* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aberdeen | 1,656 | 1,656 | 1302 | 79% | 1282 | 77% | 1290 | 78% | 1261 | 76% | 1221 | 74% | 1191 | 72% |
| Bel Air | 1,316 | 1,316 | 1402 | **107%** | 1389 | **106%** | 1342 | 102% | 1340 | 102% | 1343 | 102% | 1324 | 101% |
| Edgewood | 1,338 | 1,338 | 1277 | 95% | 1268 | 95% | 1245 | 93% | 1285 | 96% | 1293 | 97% | 1329 | 99% |
| Fallston | 988 | 988 | 1224 | **124%** | 1161 | **118%** | 1119 | **113%** | 1094 | **111%** | 1090 | 110% | 1113 | 113% |
| Havre de Grace | 785 | 785 | 605 | 77% | 593 | 76% | 593 | 76% | 586 | 75% | 564 | 72% | 568 | 72% |
| Magnolia | 1,030 | 1,030 | 913 | 89% | 952 | 92% | 972 | 94% | 990 | 96% | 945 | 92% | 950 | 92% |
| North Harford | 1,241 | 1,241 | 1118 | 90% | 1119 | 90% | 1100 | 89% | 1124 | 91% | 1115 | 90% | 1073 | 86% |
| Southampton * | 1,530 | 1,530 | 1529 | 100% | 1575 | 103% | 1634 | **107%** | 1684 | **110%** | 1747 | 114% | 1780 | 116% |
| Alternative Education | | | 3 | | | | | | | | | | | |
| **Total** | 9,884 | 9,884 | 9,373 | 95% | 9,339 | 94% | 9,295 | 94% | 9,364 | 95% | 9,318 | 94% | 9,328 | 94% |

*Note: Reflects Capacity increase for capital improvements.

Source: Harford County Public Schools and Dept. of Planning and Zoning, October, 2004.

## Table 8 (effective 1/05)

## Harford County High Schools

### Utilization Chart

### 2004

| High School | Capacity | State-Rated Capacity | Actual | | Projected | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *2004 - 2005 | | *2005 - 2006 | | *2006 - 2007 | | *2007 - 2008 | | *2008 - 2009 | | *2009 - 2010 | |
| | | | ENROLL | %UTIL* | ENROLL | %UTIL* | ENROLL | %UTIL* | ENROLL | %UTIL* | ENROLL | %UTIL* | ENROLL | %UTIL* |
| **Aberdeen | 1,360 | 1,360 | 1358 | 100% | 1485 | **109%** | 1502 | **110%** | 1528 | **112%** | 1506 | 111% | 1458 | 107% |
| Bel Air | 1,423 | 1,423 | 1638 | **115%** | 1704 | **120%** | 1744 | **123%** | 1713 | **120%** | 1696 | 119% | 1668 | 117% |
| C. Milton Wright | 1,666 | 1,666 | 1914 | **115%** | 1849 | **111%** | 1830 | **110%** | 1816 | **109%** | 1745 | 105% | 1844 | 111% |
| Edgewood | 1,379 | 1,379 | 1358 | 98% | 1390 | 101% | 1385 | 100% | 1367 | 99% | 1354 | 98% | 1331 | 97% |
| Fallston | 1,529 | 1,529 | 1635 | **107%** | 1658 | **108%** | 1677 | **110%** | 1627 | **106%** | 1605 | 105% | 1545 | 101% |
| Harford Technical | 965 | 965 | 1069 | 111% | 1040 | 108% | 1031 | 107% | 1049 | 109% | 1035 | 107% | 1034 | 107% |
| Havre de Grace | 849 | 849 | 705 | 83% | 711 | 84% | 698 | 82% | 690 | 81% | 678 | 80% | 657 | 77% |
| Joppatowne | 1,115 | 1,115 | 1109 | 99% | 1137 | 102% | 1114 | 100% | 1152 | 103% | 1181 | 106% | 1159 | 104% |
| ***North Harford | 1,600 | 1,600 | 1449 | 91% | 1437 | 90% | 1441 | 90% | 1370 | 86% | 1345 | 84% | 1329 | 83% |
| Alternative Education | | | 14 | | 30 | | 30 | | 30 | | 30 | | 30 | |
| **Total** | 11,886 | 11,886 | 12,249 | 103% | 12,441 | 105% | 12,452 | 105% | 12,342 | 104% | 12,175 | 102% | 12,055 | 101% |

*Note: Utilization Percentages are based on APF Capacity.

**Capacity has been adjusted to reflect construction of the new Aberdeen High School/Magnet School addition.

***Note: Reflects Capacity increase for capital improvements.

Source: Harford County Public Schools and Dept. of Planning and Zoning, October, 2004.

## Table 9

### Elementary School Enrollment Projections

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|
| **School District** | | | | | | | | | |
| ABINGDON | 836 | 827 | 826 | 796 | 790 | 791 | 792 | 794 | 805 |
| modified | 836 | 827 | 834 | 811 | 813 | 822 | 829 | 837 | 855 |
| BAKERSFIELD | 510 | 507 | 499 | 493 | 500 | 492 | 494 | 495 | 498 |
| modified | 510 | 507 | 510 | 515 | 533 | 536 | 554 | 572 | 592 |
| BEL AIR | 525 | 534 | 520 | 501 | 508 | 511 | 519 | 518 | 523 |
| modified | 525 | 534 | 527 | 516 | 530 | 541 | 557 | 563 | 576 |
| CHURCH CREEK | 733 | 714 | 692 | 678 | 678 | 661 | 665 | 668 | 678 |
| modified | 733 | 714 | 730 | 755 | 798 | 822 | 872 | 923 | 987 |
| CHURCHVILLE | 398 | 398 | 401 | 399 | 399 | 400 | 401 | 401 | 405 |
| modified | 398 | 398 | 403 | 404 | 406 | 410 | 412 | 414 | 420 |
| DARLINGTON | 141 | 133 | 132 | 128 | 128 | 132 | 128 | 128 | 129 |
| modified | 141 | 133 | 135 | 134 | 137 | 144 | 143 | 146 | 150 |
| DEERFIELD | 687 | 703 | 706 | 734 | 730 | 717 | 721 | 726 | 737 |
| modified | 687 | 703 | 713 | 748 | 751 | 744 | 754 | 765 | 783 |
| DUBLIN | 260 | 255 | 239 | 228 | 227 | 228 | 231 | 231 | 232 |
| modified | 260 | 255 | 243 | 235 | 238 | 243 | 249 | 253 | 258 |
| EDGEWOOD | 458 | 475 | 475 | 484 | 484 | 484 | 484 | 486 | 489 |
| modified | 458 | 475 | 476 | 485 | 486 | 487 | 487 | 490 | 493 |
| EMMORTON | 580 | 612 | 597 | 595 | 606 | 599 | 592 | 592 | 598 |
| modified | 580 | 612 | 627 | 656 | 701 | 728 | 753 | 788 | 832 |
| FOREST HILL | 580 | 611 | 604 | 605 | 584 | 586 | 586 | 586 | 592 |
| modified | 580 | 611 | 612 | 622 | 609 | 620 | 625 | 631 | 643 |
| FOREST LAKES | 675 | 677 | 669 | 669 | 661 | 664 | 665 | 667 | 673 |
| modified | 675 | 677 | 679 | 689 | 691 | 704 | 713 | 723 | 738 |
| FOUNTAIN GREEN | 647 | 644 | 676 | 662 | 682 | 671 | 659 | 660 | 667 |
| modified | 647 | 644 | 678 | 667 | 689 | 681 | 669 | 671 | 679 |
| HALLS CROSS ROADS | 359 | 363 | 363 | 361 | 364 | 357 | 362 | 363 | 366 |
| modified | 359 | 363 | 363 | 361 | 364 | 357 | 362 | 363 | 366 |
| HAVRE DE GRACE | 487 | 499 | 493 | 501 | 508 | 522 | 519 | 520 | 524 |
| modified | 487 | 499 | 514 | 544 | 575 | 614 | 633 | 658 | 688 |
| HICKORY | 693 | 698 | 721 | 700 | 711 | 725 | 714 | 715 | 728 |
| modified | 693 | 698 | 734 | 725 | 750 | 778 | 778 | 791 | 817 |
| HILLSDALE | 383 | 363 | 338 | 323 | 328 | 332 | 330 | 331 | 333 |
| modified | 383 | 363 | 342 | 331 | 341 | 349 | 351 | 356 | 362 |
| HOMESTEAD/WAKEFIEL | 992 | 970 | 958 | 932 | 933 | 909 | 918 | 919 | 932 |
| modified | 992 | 970 | 984 | 984 | 1012 | 1014 | 1050 | 1078 | 1120 |
| JARRETTSVILLE | 470 | 459 | 444 | 435 | 434 | 418 | 423 | 423 | 426 |
| modified | 470 | 459 | 452 | 450 | 457 | 448 | 460 | 468 | 479 |
| JOPPATOWNE | 564 | 563 | 548 | 547 | 542 | 555 | 561 | 563 | 570 |
| modified | 564 | 563 | 561 | 573 | 581 | 609 | 629 | 644 | 665 |
| MAGNOLIA | 566 | 552 | 527 | 521 | 516 | 525 | 524 | 526 | 531 |
| modified | 566 | 552 | 538 | 543 | 550 | 571 | 582 | 596 | 614 |
| MEADOWVALE | 602 | 611 | 589 | 587 | 578 | 568 | 565 | 567 | 571 |
| modified | 602 | 611 | 591 | 590 | 583 | 574 | 573 | 576 | 582 |
| NORRISVILLE | 194 | 193 | 190 | 199 | 199 | 190 | 191 | 192 | 194 |
| modified | 194 | 193 | 195 | 209 | 214 | 209 | 215 | 221 | 228 |
| NORTH BEND | 481 | 471 | 461 | 454 | 445 | 445 | 453 | 452 | 452 |
| modified | 481 | 471 | 472 | 476 | 478 | 490 | 510 | 520 | 531 |
| NORTH HARFORD | 539 | 542 | 542 | 528 | 509 | 504 | 506 | 508 | 513 |
| modified | 539 | 542 | 553 | 549 | 541 | 547 | 559 | 572 | 588 |
| PROSPECT MILL | 879 | 888 | 899 | 902 | 901 | 890 | 889 | 889 | 898 |
| modified | 879 | 888 | 918 | 940 | 959 | 967 | 983 | 1000 | 1027 |
| RING FACTORY | 567 | 548 | 517 | 502 | 499 | 479 | 490 | 489 | 490 |
| modified | 567 | 548 | 520 | 508 | 508 | 491 | 504 | 504 | 507 |
| RIVERSIDE | 564 | 565 | 552 | 560 | 554 | 547 | 552 | 554 | 559 |
| modified | 564 | 565 | 560 | 576 | 578 | 580 | 592 | 602 | 615 |
| ROYE-WILLIAMS | 563 | 557 | 535 | 533 | 539 | 541 | 544 | 547 | 552 |
| modified | 563 | 557 | 575 | 615 | 668 | 720 | 777 | 838 | 906 |
| W.S. JAMES | 526 | 545 | 535 | 525 | 524 | 531 | 526 | 525 | 529 |
| modified | 526 | 545 | 538 | 531 | 533 | 543 | 541 | 542 | 549 |
| WM PACA/OLD POST RD | 1033 | 1057 | 1036 | 1027 | 1023 | 1013 | 1022 | 1027 | 1041 |
| modified | 1033 | 1057 | 1139 | 1178 | 1232 | 1295 | 1353 | 1400 | 1479 |
| YOUTHS BENEFIT | 985 | 969 | 942 | 943 | 942 | 926 | 914 | 916 | 924 |
| modified | 985 | 969 | 965 | 950 | 962 | 973 | 969 | 967 | 980 |



Source: Harford County Dept. of Planning and Zoning, May, 2004.

# Table 10

## Secondary School Enrollment Projections

### Middle School

| School District | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|
| Aberdeen | 1293 | 1239 | 1171 | 1124 | 1069 | 1046 | 1026 | 1034 | 989 |
| modified | 1293 | 1239 | 1210 | 1202 | 1185 | 1202 | 1223 | 1279 | 1271 |
| Bel Air | 1461 | 1386 | 1362 | 1301 | 1295 | 1284 | 1248 | 1254 | 1193 |
| modified | 1461 | 1386 | 1394 | 1364 | 1391 | 1414 | 1405 | 1445 | 1407 |
| Edgewood | 1346 | 1313 | 1335 | 1319 | 1375 | 1402 | 1416 | 1390 | 1341 |
| modified | 1346 | 1313 | 1377 | 1405 | 1510 | 1586 | 1644 | 1658 | 1644 |
| Fallston | 1228 | 1253 | 1265 | 1263 | 1261 | 1250 | 1279 | 1260 | 1226 |
| modified | 1228 | 1253 | 1281 | 1294 | 1308 | 1313 | 1357 | 1351 | 1329 |
| Havre de Grace | 650 | 621 | 615 | 612 | 625 | 595 | 618 | 611 | 610 |
| modified | 650 | 621 | 625 | 633 | 657 | 637 | 672 | 675 | 685 |
| Magnolia | 903 | 906 | 921 | 928 | 943 | 891 | 901 | 875 | 872 |
| modified | 903 | 906 | 931 | 948 | 973 | 930 | 949 | 931 | 937 |
| North Harford | 1200 | 1149 | 1158 | 1167 | 1197 | 1194 | 1161 | 1115 | 1063 |
| modified | 1200 | 1149 | 1177 | 1206 | 1256 | 1273 | 1256 | 1225 | 1187 |
| Southampton | 1541 | 1505 | 1494 | 1505 | 1514 | 1593 | 1601 | 1620 | 1585 |
| modified | 1541 | 1505 | 1514 | 1546 | 1575 | 1679 | 1702 | 1738 | 1716 |

### High School

| School District | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|
| Aberdeen | 1250 | 1250 | 1314 | 1306 | 1260 | 1219 | 1148 | 1084 | 1073 |
| modified | 1250 | 1250 | 1383 | 1446 | 1471 | 1504 | 1500 | 1504 | 1583 |
| Bel Air | 1649 | 1674 | 1740 | 1770 | 1706 | 1675 | 1636 | 1547 | 1582 |
| modified | 1649 | 1674 | 1795 | 1882 | 1872 | 1898 | 1910 | 1863 | 1964 |
| C. Milton Wright | 1789 | 1801 | 1738 | 1731 | 1699 | 1628 | 1687 | 1673 | 1702 |
| modified | 1789 | 1801 | 1772 | 1800 | 1803 | 1764 | 1858 | 1872 | 1934 |
| Edgewood | 1327 | 1424 | 1458 | 1507 | 1457 | 1451 | 1462 | 1483 | 1530 |
| modified | 1327 | 1424 | 1530 | 1657 | 1681 | 1758 | 1847 | 1954 | 2099 |
| Fallston | 1672 | 1646 | 1641 | 1650 | 1630 | 1651 | 1632 | 1652 | 1652 |
| modified | 1672 | 1646 | 1669 | 1708 | 1716 | 1768 | 1773 | 1820 | 1846 |
| Havre de Grace | 687 | 712 | 733 | 731 | 722 | 726 | 694 | 702 | 698 |
| modified | 687 | 712 | 763 | 791 | 813 | 851 | 844 | 885 | 913 |
| Joppatowne | 1051 | 1056 | 1117 | 1113 | 1097 | 1135 | 1095 | 1127 | 1105 |
| modified | 1051 | 1056 | 1132 | 1143 | 1142 | 1197 | 1169 | 1218 | 1208 |
| North Harford | 1425 | 1464 | 1468 | 1484 | 1449 | 1424 | 1419 | 1448 | 1466 |
| modified | 1425 | 1464 | 1493 | 1535 | 1525 | 1525 | 1544 | 1600 | 1645 |

Source: Harford County Dept. of Planning and Zoning, May, 2004

## Table 11

## Harford County Residential Building Permit Activity

## by Elementary School District

### 1999 - 2003

| SCHOOL | 1999 BUILDING PERMITS ISSUED BY DWELLING TYPE | | | | | 2000 BUILDING PERMITS ISSUED BY DWELLING TYPE | | | | | 2001 BUILDING PERMITS ISSUED BY DWELLING TYPE | | | | | 2002 BUILDING PERMITS ISSUED BY DWELLING TYPE | | | | | 2003 BUILDING PERMITS ISSUED BY DWELLING TYPE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL |
| Abingdon | 8 | 131 | 0 | 0 | 139 | 2 | 132 | 0 | 0 | 134 | 1 | 170 | 0 | 1 | 172 | 5 | 141 | 0 | 6 | 152 | 2 | 81 | 0 | 0 | 83 |
| Bakersfield | 41 | 0 | 0 | 2 | 43 | 40 | 15 | 0 | 0 | 55 | 6 | 5 | 0 | 1 | 12 | 18 | 7 | 0 | 0 | 25 | 33 | 0 | 0 | 0 | 33 |
| Bel Air | 40 | 8 | 0 | 0 | 48 | 31 | 0 | 0 | 0 | 31 | 9 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 4 | 2 | 96 | 0 | 102 |
| Church Creek | 23 | 12 | 18 | 0 | 53 | 16 | 21 | 17 | 0 | 54 | 16 | 16 | 18 | 0 | 50 | 30 | 48 | 19 | 0 | 97 | 51 | 146 | 38 | 1 | 236 |
| Churchville | 25 | 0 | 0 | 1 | 26 | 31 | 0 | 0 | 0 | 31 | 60 | 0 | 0 | 0 | 60 | 54 | 0 | 0 | 1 | 55 | 18 | 0 | 0 | 2 | 20 |
| Darlington | 12 | 0 | 0 | 2 | 14 | 6 | 0 | 0 | 2 | 8 | 13 | 0 | 0 | 0 | 13 | 8 | 0 | 0 | 1 | 9 | 18 | 0 | 0 | 4 | 22 |
| Deerfield | 35 | 0 | 0 | 0 | 35 | 66 | 8 | 0 | 0 | 74 | 102 | 16 | 0 | 0 | 118 | 191 | 16 | 0 | 0 | 207 | 121 | 0 | 0 | 0 | 121 |
| Dublin | 13 | 0 | 0 | 1 | 14 | 5 | 0 | 0 | 1 | 6 | 15 | 0 | 0 | 2 | 17 | 20 | 0 | 0 | 3 | 23 | 17 | 0 | 0 | 3 | 20 |
| Edgewood | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Emmorton | 17 | 19 | 0 | 0 | 36 | 25 | 24 | 0 | 0 | 49 | 77 | 55 | 1 | 0 | 133 | 80 | 78 | 0 | 0 | 158 | 55 | 72 | 0 | 0 | 127 |
| Forest Hill | 146 | 90 | 36 | 1 | 273 | 132 | 95 | 36 | 1 | 264 | 122 | 125 | 36 | 1 | 284 | 78 | 69 | 48 | 1 | 196 | 30 | 31 | 0 | 0 | 61 |
| Forest Lakes | 29 | 7 | 24 | 0 | 60 | 49 | 0 | 0 | 1 | 50 | 87 | 0 | 0 | 0 | 87 | 47 | 0 | 0 | 0 | 47 | 70 | 0 | 0 | 0 | 70 |
| Fountain Green | 39 | 0 | 0 | 0 | 39 | 59 | 0 | 0 | 0 | 59 | 107 | 0 | 0 | 0 | 107 | 96 | 0 | 0 | 1 | 97 | 13 | 0 | 0 | 0 | 13 |
| G. Lisby at Hillsdale | 18 | 0 | 0 | 0 | 18 | 20 | 0 | 0 | 0 | 20 | 12 | 0 | 0 | 1 | 13 | 6 | 30 | 0 | 0 | 36 | 13 | 0 | 0 | 1 | 14 |
| Hall's Cross Roads | 2 | 0 | 0 | 0 | 2 | 16 | 0 | 0 | 0 | 16 | 9 | 0 | 0 | 0 | 9 | 1 | 10 | 0 | 0 | 11 | 12 | 0 | 0 | 0 | 12 |
| Havre de Grace | 4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 7 | 2 | 0 | 0 | 9 | 0 | 8 | 0 | 0 | 8 | 0 | 12 | 0 | 0 | 12 |
| Hickory | 117 | 79 | 6 | 1 | 203 | 83 | 54 | 0 | 1 | 138 | 54 | 38 | 0 | 1 | 93 | 18 | 0 | 0 | 1 | 19 | 13 | 60 | 120 | 1 | 194 |
| Homestead/Wakefield | 85 | 12 | 0 | 0 | 97 | 76 | 6 | 0 | 0 | 82 | 61 | 5 | 0 | 0 | 66 | 68 | 3 | 0 | 0 | 71 | 89 | 4 | 0 | 0 | 93 |
| Jarrettsville | 39 | 0 | 0 | 0 | 39 | 22 | 0 | 0 | 1 | 23 | 28 | 0 | 0 | 1 | 29 | 32 | 0 | 0 | 0 | 32 | 55 | 0 | 0 | 0 | 55 |
| Joppatowne | 28 | 38 | 0 | 0 | 66 | 57 | 25 | 0 | 0 | 82 | 120 | 14 | 0 | 0 | 134 | 101 | 52 | 0 | 0 | 153 | 80 | 8 | 0 | 0 | 88 |
| Magnolia | 16 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 30 | 0 | 0 | 0 | 30 |
| Meadowvale | 38 | 33 | 24 | 0 | 95 | 12 | 6 | 0 | 0 | 18 | 12 | 0 | 0 | 1 | 13 | 46 | 8 | 0 | 0 | 54 | 80 | 12 | 0 | 0 | 92 |
| Norrisville | 17 | 0 | 0 | 1 | 18 | 15 | 0 | 0 | 3 | 18 | 18 | 0 | 0 | 2 | 20 | 10 | 0 | 0 | 2 | 12 | 23 | 0 | 0 | 3 | 26 |
| North Bend | 36 | 0 | 0 | 2 | 38 | 36 | 0 | 0 | 4 | 40 | 35 | 0 | 0 | 3 | 38 | 30 | 0 | 0 | 2 | 32 | 46 | 0 | 0 | 1 | 47 |
| North Harford | 37 | 0 | 0 | 9 | 46 | 31 | 0 | 0 | 5 | 36 | 40 | 0 | 0 | 9 | 49 | 45 | 0 | 0 | 2 | 47 | 47 | 0 | 0 | 3 | 50 |
| Prospect Mill | 29 | 0 | 51 | 1 | 81 | 34 | 0 | 69 | 2 | 105 | 84 | 13 | 117 | 0 | 214 | 107 | 17 | 38 | 1 | 163 | 59 | 77 | 0 | 0 | 136 |
| Ring Factory | 16 | 79 | 0 | 0 | 95 | 10 | 7 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 3 |
| Riverside | 17 | 20 | 0 | 0 | 37 | 3 | 21 | 0 | 0 | 24 | 5 | 0 | 0 | 1 | 6 | 8 | 0 | 0 | 0 | 8 | 11 | 0 | 0 | 1 | 12 |
| Roye-Williams | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 10 | 0 | 0 | 0 | 10 | 33 | 0 | 0 | 0 | 33 |
| Wm. Paca/Old Post Rd | 60 | 20 | 0 | 1 | 81 | 77 | 16 | 0 | 0 | 93 | 86 | 17 | 0 | 0 | 103 | 83 | 32 | 1 | 0 | 116 | 116 | 0 | 0 | 0 | 116 |
| Wm. S. James | 26 | 0 | 0 | 0 | 26 | 16 | 0 | 0 | 0 | 16 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Youth's Benefit | 71 | 0 | 0 | 1 | 72 | 47 | 0 | 0 | 0 | 47 | 44 | 0 | 0 | 0 | 44 | 67 | 0 | 0 | 0 | 67 | 164 | 0 | 0 | 1 | 165 |
| TOTAL | 1,086 | 548 | 159 | 23 | 1,816 | 1,021 | 430 | 122 | 22 | 1,595 | 1,238 | 476 | 172 | 25 | 1,911 | 1,268 | 519 | 106 | 21 | 1,914 | 1,308 | 505 | 254 | 21 | 2,088 |

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May, 2004.

KEY:

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

# Table 12

## Harford County Residential Building Permit Activity

## by Middle School District

## 1999 - 2003

| | 1999 | | | | | 2000 | | | | | 2001 | | | | | 2002 | | | | | 2003 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL |
| Aberdeen | 88 | 20 | 18 | 2 | 128 | 102 | 36 | 17 | 1 | 156 | 63 | 21 | 18 | 3 | 105 | 74 | 95 | 19 | 1 | 189 | 136 | 141 | 38 | 2 | 317 |
| Bel Air | 154 | 123 | 0 | 0 | 277 | 142 | 37 | 0 | 0 | 179 | 151 | 60 | 1 | 0 | 212 | 155 | 81 | 0 | 0 | 236 | 154 | 91 | 96 | 0 | 341 |
| Edgewood | 133 | 151 | 0 | 1 | 285 | 160 | 156 | 0 | 0 | 316 | 194 | 203 | 0 | 0 | 397 | 279 | 189 | 1 | 6 | 475 | 257 | 86 | 0 | 1 | 344 |
| Fallston | 108 | 7 | 30 | 1 | 146 | 103 | 0 | 0 | 2 | 105 | 134 | 0 | 0 | 0 | 134 | 116 | 0 | 0 | 0 | 116 | 224 | 0 | 0 | 1 | 225 |
| Havre de Grace | 54 | 33 | 24 | 2 | 113 | 22 | 6 | 0 | 2 | 30 | 32 | 2 | 0 | 1 | 35 | 53 | 16 | 0 | 1 | 70 | 98 | 24 | 0 | 4 | 126 |
| Magnolia | 61 | 58 | 0 | 0 | 119 | 60 | 46 | 0 | 0 | 106 | 125 | 14 | 0 | 1 | 140 | 113 | 52 | 0 | 0 | 165 | 119 | 8 | 0 | 1 | 128 |
| North Harford | 142 | 0 | 0 | 12 | 154 | 109 | 0 | 0 | 14 | 123 | 139 | 0 | 0 | 17 | 156 | 138 | 0 | 0 | 9 | 147 | 197 | 0 | 0 | 10 | 207 |
| Southampton | 334 | 169 | 87 | 4 | 594 | 322 | 149 | 106 | 3 | 580 | 401 | 176 | 153 | 2 | 732 | 340 | 86 | 86 | 4 | 516 | 123 | 155 | 120 | 2 | 400 |
| TOTAL | 1,074 | 561 | 159 | 22 | 1,816 | 1,020 | 430 | 123 | 22 | 1,595 | 1,239 | 476 | 172 | 24 | 1,911 | 1,268 | 519 | 106 | 21 | 1,914 | 1,308 | 505 | 254 | 21 | 2,088 |

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May, 2004.

KEY:

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

## Table 13

## Harford County Residential Building Permit Activity

## by High School District

## 1999 - 2003

| | 1999 | | | | | 2000 | | | | | 2001 | | | | | 2002 | | | | | 2003 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL | SF | TH | APT/ CONDO | MH | TOTAL |
| Aberdeen | 88 | 20 | 18 | 2 | 128 | 102 | 36 | 17 | 1 | 156 | 63 | 21 | 18 | 3 | 105 | 74 | 95 | 19 | 1 | 189 | 136 | 141 | 38 | 2 | 317 |
| Bel Air | 154 | 123 | 0 | 0 | 277 | 142 | 37 | 0 | 0 | 179 | 151 | 60 | 1 | 0 | 212 | 155 | 81 | 0 | 0 | 236 | 154 | 91 | 96 | 0 | 341 |
| C.M. Wright | 299 | 79 | 51 | 4 | 433 | 315 | 54 | 70 | 3 | 442 | 374 | 51 | 117 | 2 | 544 | 303 | 17 | 38 | 4 | 362 | 123 | 124 | 120 | 2 | 369 |
| Edgewood | 133 | 151 | 0 | 1 | 285 | 160 | 156 | 0 | 1 | 317 | 194 | 203 | 0 | 0 | 397 | 279 | 189 | 1 | 6 | 475 | 257 | 86 | 0 | 1 | 344 |
| Fallston | 143 | 97 | 66 | 1 | 307 | 109 | 95 | 36 | 2 | 242 | 161 | 125 | 36 | 0 | 322 | 153 | 69 | 48 | 0 | 270 | 224 | 31 | 0 | 1 | 256 |
| Havre de Grace | 55 | 33 | 24 | 2 | 114 | 22 | 6 | 0 | 2 | 30 | 32 | 2 | 0 | 1 | 35 | 53 | 16 | 0 | 1 | 70 | 98 | 24 | 0 | 4 | 126 |
| Joppatowne | 61 | 58 | 0 | 0 | 119 | 60 | 46 | 0 | 0 | 106 | 125 | 14 | 0 | 1 | 140 | 113 | 52 | 0 | 0 | 165 | 119 | 8 | 0 | 1 | 128 |
| North Harford | 142 | 0 | 0 | 12 | 154 | 109 | 0 | 0 | 14 | 123 | 139 | 0 | 0 | 17 | 156 | 138 | 0 | 0 | 9 | 147 | 197 | 0 | 0 | 10 | 207 |
| TOTAL | 1,075 | 561 | 159 | 22 | 1,817 | 1,019 | 430 | 123 | 23 | 1,595 | 1,239 | 476 | 172 | 24 | 1,911 | 1,268 | 519 | 106 | 21 | 1,914 | 1,308 | 505 | 254 | 21 | 2,088 |

Note: Permits totals revised for cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May, 2004.

KEY:

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

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

**1999 - 2003**

| SCHOOL | 1999* | | 2000* | | 2001* | | 2002* | | 2003* | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Households | Population | Households | Population | Households | Population | Households | Population | Households | Population |
| Abingdon | 3,495 | 9,544 | 3,645 | 9,393 | 3,775 | 10,319 | 3,921 | 10,614 | 4,065 | 10,950 |
| Bakerfield | 2,816 | 7,690 | 2,844 | 7,050 | 2,896 | 7,917 | 2,921 | 7,908 | 2,944 | 7,930 |
| Bel Air | 3,275 | 8,945 | 3,299 | 8,381 | 3,328 | 9,098 | 3,329 | 9,014 | 3,330 | 8,971 |
| Churchville | 1,963 | 5,361 | 1,973 | 5,434 | 2,024 | 5,533 | 2,117 | 5,732 | 2,209 | 5,951 |
| Church Creek | 2,817 | 7,694 | 2,930 | 7,714 | 2,956 | 8,079 | 3,005 | 8,134 | 3,061 | 8,244 |
| Darlington | 973 | 2,658 | 1,000 | 2,698 | 1,008 | 2,754 | 1,016 | 2,751 | 1,025 | 2,760 |
| Deerfield | 1,956 | 5,341 | 1,969 | 5,925 | 2,039 | 5,574 | 2,238 | 6,058 | 2,434 | 6,557 |
| Dublin | 1,257 | 3,433 | 1,256 | 3,400 | 1,262 | 3,449 | 1,284 | 3,475 | 1,306 | 3,517 |
| Edgewood | 1,418 | 3,872 | 1,389 | 3,955 | 1,389 | 3,797 | 1,389 | 3,760 | 1,389 | 3,741 |
| Emmorton | 2,206 | 6,025 | 2,328 | 6,234 | 2,375 | 6,491 | 2,526 | 6,838 | 2,676 | 7,208 |
| Forest Hill | 2,510 | 6,855 | 1,564 | 4,336 | 1,818 | 4,969 | 2,008 | 5,437 | 2,192 | 5,903 |
| Forest Lakes | 2,137 | 5,835 | 3,042 | 8,884 | 3,086 | 8,435 | 3,128 | 8,468 | 3,175 | 8,553 |
| Fountain Green | 2,271 | 6,202 | 2,310 | 6,544 | 2,366 | 6,468 | 2,459 | 6,657 | 2,551 | 6,872 |
| G. Lisby at Hillsdale | 1,827 | 4,989 | 1,835 | 4,825 | 1,854 | 5,068 | 1,888 | 5,113 | 1,943 | 5,233 |
| Hall's Cross Roads | 1,856 | 5,067 | 1,863 | 4,718 | 1,878 | 5,134 | 1,889 | 5,113 | 1,920 | 5,172 |
| Havre de Grace | 2,943 | 8,038 | 2,988 | 6,885 | 2,992 | 8,178 | 2,999 | 8,120 | 3,007 | 8,100 |
| Hickory | 2,266 | 6,188 | 2,349 | 6,930 | 2,480 | 6,779 | 2,498 | 6,764 | 2,516 | 6,778 |
| Homestead/Wakefield | 4,856 | 13,261 | 4,945 | 12,966 | 5,023 | 13,730 | 5,091 | 13,783 | 5,158 | 13,895 |
| Jarrettsville | 2,163 | 5,906 | 2,167 | 6,432 | 2,188 | 5,981 | 2,219 | 6,006 | 2,249 | 6,058 |
| Joppatowne | 3,059 | 8,354 | 3,078 | 7,888 | 3,156 | 8,627 | 3,302 | 8,941 | 3,448 | 9,287 |
| Magnolia | 1,486 | 4,058 | 1,499 | 4,344 | 1,499 | 4,097 | 1,503 | 4,069 | 1,507 | 4,058 |
| Meadowvale | 2,288 | 6,249 | 2,323 | 6,391 | 2,340 | 6,397 | 2,391 | 6,473 | 2,443 | 6,581 |
| Norrisville | 841 | 2,297 | 856 | 2,493 | 873 | 2,387 | 885 | 2,395 | 896 | 2,413 |
| North Bend | 2,119 | 5,788 | 2,174 | 6,488 | 2,213 | 6,049 | 2,244 | 6,074 | 2,274 | 6,125 |
| North Harford | 1,921 | 5,246 | 2,205 | 6,453 | 2,239 | 6,121 | 2,284 | 6,184 | 2,329 | 6,273 |
| Prospect Mill | 3,096 | 8,454 | 3,267 | 9,519 | 3,372 | 9,216 | 3,532 | 9,563 | 3,683 | 9,919 |
| Ring Factory | 2,252 | 6,149 | 2,337 | 6,727 | 2,353 | 6,432 | 2,358 | 6,384 | 2,361 | 6,359 |
| Riverside | 2,670 | 7,291 | 2,621 | 7,068 | 2,644 | 7,227 | 2,651 | 7,178 | 2,659 | 7,162 |
| Roye-Williams | 1,477 | 4,033 | 1,457 | 4,747 | 1,458 | 3,985 | 1,468 | 3,973 | 1,477 | 3,979 |
| Wm. Paca/Old Post Rd | 4,786 | 13,071 | 5,026 | 12,999 | 5,114 | 13,980 | 5,225 | 14,147 | 5,336 | 14,372 |
| Wm. S. James | 1,839 | 5,021 | 1,888 | 5,791 | 1,900 | 5,195 | 1,900 | 5,145 | 1,900 | 5,119 |
| Youth's Benefit | 5,183 | 14,156 | 5,240 | 14,978 | 5,285 | 14,446 | 5,349 | 14,481 | 5,412 | 14,579 |
| TOTAL | 78,020 | 213,072 | 79,667 | 218,590 | 81,182 | 221,911 | 83,050 | 224,840 | 84,875 | 228,620 |

* Note: Population / Household figures are as of April 1 each year.

Source: Harford County Dept. of Planning and Zoning, May, 2004.

## Table 15
## Harford County Population and Households
## by Middle School District

## 1999 - 2003

| SCHOOL | 1999* | | 2000* | | 2001* | | 2002* | | 2003* | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Households | Population | Households | Population | Households | Population | Households | Population | Households | Population |
| Aberdeen | 11,561 | 31,572 | 11,709 | 31,085 | 11,859 | 32,417 | 11,962 | 32,406 | 12,183 | 32,815 |
| Bel Air | 10,129 | 27,661 | 12,669 | 33,719 | 12,839 | 35,095 | 13,043 | 35,333 | 13,268 | 35,737 |
| Edgewood | 12,337 | 33,691 | 12,781 | 34,446 | 13,082 | 35,760 | 13,459 | 36,460 | 13,911 | 37,469 |
| Fallston | 8,650 | 23,623 | 9,907 | 28,745 | 10,007 | 27,353 | 10,134 | 27,452 | 10,244 | 27,594 |
| Havre de Grace | 6,248 | 17,063 | 6,359 | 16,105 | 6,388 | 17,460 | 6,421 | 17,393 | 6,487 | 17,474 |
| Magnolia | 7,177 | 19,599 | 7,145 | 19,257 | 7,246 | 19,806 | 7,379 | 19,988 | 7,535 | 20,297 |
| North Harford | 7,824 | 21,366 | 8,560 | 24,995 | 8,676 | 23,715 | 8,824 | 23,904 | 8,964 | 24,145 |
| Southampton | 14,096 | 38,496 | 10,537 | 30,238 | 11,089 | 30,312 | 11,777 | 31,904 | 12,284 | 33,088 |
| **TOTAL** | 78,020 | 213,072 | 79,667 | 218,590 | 81,185 | 221,919 | 83,000 | 224,840 | 84,875 | 228,620 |

* Note: Population / Household figures are as of April 1 each year

Source: Harford County Dept. of Planning and Zoning, May, 2004.

## Table 16
## Harford County Population and Households
## by High School District

## 1999 - 2003

| SCHOOL | 1999* | | 2000* | | 2001* | | 2002* | | 2003* | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Households | Population | Households | Population | Households | Population | Households | Population | Households | Population |
| Aberdeen | 11,561 | 31,572 | 11,709 | 31,085 | 11,859 | 32,417 | 11,962 | 32,406 | 12,183 | 32,815 |
| Bel Air | 12,328 | 33,669 | 12,669 | 33,719 | 12,839 | 35,095 | 13,041 | 35,328 | 13,268 | 35,738 |
| Edgewood | 10,309 | 28,155 | 9,926 | 28,771 | 10,349 | 28,288 | 10,859 | 29,415 | 11,214 | 30,208 |
| Fallston | 12,337 | 33,691 | 12,781 | 34,446 | 13,082 | 35,760 | 13,459 | 36,460 | 13,911 | 37,469 |
| Havre de Grace | 10,237 | 27,957 | 10,518 | 30,209 | 10,748 | 29,379 | 11,057 | 29,951 | 11,313 | 30,473 |
| Joppatowne | 6,248 | 17,063 | 6,359 | 16,105 | 6,388 | 17,460 | 6,421 | 17,393 | 6,487 | 17,474 |
| North Harford | 7,177 | 19,599 | 7,145 | 19,257 | 7,246 | 19,806 | 7,379 | 19,988 | 7,535 | 20,297 |
| C. Milton Wright | 7,824 | 21,366 | 8,560 | 24,998 | 8,675 | 23,713 | 8,822 | 23,898 | 8,964 | 24,145 |
| **TOTAL** | 78,020 | 213,072 | 79,667 | 218,590 | 81,185 | 221,919 | 83,000 | 224,840 | 84,875 | 228,620 |

* Note: Population / Household figures are as of April 1 each year

Source: Harford County Dept. of Planning and Zoning, May, 2004.

# WATER AND SEWERAGE

## Introduction

The data included in this section for the water and sewerage system are aggregated by the water & sewer service area, which essentially reflects the Development Envelope as defined in the 1996 Harford County Land Use Element Plan. Additional information is included in this report on water/sewerage usage by dwelling type and for nonresidential uses, an inventory of existing water consumption/sewerage flows, demand projections (including the basis for their computation), and a list of capital projects contained in the County's Capital Improvements Program for expanding facilities - including project status. This information is extracted from the "2003 Water and Sewer Adequate Public Facilities Report," and can be found on pages 25 - 30 of this report.

## 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, pumping and storage facilities for all zones must be sized for estimated future demands. In 1996, the average daily water demand by customers served by the County's central system was approximately 8.6 MGD, with a corresponding maximum day demand of approximately 11.2 MGD. In 2003, the County's average day and maximum day demands were 11.6 MGD and 13.9 MGD respectively. 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 seven multiple-use water systems that are not maintained or operated by Harford County, but are subject to the APF provision of the County Code. These systems are listed below:

1) Maryland-American Water Co.
2) Conowingo Power Co.
3) Campus Hills Water Works Inc.
4) Darlington
5) Greenridge Utilities Inc.
6) Lakeside Vista
7) Bel Air Heights

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 on page 9 and pages 32-157 of the 2003 Water and Sewer Adequate Public Facilities Report.

The average daily influent flow to the Sod Run WWTP in 2003 was approximately 13.7 MGD, exclusive of recycle flows and septage. The average daily influent flow to the Joppatowne WWTP in 2003 was approximately 0.82 MGD. The determination of future wastewater flows to wastewater treatment plants are made by using population and household projections developed by Harford County Department of Planning and Zoning for the years 2000 through 2025. The projections were distributed by local transportation zone (LTZs) by aggregating the ultimate development in terms of equivalent dwelling units into sewerage drainage areas. In order to keep pace with projected growth, construction of an expansion of the Sod Run Wastewater Treatment Plant from 12 MGD in 1995 to 20 MGD by 2000 had been completed.

There are two private multi-use sewerage systems in the County. The Conowingo-Susquehanna Power Company provides sewerage service to the Conowingo Power Plant and some surrounding residences and the Swan Harbor Dell Mobile Home Park that serves about 160 units. In addition, a sanitary sewer collection system has 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.

# Table 17

## JANUARY - DECEMBER 2003
## WATER CONSUMPTION & SEWAGE GENERATION

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

| | 2003 |
|---|---|
| **Total Number of Connections** | 38,489 |
| **WATER** | |
| **Average Water Production** | 11.6 MGD |
| **Maximum Day Water Production** | 13.9 MGD |
| **Average Water Usage per Connection (gal/day)** | 324 |
| **Residential Unit Water Usage (gal/day)** | 160 |
| **Average Commercial/Industrial Water Usage (gal/day)** | 5,524 |
| **SEWAGE** | |
| **Average Sewage Flows** | 14.5 MGD |
| **Maximum Day Sewage Flows** | 26.4 MGD |
| **Average Sewage per Connection (gal/day)** | 389 |
| **Residential Sewage Generation (gal/day)** | 160 |
| **Average Commercial/Industrial Sewage Generation (gal/day)** | 5,524 |

- MGD = Million Gallons per Day

## Table 18

## HARFORD COUNTY SYSTEM WATER PRODUCTION PROJECTIONS

| SYSTEM WIDE RESIDENTIAL/ COMMERCIAL INDUSTRIAL WATER DEMAND | YEAR | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1990** | **1993** | **1994** | **1995** | **1996** | **1997** | **1998** | **1999** | **2000** | **2001** | **2002** | **2003** | **2010** | **2015** | **2020** | **2025** |
| First Zone | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 3.4 | 3.2 | 3.4 | 4.1 | 4.05 | 4.5 | 4.5 | 4.6 | 3.5 | 5.1 | 5.7 | 3.6 | 6.7 | 11 | 13.5 | 17.2 |
| Max. Day, mgd | 4.3 | 4.6 | 4.8 | 6 | 4.8 | 6.5 | 6.6 | 6.5 | 4.6 | 9.1 | 7.8 | 4.7 | 9.5 | 15.8 | 19.7 | 25 |
| Total of Second, Third and Fourth Zones | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 2.5 | 3.5 | 3.7 | 3.8 | 4.5 | 5 | 5 | 5.7 | 5.9 | 6.4 | 5.8 | 7.5 | 6.6 | 7.3 | 9.1 | 9.9 |
| Max. Day, mgd | 3.3 | 3.9 | 4 | 5.6 | 5.9 | 6.8 | 6.9 | 7.3 | 6.9 | 7.1 | 8.1 | 8.2 | 9.8 | 10.7 | 13.2 | 14.4 |
| Aberdeen | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 0 | 0 | 0 | 0.5 | 0.05 | 0.03 | 0.01 | 0.3 | 0.26 | 0.26 | 0.47 | 0.5 | 0.3 | 0.4 | 0.5 | 0.5 |
| 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 |
| Chapel Hill | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Max. Day, mgd | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| Maryland-American Water Co. | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 0 | 0 | 0 | 0 | 0 | 0.07 | 0.01 | 0.01 | 0.19 | 0.01 | 0.16 | 0.001 | 0.2 | 0.25 | 0.3 | 0.35 |
| Max. Day, mgd | 0 | 0 | 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 |
| Total | | | | | | | | | | | | | | | | |
| Avg. Day, mgd | 5.9 | 6.7 | 7.1 | 8.4 | 8.6 | 9.6 | 9.5 | 10.6 | 9.9 | 11.8 | 12.1 | 11.6 | 15.8 | 19 | 23.4 | 28 |
| Max. Day, mgd | 7.6 | 8.5 | 8.8 | 12.1 | 11.2 | 14.3 | 14.5 | 14.8 | 12.5 | 17.2 | 16.9 | 13.9 | 23.3 | 27.5 | 33.9 | 40.4 |

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

# Table 19

## Harford County Present and Projected Capacities in Million Gallons Per Day (MGD)

| SERVICE AREA | PLANNING YEAR | RESIDENTIAL POPULATION SERVED | DOMESTIC FLOW (ADF) | INDUSTRIAL FLOW (ADF) | INFILTRATION / INFLOW (ADF) | TOTAL FLOW | SYSTEM CAPACITY |
|---|---|---|---|---|---|---|---|
| HARFORD COUNTY | 1993 | 70,732 | 7.7 | 0.4 | 1 | 9.1 | 10 |
| | 1995 | 81,696 | 7.7 | 0.5 | 1.4 | 9.6 | 12 |
| | 2000 | 99,057 | 9.3 | 0.6 | 1.7 | 11.6 | 20 |
| | 2003 | 103,051 | 10.8 | 0.6 | 2.3 | 13.7 | 20 |
| | 2005 | 104,000 | 9.4 | 0.6 | 1.7 | 11.7 | 20 |
| | 2010 | 113,000 | 10 | 0.6 | 1.9 | 12.5 | 20 |
| | 2025 | 178,000 | 14.5 | 1 | 2.3 | 17.8 | 20 |
| JOPPATOWNE | 1993 | 7,000 | 0.59 | 0 | 0.19 | 0.78 | 0.75 |
| | 1995 | 7,000 | 0.56 | 0 | 0.19 | 0.75 | 0.75 |
| | 2000 | 7,700 | 0.65 | 0 | 0.19 | 0.84 | 0.95 |
| | 2003 | 7,889 | 0.61 | 0 | 0.21 | 0.082 | 0.95 |
| | 2005 | 8,800 | 0.65 | 0 | 0.19 | 0.84 | 0.95 |
| | 2010 | 9,500 | 0.76 | 0 | 0.19 | 0.95 | 0.95 |
| | 2025 | 9,500 | 0.76 | 0 | 0.19 | 0.95 | 0.95 |
| SPRING MEADOWS | 1993 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 1995 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 2000 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 2003 | 159 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 2005 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 2010 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| | 2025 | 153 | 0.01 | 0 | 0 | 0.01 | 0.01 |
| WHITEFORD - CARDIFF | 2003 | 525 | 0.02 | 0 | 0.01 | 0.03 | 0.12 |
| | 2005 | 516 | 0.07 | 0.01 | 0.01 | 0.09 | 0.12 |
| | 2010 | 537 | 0.08 | 0.01 | 0.01 | 0.1 | 0.12 |
| | 2025 | 537 | 0.09 | 0.01 | 0.02 | 0.12 | 0.12 |

# Table 20

## 2003 EXISTING WATER & SEWER CAPITAL PROJECTS

The Capital Improvement Program establishes projects for expanding and improving water and sewer facilities. This list of 2002 Capital Projects includes the project status.

| PROJECT NO. | PROJECT NAME | PROJECT STATUS |
|---|---|---|
| 6440 | Infiltration/Inflow<br>(a) Joppatowne Manhole Rehabilitation | I/I priority analysis complete<br>(a) Joppatowne Manhole Rehabilitation complete |
| 6458 | Lower Bynum Run Parallel Interceptor | Phase 3A: Awaiting right-of-way<br>Phases 4 & 5: Design Complete |
| 6587 | Route 7 Sewer Extension | Construction complete |
| 6591 | Perryman Well Field Improvements | Construction complete |
| 6608 | Bush Creek P.S. Force Main Surge Facility Modification | Under bid |
| 6611 | Old Joppa Road Sewer Petition | Construction complete |
| 6620 | Perryman WTP Granular Activated Carbon (GAC) Relocation | Construction complete |
| 6627 | Country Walk 20" Water Main Parallel | Under design |
| 6628 | Fourth Zone Loop | Construction complete |
| 6632 | Red Pump Road Force Main | Construction complete |
| 6634 | Lower Bynum Run Interceptor Parallel | Environmental Permitting and Alternative Analyses |
| 6639 | Edgewood Interceptor Extension Phase II | Construction complete |
| 7014 | Joppatowne WWTP Automation | Design Complete |

# ROAD SYSTEM

## Introduction

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 04 (Table 24), and a list of state consolidated transportation program projects funded for construction FY 04 (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 nonresidential uses that generate more than 249 trips. Proposed development located within the Route 40 Overlay District 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 recommending 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 of the Development Envelope.

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

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

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

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

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

The Developer is required to provide improvements where the trips generated by the development reduce the Level Of Service (LOS) from adequate to a LOS below the standard. The standard for intersections within the Development Envelope will be LOS D. If existing LOS is E or F at an intersection within the Development Envelope, 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 unsignalized intersections and two signalized intersection with one or more movements operating at a LOS E or lower during peak hours. The following intersections contain one or more movements that operate at an unacceptable LOS. The evaluation of the LOS is determined on performance of the intersection during one hour peak traffic periods in the a.m. and/or p.m.:

1. Interstate 95 and Maryland 24 Ramp
2. Maryland 24 and Forest Valley Drive
3. Maryland 152 and U.S. 1
4. Maryland 24 and Maryland 924 (Tollgate Rd)

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

# Table 21

## Signalized Intersection Capacity

## Level Of Service And Delay In Seconds

## 2000 - 2003

| Intersection | 2000 Peak Hour Level Of Service / Delay In Seconds | 2001 Peak Hour Level Of Service / Delay In Seconds | 2002 Peak Hour Level Of Service / Delay In Seconds | 2003 Peak Hour Level Of Service / Delay In Seconds |
|---|---|---|---|---|
| Maryland Route 7 and U.S. Route 40 | D / 36.6 | | C / 30.8 | |
| Maryland Route 924 and Moores Mill Road | C / 31.0 | | C / 27.2 | |
| Maryland Route 24 and Trimble Road | C / 32.6 | | C / 23.5 | |
| Maryland Route 152 and U.S. Route 1 | D / 49.7 | | E / 56.5 | |
| Maryland Route 24 and U.S. Route 1 | D / 50.8 | | D / 54.8 | |
| Maryland Route 152 and Trimble Road | C / 26.8 | | C / 24.3 | |
| Maryland Route 24 and Jarrettsville Road | C / 34.5 | | C / 20.8 | |
| Maryland Route 152 and Hanson Road | C / 25.2 | | C / 28.8 | |
| Maryland Route 22 and Brier Hill Road | | C / 29.9 | | C / 25.3 |
| Maryland Route 22 and Maryland Route 136 | | C / 20.3 | | D / 37.6 |
| Maryland Route 24 and Bel Air South Parkway | | D / 52.1 | | D / 54.2 |
| Maryland Route 24 and Plumtree Road | | C / 24.4 | | D / 35.4 |
| Maryland Route 24 and Ring Factory Road | | C / 20.8 | | C / 25.2 |
| Maryland Route 24 and Maryland Route 755 | | D / 43.8 | | D / 40.3 |
| Maryland Route 24 and Maryland Route 924 (Tollgate ) | | F / 88.7 | | F / 110.2 |
| Maryland Route 543 and U.S. Route 1 | | C / 27.5 | | B / 17.8 |
| Maryland Route 543 and Maryland Route 22 | | D / 36.1 | | D / 52.4 |
| Maryland Route 924 and Abingdon Road | | D / 37.9 | | B / 19.4 |
| Maryland Route 924 and Abingdon Road | | F / 92.8* | | C / 28.1 |

*Note: Unsignalized in 2001.

# Table 22

# Unsignalized Intersection Capacity

# Level Of Service And Delay In Seconds

# 2000 - 2003

| Intersection | 2000 Peak Hour Level Of Service / Delay In Seconds | 2001 Peak Hour Level Of Service / Delay In Seconds | 2002 Peak Hour Level Of Service / Delay In Seconds | 2003 Peak Hour Level Of Service / Delay In Seconds |
|---|---|---|---|---|
| Interstate 95 and Maryland Route 24 Ramp | F / >60 | | F / >60 | |
| Maryland Route 152 and Singer Road | F / >60 | | F / >60 | |
| Maryland Route 7 and Maryland Route 159 | | B / 11.5 | | B / 10.5 |
| Maryland Route 24 and Forest Valley Road | | F / 171.4 | | F / >150 |
| Maryland Route 159 and Spesutia Road | | B / 14.5 | | C / 16.3 |

# Table 23

48 Hour Average Weekday Daily Traffic Volume And Locations

2001 - 2003

| Road Name | Location | 2001 Average Daily Count | 2002 Average Daily Count | 2003 Average Daily Count |
|---|---|---|---|---|
| Beards Hill Road | North of Churchville Road | | 6,825 | |
| Carrs Mill Road | North of Maryland Route 152 | | 8,644 | |
| Chapel Road | North of Interstate 95 | | 1,705 | |
| Jarrettsville Road | East of Maryland Route 24 | | 10,196 | |
| Jarrettsville Road | West of Maryland Route 24 | | 4,526 | |
| Maryland Route 7 | West of Maryland Route 24 | | 7,625 | |
| Moores Mill Road | West of Coconut Court | | 10,662 | |
| Moores Mill Road | West of Old English Court | | 6,942 | |
| Pleasantville Road | North of Putnam Road | | 3,505 | |
| Singer Road | East of Maryland Route 24 | | N/A* | |
| Stepney Road | North of Interstate 95 | | 1,373 | |
| U.S. Route 1 | North of Maryland Route 152 | | 31,050 | |
| U.S. Route 40 | North of Maryland Route 24 | | 17,341 | |
| Abingdon Road | North of Interstate 95 | 9,395 | | 10,783 |
| Hanson Road | South of Silverbell Road | 3,094 | | 1,770 |
| Hanson Road | West of Maryland Route 24 | 11,738 | | 12,160 |
| Maryland Route 24 | North of Singer Road | 43,900 | | 43,875 |
| Maryland Route 152 | South of U.S. Route 1 | 27,025 | | 25,925 |
| Maryland Route 543 | South of Maryland Route 22 | 17,625 | | 18,050 |
| Plumtree Road | East of Maryland Route 24 | 4,532 | | 4,745 |
| Ring Factory Road | West of Maryland Route 24 | 4,515 | | 4,746 |
| Ring Factory Road | East of Maryland Route 24 | 12,082 | | 9,939 |
| Singer Road | West of Maryland Route 24 | 11,739 | | 10,689 |
| Trimble Road | East of Maryland Route 24 | 4,226 | | 7,751 |
| Trimble Road | West of Maryland Route 24 | 7,039 | | 7,034 |
| Vale Road | West of U.S. Route 1 Overpass | 8,656 | | 14,844* |

***Increase due to Red Pump Road closure /construction**

# Table 24

**List of Approved County Capital Projects**

**Funded for Construction in FY 04**

| | |
|---|---|
| **Bridge Painting Program** | **Surface Coatings** |
| **Bridge Rehabilitation** | **Repairs** |
| **Chapel Road Bridge #196** | **Reconstruction** |
| **Greene Road Bridge** | **Reconstruction** |
| **Grier Nursery Road Bridge** | **Reconstruction** |
| **Moores Mill Road Bridge #48** | **Reconstruction** |
| **Abingdon Road, MD 924 to Box Hill S. Pkwy,** | **Upgrade** |
| **Tollgate Road; between W. Ring Factory & Plumtree Roads** | **Upgrade** |
| **Old Pylesville Road; between MD 136 & PA line** | **Upgrade** |

# Table 25

**State Consolidated Transportation Program**

**Funded for Construction in FY 04**

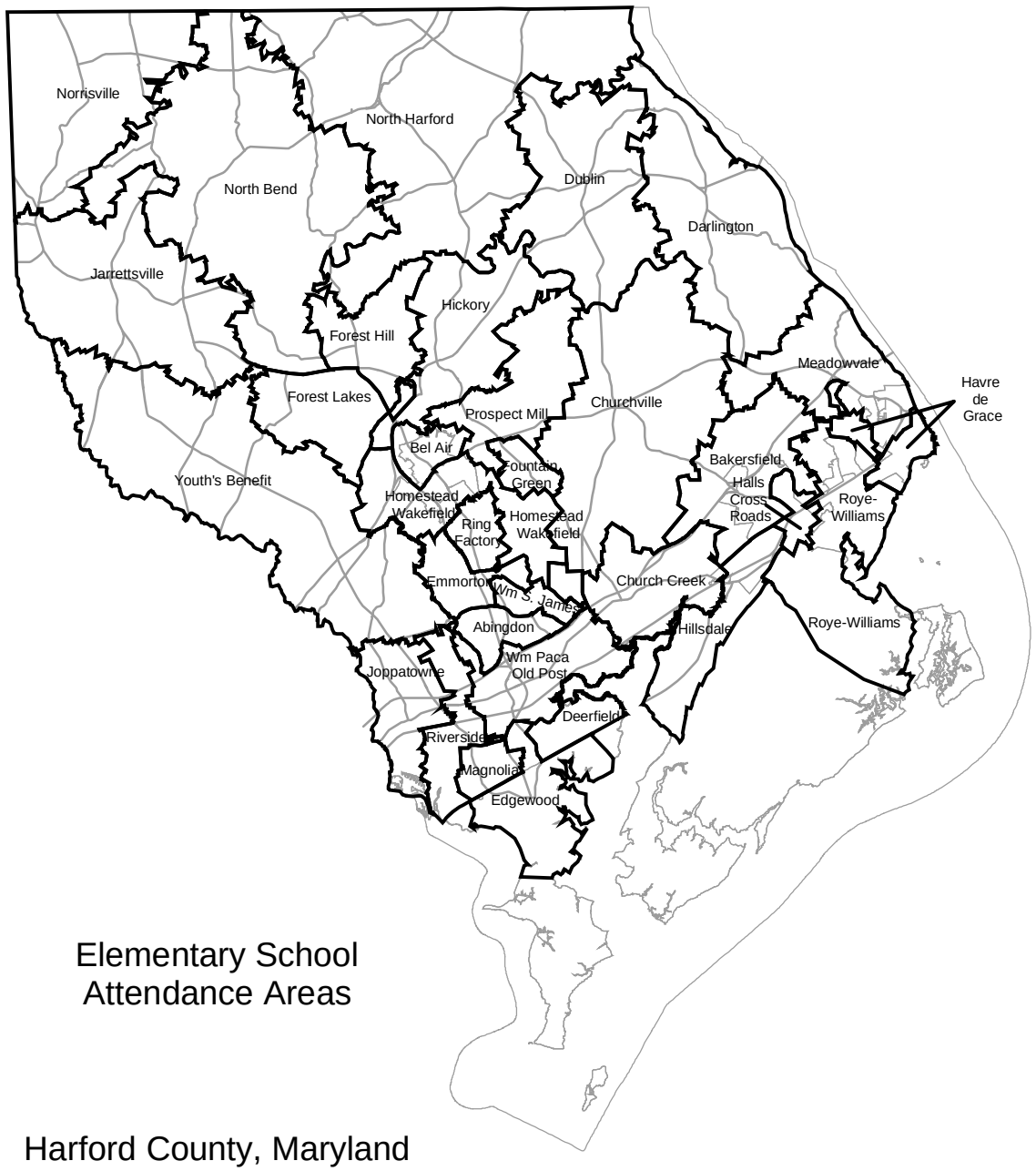
| | |
|---|---|
| **Bridge #12045, over the West Branch on MD 165** | **Reconstruction** |
| **MD 924, from Mac Phail Road to Linwood Avenue** | **Center Turn Lane** |
| **MD 924, Patterson Mill Rd. to Ring Factory Rd.** | **Center Turn Lane** |
| **MD 543 from Kendall Gate Ct. to Foxborough Dr.** | **Center Turn Lane** |

# APPENDIX

# PUPIL YIELD FACTORS

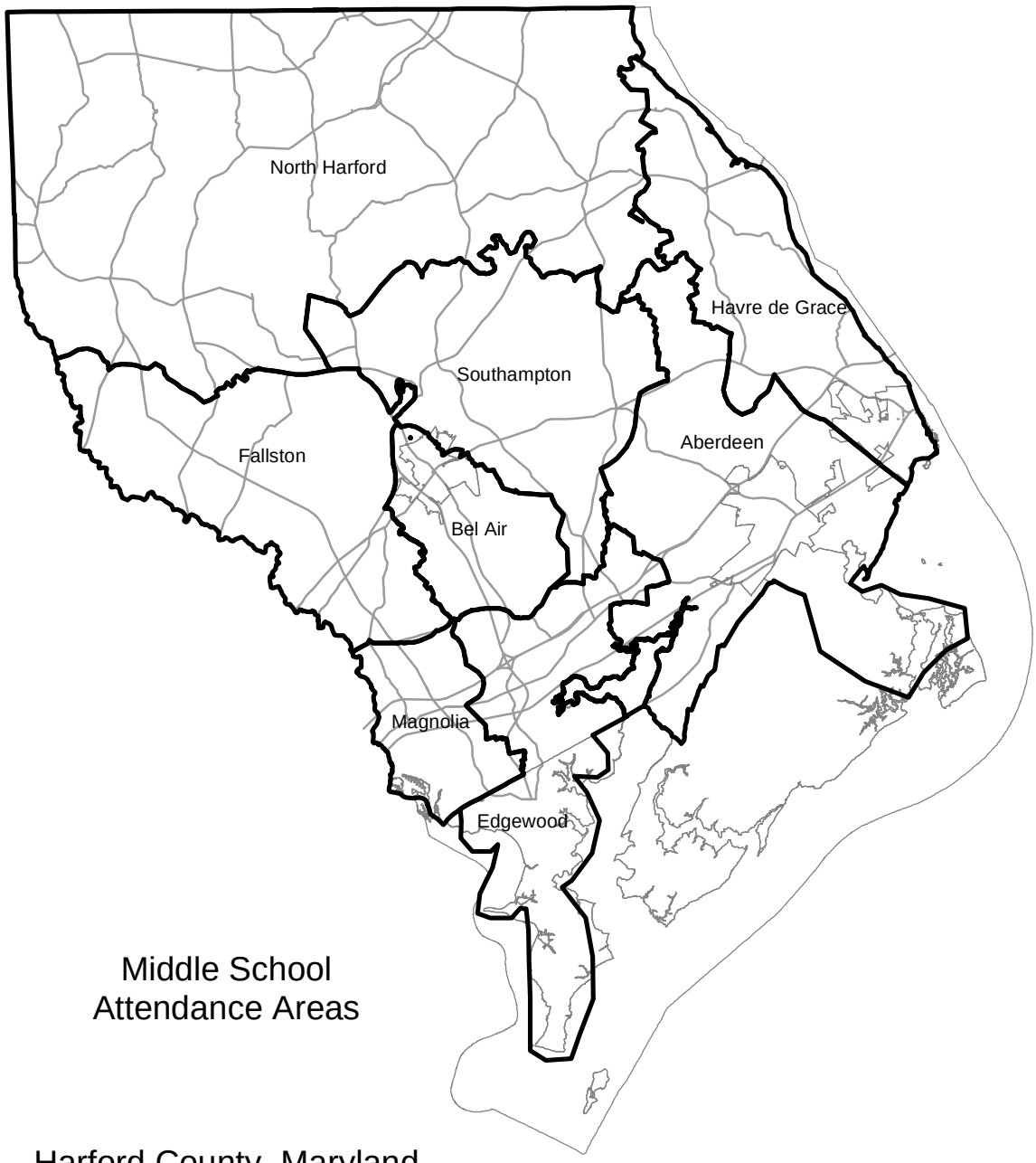
Forty subdivisions were selected from various geographic locations throughout Harford County, to include single family dwellings, townhouse units, apartments/condominium units, and mobile home units. The subdivisions selected represented newly constructed and established subdivisions ranging in size from 28 units to 2,423 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 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 | .31 | .16 | .20 |
| Townhome | .23 | .09 | .15 |
| Apartments (2 Bdrms) | .08 | .03 | .01 |
| Condo (2+ Bdrms) | .08 | .03 | .01 |
| Mobile Home | .11 | .04 | .06 |



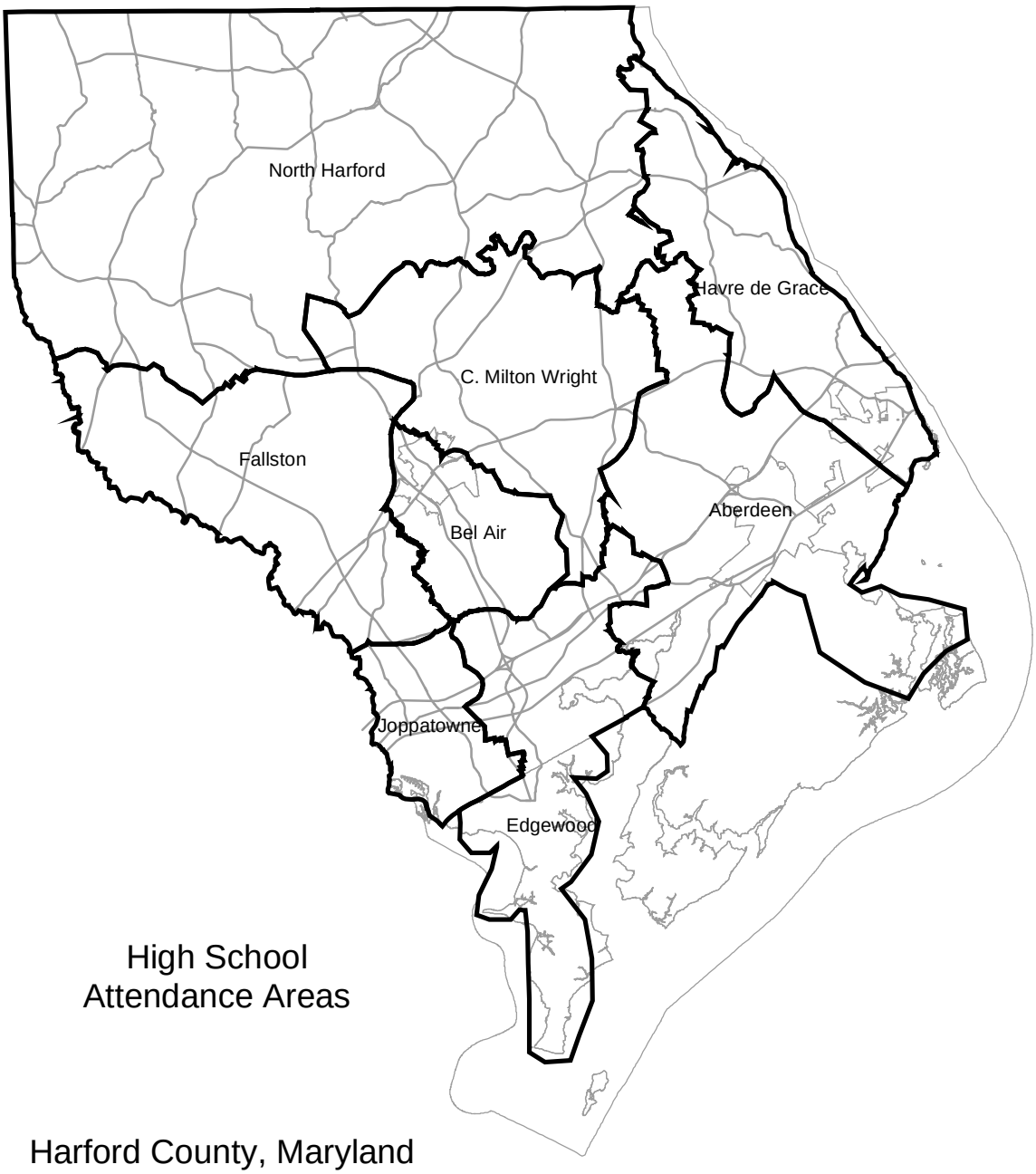

Elementary School
Attendance Areas

Harford County, Maryland




Middle School
Attendance Areas

Harford County, Maryland




High School
Attendance Areas

Harford County, Maryland