

2021 ANNUAL GROWTH REPORT



**HARFORD COUNTY GOVERNMENT
DEPARTMENT OF PLANNING AND ZONING**

BARRY GLASSMAN
HARFORD COUNTY EXECUTIVE

BEN LLOYD
DIRECTOR OF ADMINISTRATION

JENNY B. JARKOWSKI
DIRECTOR OF PLANNING AND ZONING

"MARYLAND'S NEW CENTER OF OPPORTUNITY"

The 2021 Annual Growth Report

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INTRODUCTION

In accordance with State law, 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 goals and visions. This report also addresses the implementation status of HarfordNEXT. The indicators required by the State are included in this report.

Starting in July 2010, Harford County was required to submit a report to the Maryland Department of Planning (MDP) on its Adequate Public Facilities (APF) provisions and any development restrictions within Priority Funding Areas (PFAs) that are the result of these provisions. Harford County provides this information annually to MDP.

The 2021 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 and the Harford County Public Schools. 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

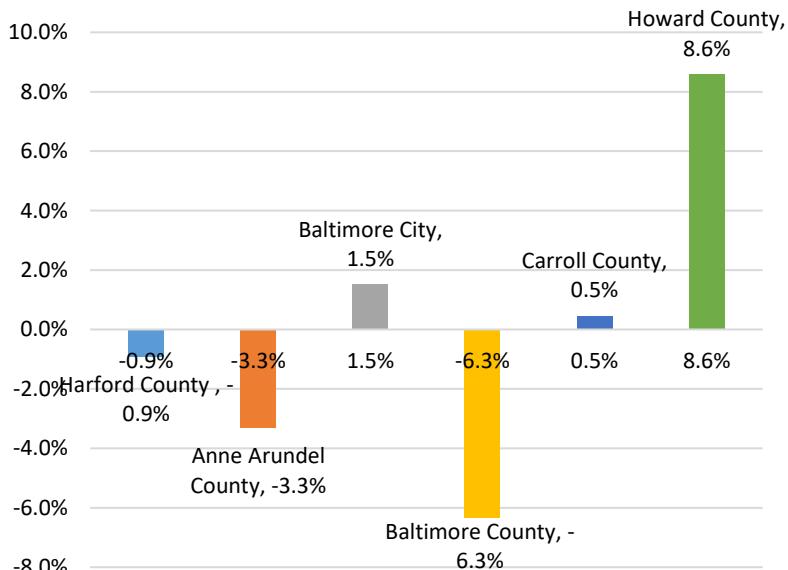
Regional Data

In accordance with the Harford County Adequate Public Facilities provisions of the Harford County Code, the annual growth report must include data on growth trends for the previous one-year and five-year period, including comparisons with the other jurisdictions in the Baltimore region. Tables 1A – 5A (Appendix A) address the requirements specified in §267-126 A (2) of the Harford County Zoning Code.

Baltimore Region Permit Activity

Harford County's share of the region's residential permits over the past five years represents 10.5% of the region's total permit activity. Harford County's share of the regional residential building permits activity decreased .9% between 2020 and 2021 (Figure 1). This is primarily due to a few multi-family projects in the City of Baltimore. See Table 1A in Appendix A for residential permit activity for the Baltimore Region for the 2017 to 2021 period.

Figure 1 Change in Share of Baltimore Region Residential Permits: 2020 - 2021



Baltimore Region Population / Household Projections

Harford County's population is projected to grow by 14,146 residents over the next ten years from 259,118 in 2021 to 273,264 in 2031 (Figure 2). This represents a 5.2% increase in population growth and is slightly greater than the Baltimore region's projected growth rate of 3.7%. See Table 2A in the Appendix A for population and household projections for the Baltimore region for the 2021 to 2031 period.

Figure 2
Baltimore Region and Counties
Population & Employment Forecast: 2021 - 2031



Baltimore Region Employment Projections

Harford County's employment is projected to grow by over 22,161 jobs between 2021 and 2031, which represents a 17.4% increase in jobs over the next ten years. By contrast, the Baltimore region employment is projected to grow by 9.3% or 159,472 jobs between 2021 and 2031.

Harford County is strategically located on I-95 in the heart of the East Coast and Mid-Atlantic markets. Harford's location, highly skilled workforce, and progressive, business-friendly environment offers the ultimate setting to a wide range of prospective companies and industry sectors. See Table 3A in Appendix A for employment projections for the Baltimore region for the 2021 to 2031 period.

Harford County Development Activity

As required by State Land Use Article §1-207, Harford County is also required to prepare an annual report on development activity and planning programs. Reporting is required to be based on designated Priority Funding Areas (PFAs). PFA's coordinate state and local government efforts to support economic development and new growth. Funding for projects in municipalities, other existing communities, industrial areas, and planned growth areas designated by counties receive priority for state funding over other projects. In Harford County, the PFA includes the Development Envelope, the municipalities, designated rural villages, University Center, Harford Community College, and areas designated for Mixed Office.

New Subdivisions

In 2021, Harford County approved 19 residential subdivisions, totaling 323 acres. The residential subdivisions resulted in the creation of 34 units. Three of the subdivisions (12 units) were in the Priority Funding Area. The remaining 16 residential subdivisions were located outside of the PFA and created 22 units. (Figure 3) As part of Maryland's 2009 Smart, Green, and Growing law, Harford County must submit an annual report showing the county is following the statewide land use goal of targeting development within designated Priority Funding Areas and minimizing development outside of these areas.

There were six non-residential plans approved, all except one were located within the PFA. A list of the approved subdivisions is located in Appendix E.



Permit Activity

A total of 974 building permits were issued by Harford County in 2021, which represents a 12.4% increase over the 2020 permit total of 866. This number includes new construction residential, non-residential, and accessory structure permits.

New Residential Building Permits Issued

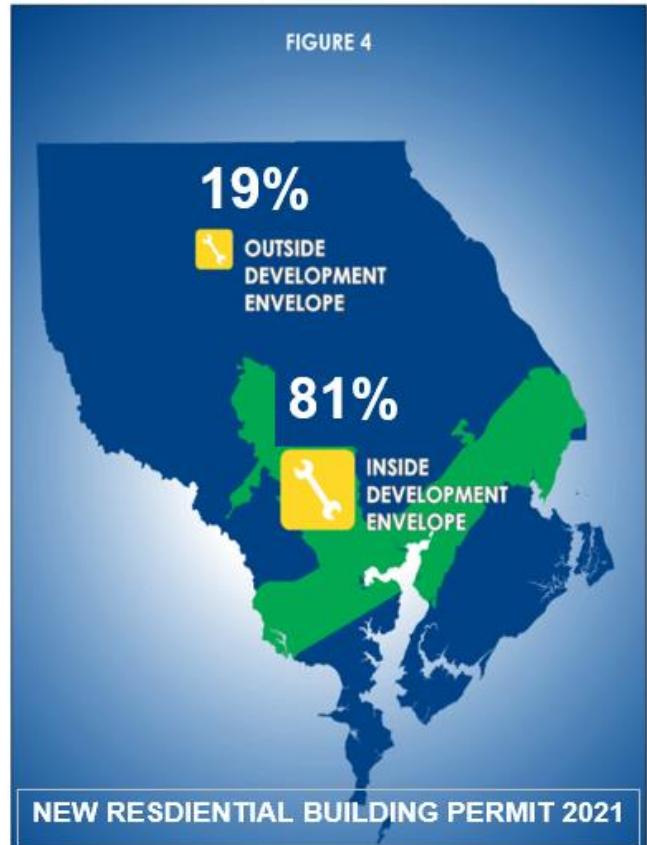
A total of 763 new residential permits were issued by Harford County in 2021, which represents a 8.9% decrease over the 2020 total of 838. The unit type breakdown includes 292 single family detached units, 173 townhouse units, and 298 apartment units. The municipalities of Aberdeen, Bel Air, and Havre de Grace issued 377 of the new construction residential permits collectively. 615 or 81% of the 763 new residential permits (county and municipal) were located within the County's Development Envelope (Figure 4).

New Non-Residential Building Permits Issued

The County issued a total of 10 permits for new non-residential construction (larger-scale projects valued at \$50,000 and over - including municipal) for a range of commercial and industrial uses. These permits can be broken out by value as \$8.8 million in new construction and \$64.5 million in additions, alterations, or repairs.

Development Capacity

The Department of Planning and Zoning routinely updates the inventory of residentially zoned land in the Development Envelope. This inventory provides a total residential land capacity and includes vacant undeveloped zoned land, preliminary and site plan approvals, vacant land capacity in the municipalities, and potential redevelopment/infill capacity. Based on this update, there is an estimated capacity of 12,921 units (Figure 5) in the Development Envelope.





This section addresses state reporting requirements regarding code amendments and new or updated comprehensive plans and plan elements.

Zoning Code Amendments

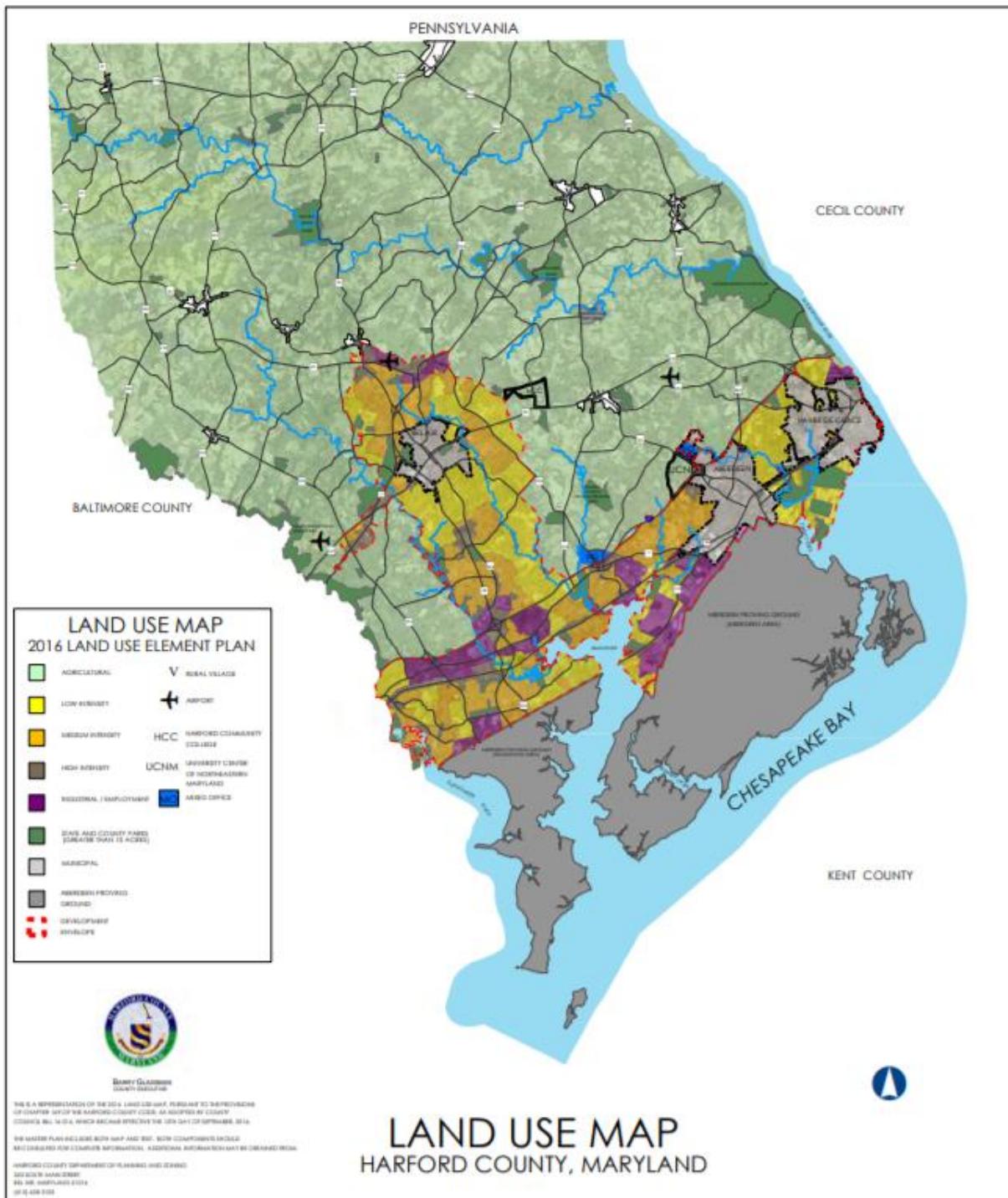
In 2021, the following bills were enacted that resulted in changes to the County's Zoning Code:

Effective Date	Bill	Description
5/10/2021	21-01AA	Community Solar Energy Generating System (CSEGS). 267-4 – add definitions for CSEGS and Viewshed; Add standards in TCU, 267-88I(4).
5/19/2021	21-04	Establishment of a temporary moratorium on application of provisions related to setbacks, parking requirements, temporary uses, signs, outdoor storage and display and seating capacity with regard to uses that include nightclubs, bars, breweries and restaurants. There is no text amendment; however the moratorium is specific to the following sections as specified in the bill: 267-4; 267-23C(1)(a)[8]; 267-26C(1); 267-28; 267-33; 267-58C(3)(b), (d) and (e); 267-59C(4); 267-59C(6)(a), (b) and (b)[6]; 267-60C(4)(a) and (b); 267-60C(6)(a) and (b); 267-61D(3)(b); 267-65D(4) and (6); 267-73A(11); 267-73(B3)(a) and (c); 267-73F(2)(a) and (c); Tables 58-1, 59-1, 59-2, 59-3, 60-1, 60-2, 60-3, and 61-1 . The temporary moratorium shall sunset on 12/31/21 unless renewed by legislative act. There is no code amendment. Note: this moratorium was extended per Bill 21-24 to sunset 12/31/22 unless renewed.
6/8/2021	21-12	Establishment of a moratorium to temporarily prohibit the approval of site plans and issuance of building permits for construction of any new farm breweries. There is no code amendment.
8/6/2021	21-03AA	Permit motor vehicle filling or service stations within 1 mile of both the Harford County water service boundary and the development envelope boundary in the B2 and B3 districts. 267-59C(7)(e)
8/16/2021	21-14	267-30 Allow encroachment of hardscape improvements into bufferyards in the MO District. 267-33I(7)(d) Amend the size and height of signs in the MO District.
11/22/2021	21-19	Electric vehicle and electric vehicle charging stations as accessory uses 267-4 – add definitions; Add standards in 267-23C(1)(a)[9]; and 267-27C(5) and (10)
12/13/2021	21-04	This legislation extends an established temporary moratorium per Bill 21-04 related to setbacks, parking requirements, temporary uses, signs, outdoor storage and display and seating capacity with regard to uses that include nightclubs, bars, breweries and restaurants. There is no text amendment. Note: this extension sunsets 12/31/22 unless renewed.
12/20/2021	21-20AA	Farm Breweries 267-73B(3); modify parking requirements, increase minimum acreage; establish acreage and usage requirements for planting of crops utilized as ingredients in the brewery production; increase lot line setback.

Comprehensive Plan and Element Plan Updates

HarfordNEXT, the County Master Plan (Figure 6), was adopted and became effective September 12, 2016 by the Harford County Council.

FIGURE 6



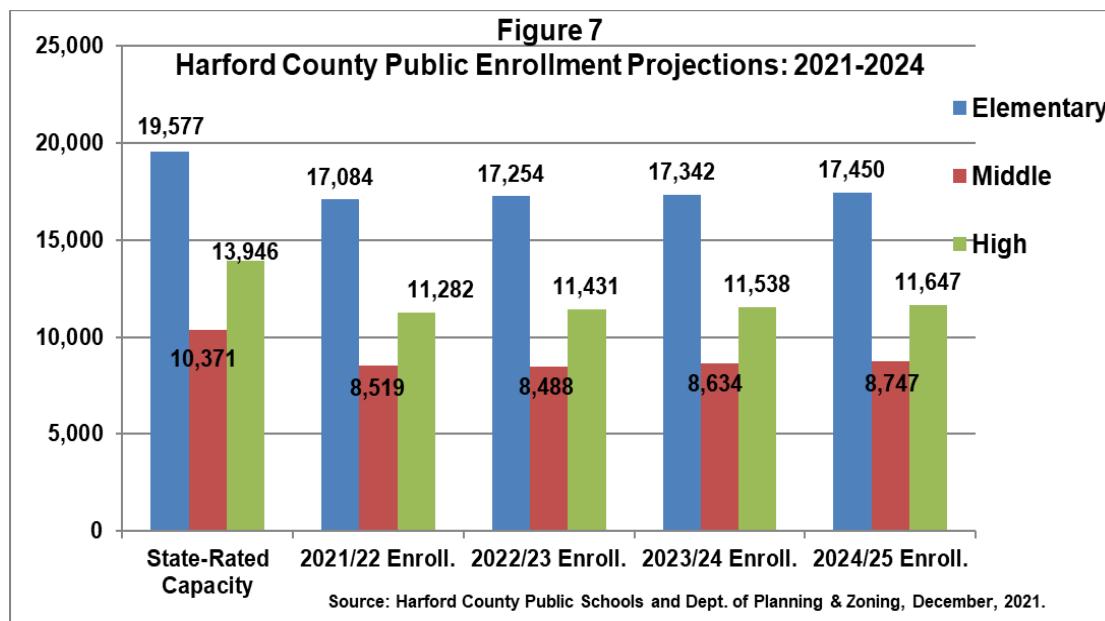
ADEQUATE PUBLIC FACILITIES

The County's Annual Growth Report must be updated annually to identify any public facilities that are functioning 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, road intersections and government facilities.

This report also addresses State reporting requirements for Adequate Public Facilities provisions; including reporting requirements for roads, transportation facilities and schools as they relate to development patterns. In the report, Harford County must identify any restrictions that occur within a PFA because of APF 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 is aggregated by the elementary/middle/high school districts, and include school enrollments, State-rated capacities for each school facility, utilization of each school facility, and three-year projected school enrollments (*Tables 6B, 10B, and 14B in Appendix B*). Modified school enrollment projections are included and take into account planned units remaining and projected units from vacant residential zoned land (*Tables 7B, 11B, and 14B in Appendix B*). In addition, development information such as building permits issued by dwelling type (*Tables 8B, 12B, and 16B in Appendix B*) and population and household estimates (*Tables 9B, 13B, and 17B in Appendix B*) are included in this report. Figure 7 shows enrollment projections by grade level.



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 provisions of the County Code, the level of service standard for Public Schools is 110 percent of rated capacity within three years for elementary and secondary schools.

School Adequacy Standards

Under current law, preliminary plans for subdivisions of greater than five lots cannot be approved in school districts where the full-time enrollment currently exceeds, or is projected to exceed, 110 percent of the capacity within three years. Currently, 31 of 33 elementary schools meet adequacy standards. Eight of nine middle and all high schools meet adequacy standards. Given projected capacity utilization for 2021 – 2024, major subdivisions in the Homestead/Wakefield and Havre de Grace Elementary School as well as Bel Air Middle School attendance areas will not be approved but may be reviewed and placed on a waiting list until capacity is available.

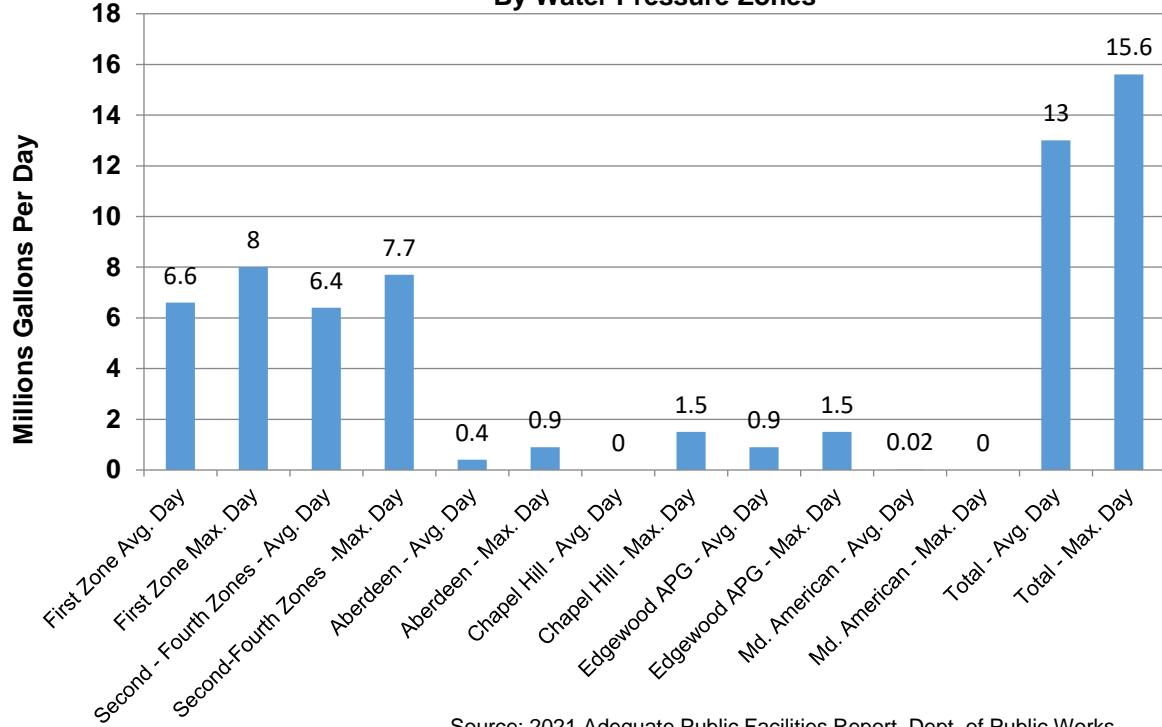
Water and Sewerage

The data included in this section for the water and sewerage system are aggregated by the water and sewer service area, which generally coincides with the Development Envelope, as defined in the 2016 Harford County Master Plan, HarfordNEXT. 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 (*Tables 18C - 21C in Appendix C*). This information is derived from the "2021 Water and Sewer Adequate Public Facilities Report," and is consistent with the County's Water Resources Element Plan.

Water

The County water system's average daily usage in 2021 was 13.01 MGD (Million Gallons Per Day), with a peak day demand of 15.64 MGD. The total countywide permitted maximum daily water treatment capacity is approximately 27.8 MGD. The County has a maximum day drought demand of 19.75 MGD. With the further expansion of the AWTP to 20 MGD the County's water service area is adequately planned. 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. Figure 8 illustrates water production by water pressure zones during 2021.

Figure 8
Harford County Water Production: 2021
By Water Pressure Zones



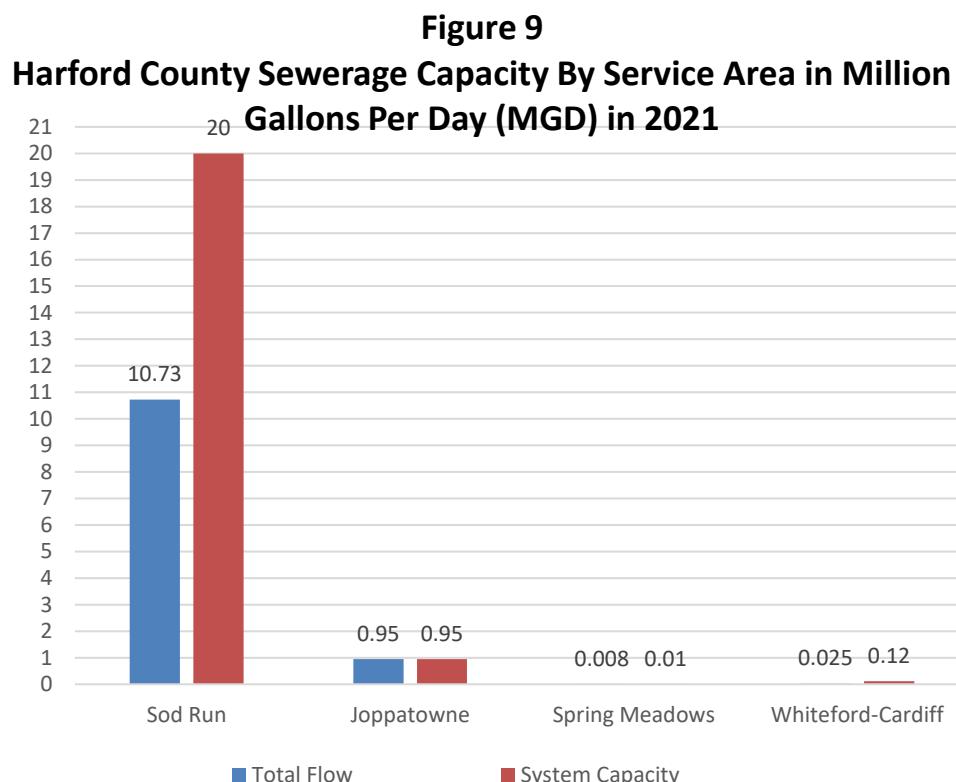
Source: 2021 Adequate Public Facilities Report, Dept. of Public Works,

There are 16 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:

- Maryland-American Water Co.
- Campus Hills Water Works Inc.
- Clear View Court Mobile Home Park
- Conowingo Power Plant
- Darlington
- Darlington Mobile Estates
- Fountain Green Mobile Home Park
- Greenridge Utilities Inc.
- Harford Community College
- Hart Heritage
- Lakeside Vista
- Queens Castle Mobile Home Park
- R & R Estates Mobile Home Park
- Susquehanna State Park
- Swan Harbor Mobile Home Park
- Williams Mobile Home Park

Sewerage

The average daily influent flow to the Sod Run WWTP in 2021 was approximately 10.73 MGD, exclusive of recycle flows and septage. The average daily influent flow to the Joppatowne WWTP in 2021 was approximately 0.95 MGD. The average daily influent flows for Spring Meadows and Whiteford-Cardiff in 2021 respectively were 0.008 MGD and 0.025 MGD's (*Figure 9*).

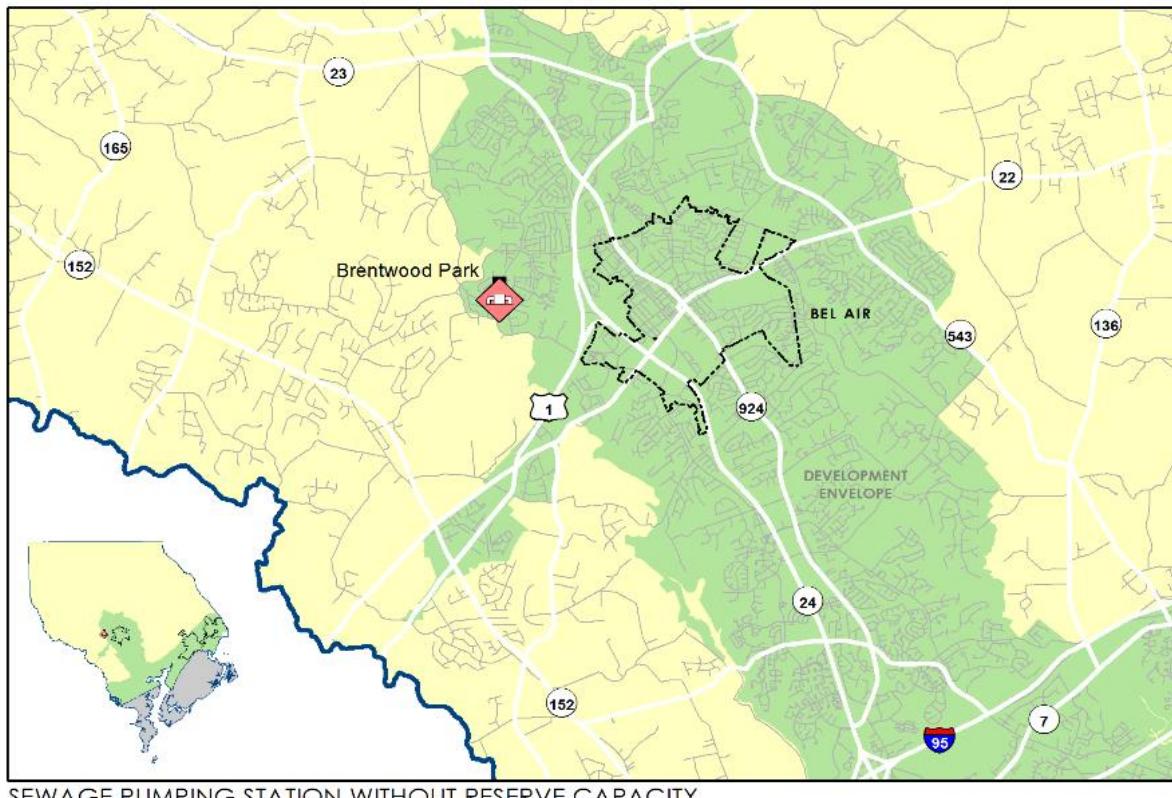


Source: 2021 Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer.

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 the Brentwood Park Sewage Pumping Station (S.P.S.) (*Figure 10*) as being over capacity. Replacement of the station is included in the capital improvement program and the project is currently at the bid ready stage and is expected to be advertised for construction in mid to late 2022.

FIGURE 10



In March 2019, the final report for the Fallston Sewer Capacity Study was completed. The study examined both the existing and build out conditions for the Fallston service area and identified the sewer improvements required. The improvements are included in the capital improvement program for the portion to be funded by the County. The study identified the need for an increase in capacity for the Record Road Sewer Pumping Station. In July 2019, the Reckord Road Sewer Policy (18.62-1) was established to create a surcharge for new connections to fund the required improvements as a county capital project. The study also performed a preliminary downstream analysis of the Plumtree drainage basin, which will require further study to identify the future required capital improvements.

In August 2018, the Hickory Collector Policy was approved which identified the future sewer improvements necessary for buildout of the Hickory drainage area and it established a funding mechanism by a surcharge for future connections. The capital improvements are planned to be implemented as necessary depending on how and when development progresses.

Road System

The intent of the Adequate Public Facilities 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 system. Due to the Covid-19 pandemic there are still some delays to the transportation factors for 2021 report. Traffic counts during the pandemic were not representative. Traffic studies were required to apply a growth factor to the previous year data.

The information for the APF Road System contained in this section includes the following: signalized and unsignalized intersection capacity analysis results (*Tables 22D and 23D*), average daily count locations (*Table 24D*), a list of approved County capital projects funded for construction in Fiscal Year 2021 (*Table 25D*), and a list of State Consolidated Transportation Program (CTP) projects funded for construction in Fiscal Year 2021 (*Table 26D*). 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 (*Tables 22D – 26D in Appendix D*).

Developments which generate 1,500 or more trips per day may be required to expand the study area. The determination of existing and projected Level-Of-Service (LOS) is calculated in the Traffic Impact Analysis (TIA), which is performed by the developer and reviewed by the Departments of Planning and Zoning, Public Works and the State Highway Administration. LOS is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience.

There are six established LOS – A through F – that measure the operational efficiency of a transportation facility. The following is a general definition of each level of service and Delay in Seconds:

LOS A (<= 10) – free flow of traffic with no restriction of significant delay

LOS B (> 10 & <= 20) – stable flow of traffic with very little restriction or delay

LOS C (>=20 & <= 35) – stable flow of traffic with low to moderate restriction or delay.

LOS D (> 35 & <= 55) – approaching unstable flow of traffic with moderate to heavy restriction / delay.

LOS E (>55 & <= 80) – unstable flow of traffic with significant restriction and delay.

LOS F (> 80) – forced flow or cases of “grid lock”. The flow rate drops significantly.

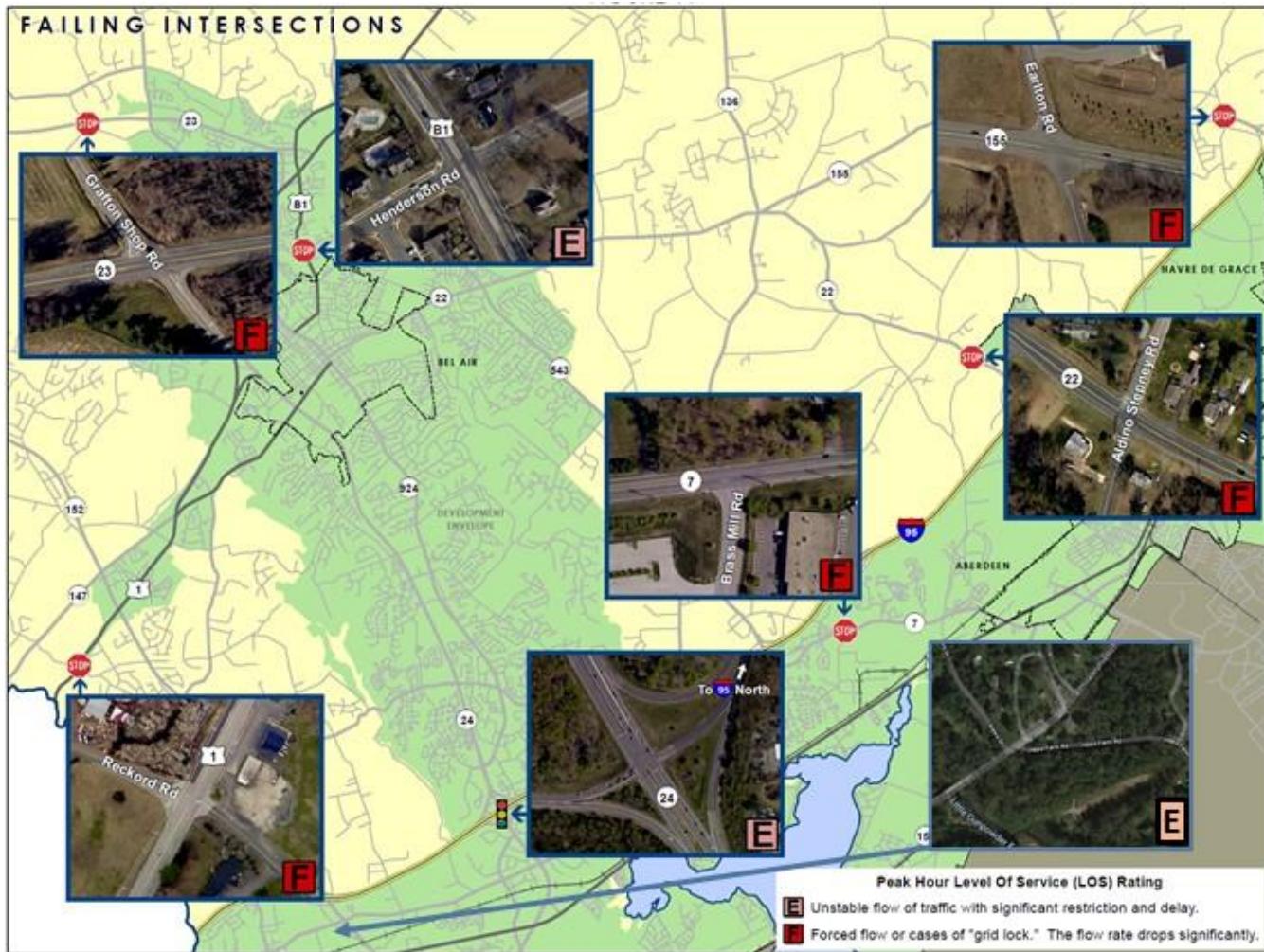
The standard for intersections within the Development Envelope is a LOS D. If the existing LOS is E or F at an intersection within the Development Envelope, then the developer must mitigate the impact of the development's new trips. The standard for intersections outside the Development Envelope is a LOS C. If the existing LOS is a D or lower, then the developer must mitigate the impact of the development's new trips.

In addition to the review of individual TIAs, 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 that have been identified as failing or on the verge of failing based on the adopted LOS standards.

There is one signalized intersection and seven un-signalized 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. Figure 11 identifies intersections that contain one or more movements that **operate at an unacceptable LOS**. Developments that impact these intersections will be required to mitigate their impacts to the intersections.

FIGURE 11
FAILING INTERSECTIONS MAP



GOVERNMENT FACILITIES

The Harford County Code requires an analysis of the need for additional fire, library and public safety services based upon the county's population and a list of approved capital

Fire/EMS Services

The Harford County Fire and EMS Services Master Plan that was completed in 2009 analyzed the need for Fire and EMS services based upon the county population. The plan identified the need for four additional Fire Station Facilities. One of these facilities, the Patterson Mill Road Station, has been completed and turned over to Bel Air Volunteer Fire Company (VFC) (2012). The plan called for three additional Fire/Emergency Medical Service facilities which are listed below:

- Riverside area on MD Route 543 just north of US Route 40. The design and construction of this station is in progress and currently underway
- On MD 543 (Fountain Green Road between Hickory and Fountain Green) This project is still under consideration by the Volunteer Fire Service
- Churchville near the intersection of MD Routes 22 and 136. This project is still under consideration by both County Government and the Fire Service

The approved FY 2021 Capital Budget and CIP includes funding for an EMS station in North Harford. This project has started and completion is anticipated in September 2022; and renovation of two existing VFD stations in Aberdeen (project was completed in 2021) and Whiteford (project is still under consideration). Additionally, the program funds communications, safety equipment, and multi-agency mobile command as well as other repairs to existing stations. The Multi-Agency Mobile Command Vehicle project is being overseen by the Harford County Sheriff's Office. The project is currently underway with an anticipated completion date of late 2023/early 2024.

Library Services

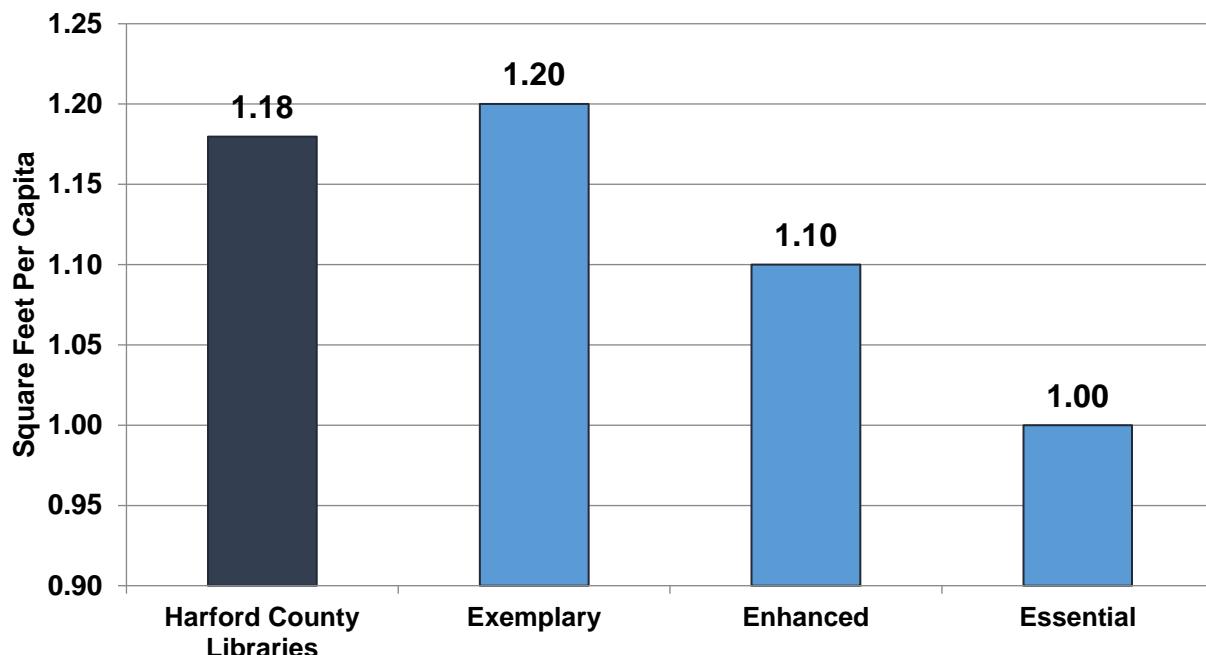
The Maryland Department of Budget and Management require that libraries refer to "Maryland's Planning Guidelines for Libraries" in order to determine if the level of service is consistent with the population and justify the need for expansion. The planning guidelines rate the area of library space per capita in a scale with three ranges:

- Essential = 1.0 square feet per capita (nationally accepted minimum facility size)
- Enhanced = 1.1 square feet per capita
- Exemplary = 1.2 square feet per capita

The total gross square footage of all Harford County Public Library branches totals 229,917. Based on a 2021 population figure of 262,977 the square footage per capita

figure is 1.18, which exceeds the enhanced standard of 1.1 square feet per capita (*Figure 12*). The approved FY 2021 Capital Budget and CIP includes funding for technology. Additionally, expansion projects for Darlington and Havre de Grace remain open with prior appropriations.

Figure 12 Harford County Public Libraries Square Footage Per Capita



Source: Harford County Public Libraries & Maryland's Planning Guidelines for Libraries

Law Enforcement

Harford County sworn officers per capita are compared using state and federal reports. The most recent federal report is from 2019. The 2020 Maryland Uniform Crime Report shows Harford County had 447 sworn officers. This represents a rate of 1.7 sworn officers per 1,000 residents. The County total of sworn officers breaks down to 312 in the Harford County Sheriff's Office, 32 in the Maryland State Police, as well as 41 in Aberdeen, 31 in Bel Air, and 31 in Havre de Grace.

PLANNING CONSISTENCY REVIEW

Harford County must submit an annual report that addresses specific smart growth measures and indicators that support the statewide land use goal of targeting development within designated Priority Funding Areas and minimizing development outside of these areas. Changes in development patterns occurring in 2021 that impact land use, transportation, community facilities patterns, zoning map amendments, and subdivision plats must be reported. Local jurisdictions, as part of their annual reporting, must determine if all changes in development patterns in 2021 reported are consistent with the following criteria:

- All changes must be consistent with each other;
- The recommendations of the last annual report;
- The adopted plans of the local jurisdictions;
- The adopted plans of all adjoining local jurisdictions; and
- The adopted plans of State and local jurisdictions that have responsibility for financing or constructing public improvements necessary to implement the local jurisdiction's plan.

No changes to land use were approved in 2021.

Development Patterns / Consistency of Plans

All 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 residential development and redevelopment (98 in 2020) to the Development Envelope. During 2021, all subdivisions approved were consistent with the intent and policies of the 2016 Master Plan, the Water and Sewer Master Plan, and Adequate Public Facilities regulations. All roadway improvements were consistent with the State Consolidated Transportation Plan, and the Transportation Improvement Plan. Changes in development patterns, ordinances, and regulations were found to be consistent with the adopted plans of Harford County, as well as those of the state and all adjoining local jurisdictions. These changes furthered the Twelve Visions established in § 1-201 of the Land Use Article of the Annotated Code of Maryland.

Municipal Plan Coordination

Harford County coordinates with the Town of Bel Air and the cities of Aberdeen and Havre de Grace on the creation of their growth plans. State law requires municipal jurisdictions to develop a Municipal Growth Element (MGE) as part of their Comprehensive Plan. The MGE must identify future municipal growth areas outside of the existing corporate limits and be submitted to the County for review and comment. Proposed annexations must be

consistent with those outlined in the Municipal Growth Element Plans and permitted development on the annexed lands shall be in accordance with the County's zoning classification that is in place at the time of the annexation.

Implementation

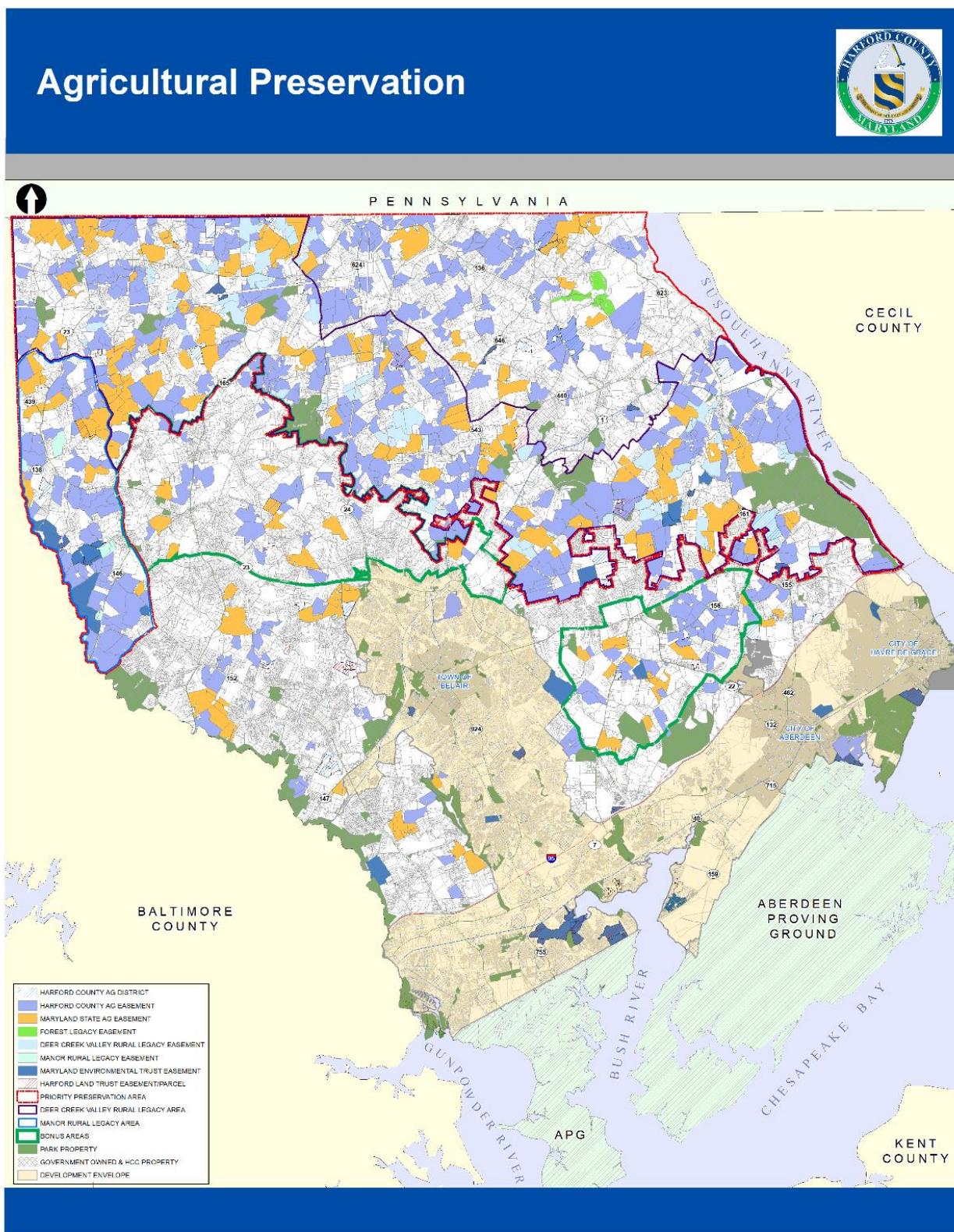
Harford County uses many tools to achieve the Visions, including Adequate Public Facilities (APF) legislation to manage growth by tying development to the capacity of existing government services such as water and sewer, roads, and schools. The County has developed implementation strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure, and transportation are integrated across the local, regional, State, and interstate levels to achieve these visions.

The Department of Planning and Zoning tracks approved subdivisions located in the Priority Preservation Area Designation (Tier IV) under the Maryland Sustainable Growth and Preservation Act of 2012 (SB 236) that were approved prior to the enactment of the regulations and therefore grandfathered. In 2018, the Department tracked three grandfathered preliminary plans comprised of 71 lots. These grandfathered plans shall remain valid through the tenure of their approval.

Agricultural Preservation

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 is protecting the Priority Preservation Area (PPA) (Figure 13). HarfordNEXT expanded the PPA boundary to include all lands north of the 2009 boundary and the Harford County portion of the Manor Rural Legacy Area. During 2021, 3,008 acres were preserved countywide, bringing the total protected land in the County to 59,799 acres at the end of 2021. Almost 25% of the county (excluding municipalities) is in some form of permanent preservation. Of the acreage protected in 2021, approximately 2,061 acres were located in the County's PPA, bringing the total amount of protected land in the PPA to 47,812 acres.

Figure 13



PROCESS IMPROVEMENTS

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

In 2021, The county Department of Planning and Zoning developed ALVIN: The Agricultural Land Valuation Index, a computer software program to modernize the establishment of a monetary value for land placed in agricultural preservation which was previously done manually. The ALVIN program uses the legislative approved evaluation worksheet and evaluates soil productivity, land quality, development potential, site location, and other factors to develop a valuation. Further, the program calculates a competitive ranking score which also uses the legislative approved ranking score sheet to prioritize the worthiness of parcels evaluated for inclusion in the county's agricultural preservation program.

Developed in-house by Planning and Zoning staff, the ALVIN program entirely automates the valuation and ranking process using the approved Legislative ranking and pricing worksheets. Written in Python and utilizing ESRI ArcGIS Pro software, ALVIN merges soil, vegetation and cadastral databases, combines the output with USDA site assessment data and performs the myriad weighted calculations necessary to establish farmland productivity and land quality ratings. Additionally, the program performs multiple proximity analyses to give value to the parcel's location relative to established preservation lands, targeted preservation areas, and conformity with county land planning goals. The ALVIN program documents all calculations and archives all output materials to meet the stringent requirements desired by county auditors.

Using the ALVIN program, preservation program administrators can now complete site evaluations in only minutes rather than hours or days for manual calculations. Assessments are more accurate, and the likelihood of mathematical errors has been completely removed.

Applicants to the preservation program enjoy greatly improved levels of service in a number of ways. In meetings with the preservation team, multiple scenarios can now be evaluated in a single session. Previously, this may have required repeated meetings with program staff.

The ALVIN program has resulted in a significant saving of county resources and has allowed the preservation team to spend a far greater percentage of their time promoting their preservation program, meeting with agricultural landowners, and engaging community stakeholders.

ORDINANCES AND/OR REGULATIONS THAT IMPLEMENT THE STATE PLANNING VISIONS

Harford County's Master Plan, HarfordNEXT, was adopted in June 2016 and is consistent with the 12 State Planning Visions. The various element plans, including the Land Use Element Plan, Natural Resources and Water Resources Element Plan, Historic Preservation Element Plan, and Transportation Element Plan have been incorporated into the 2016 Master Plan. The Land Preservation, Parks, and Recreation Element Plan is also consistent with the planning visions contained in the Land Use Article of the Maryland Code. 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.

METHODOLOGY

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. A component of the residential land inventory is the number of nets 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.

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. The population projections for the five other jurisdictions in the Baltimore Region are based on an interpolation of the Baltimore Metropolitan Council's Round 9 population forecast.

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:

- Births in a given year which affect subsequent kindergarten and first grade enrollments.
- Net migration of school age children.
- Net transfer of children between public and private schools.
- Non-promotion of children to the next grade level.
- Dropouts in the later years of secondary school.
- 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.

Development monitoring is a key activity to ensure accurate projections since 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 is a term which describes the number of pupils generated per dwelling. The pupil yield factor is used to assist in identifying the impact of residential development on the Harford County Public Schools (HCPS) system. The former method only looked at selected subdivisions. The data were tabulated by unit type, and the specific pupil yields were calculated for each subdivision in the elementary, middle, and high schools. Table 1 below provides a summary of the pupil yield factors by grade level.

Table 1 - Pupil Yield Factors

Unit Type	Grade Level		
	K – 5	6 - 8	9 - 12
Single-Family	0.17	0.09	0.12
Townhome	0.22	0.10	0.13
Apartments	0.15	0.06	0.06
Condominiums	0.07	0.04	0.04
Mobile Home	0.14	0.09	0.07

Source: Harford County Department of Planning and Zoning, 2018 Harford County Pupil Yield Study

The following example is included to illustrate how pupil yield factors are used to estimate new students generated by proposed residential development. In this example, it is estimated that 55 new students would be generated by a proposed 100-unit Single-Family detached (SFD) subdivision.

Table 2 - Estimating New Students Using Pupil Yield Factors (Proposed 100 SFD Subdivision)

Grade Level	Yield Factor	X	# of Dwelling Units (Single-family)	=	New Students
K- 5	0.17	X	100	=	23
6 - 8	0.09	X	100	=	9
9 - 12	0.12	X	100	=	12
TOTAL	0.44	X	100	=	44

Modified School Enrollment Methodology

Utilizing our regional cooperative Round 9 forecast, a projection of housing units was determined for each school district. 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.

Water and Sewer Facility Projection Methodology

Water:

The Harford County water service area is divided into four pressure zones due to 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 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.

Sewerage:

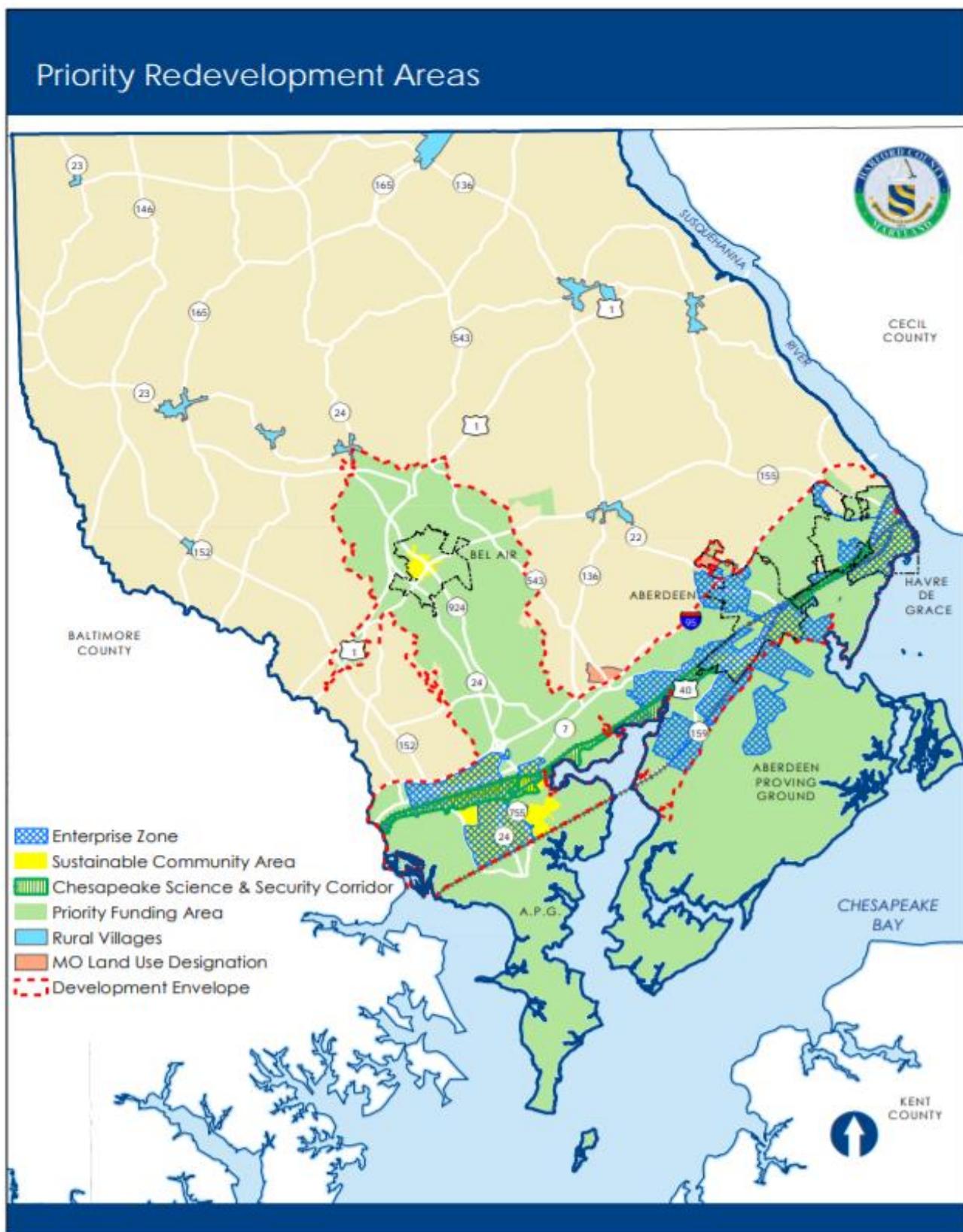
The sewerage system is similarly evaluated for adequacy to accommodate expected peak flows through collectors, interceptors, pump stations, force mains, and wastewater treatment plants. Should a capacity problem exist in a collector sewer, it is the developer's responsibility to resolve the inadequacy.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

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 "2019 Water and Sewer Adequate Public Facilities Report."

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 2035. 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.

Figure 14



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 projected to generate more than 249 trips per day. Proposed development located within the Chesapeake Science and Security Corridor (CSSC) (Figure 14) will not be required to submit a TIA unless the proposed use is expected to generate 1,500 trips per day. The TIA provides information regarding the impact of generated trips from proposed land uses

Road Intersection Analysis Methodology

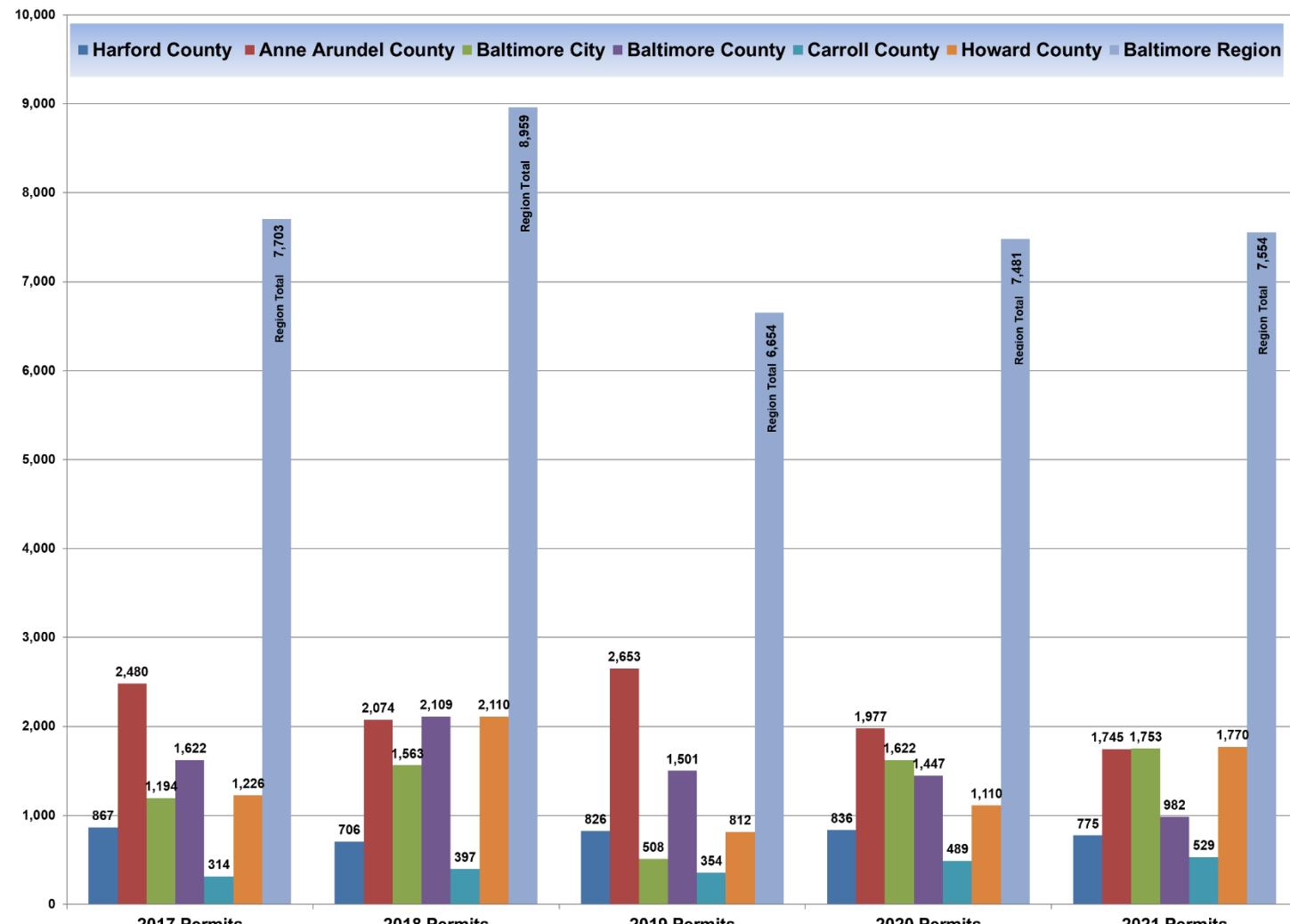
A key feature of the APF Road Intersection regulations is the requirement for preparation of a Traffic Impact Analysis (TIA) for residential and non-residential uses that are on traffic safety and traffic operation within a designated area and recommends solutions to mitigate the impact. The method of conducting a TIA is outlined in the "Harford County Traffic Impact Analysis Guidelines." Functional classification road as defined by the Harford County Transportation Plan.

All TIA's shall include:

- 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 Level-of-Service (LOS) 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.

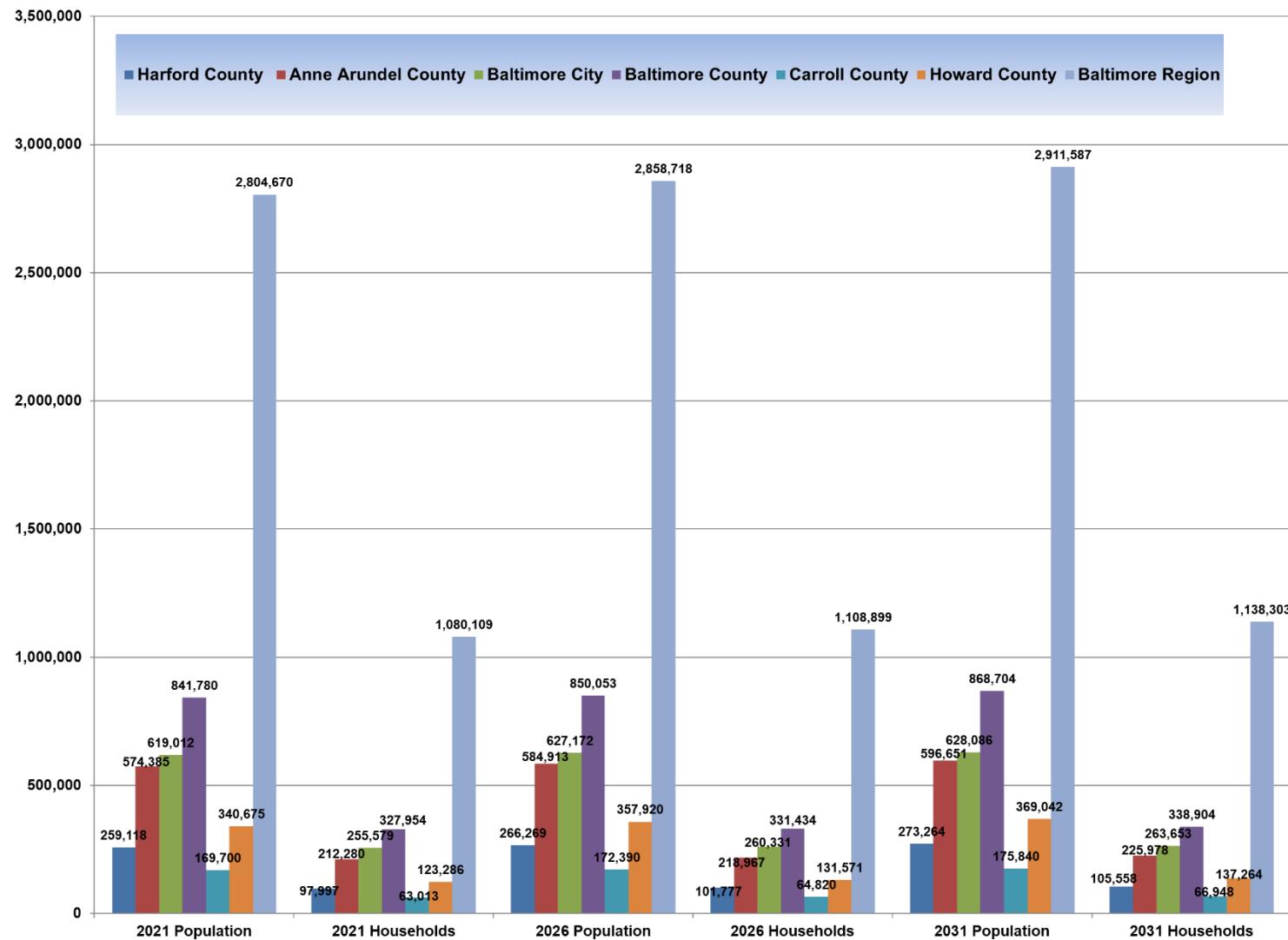
APPENDIX A

Table 1A Harford County - Baltimore Region Residential Permit Activity: 2017 - 2021



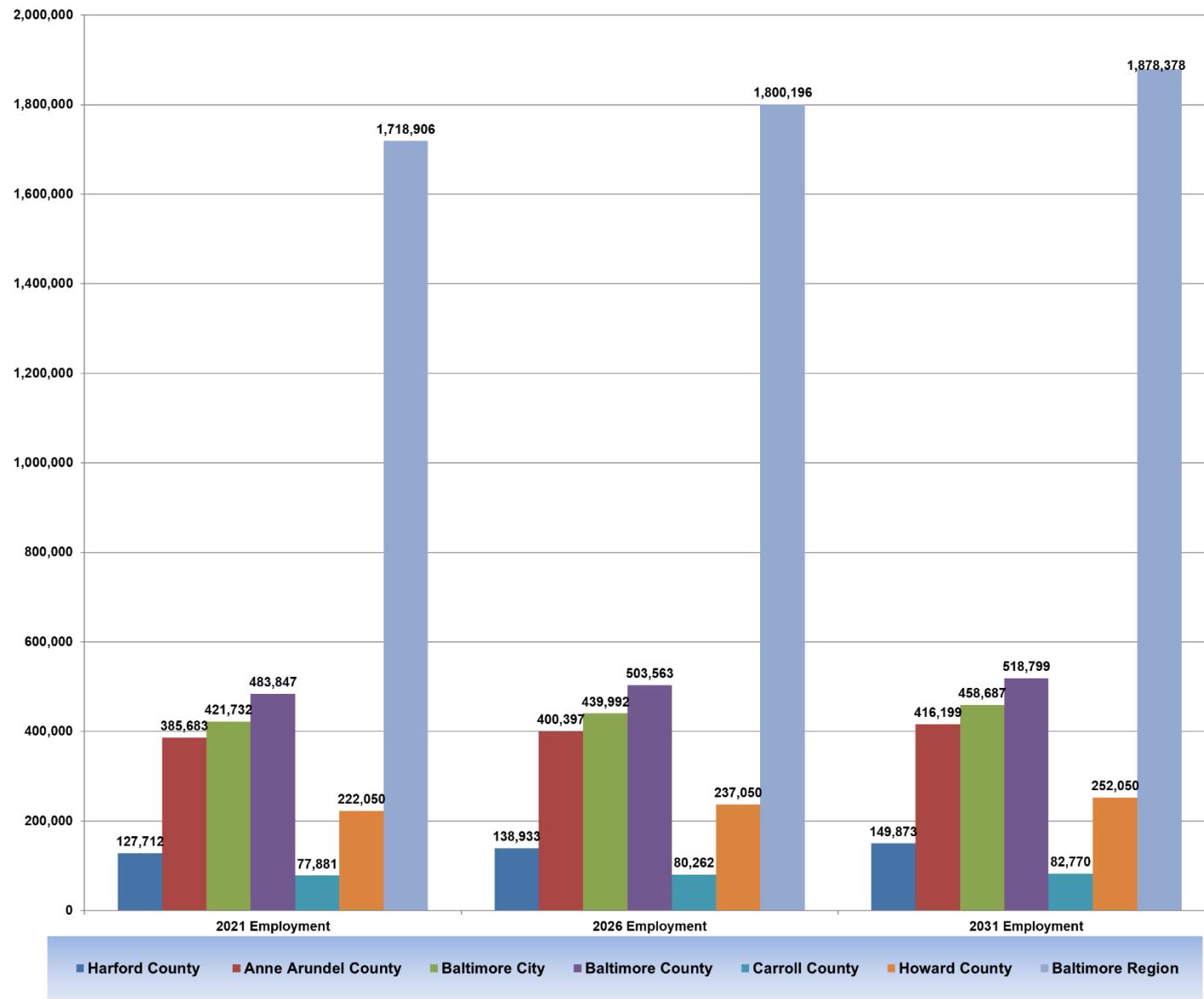
Source: Baltimore Metropolitan Council, May 2021

Table 2A Harford County - Baltimore Region Population and Household Projections: 2021 - 2031



Source: Baltimore Metropolitan Council, May 2021

Table 3A Harford County - Baltimore Region Employment Projections: 2021 - 2031



Source: Baltimore Metropolitan Council, May 2021

Harford County Non-Residential Permit Activity

New Permits Valued \$50,000 and Over

Permit Type	2017		2018		2019		2020		2021	
	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage	# of Permits	Square Footage
Commercial	2	16,091	5	46,824	10	221,274	3	16,400	3	10,739
Industrial	2	663,880	4	865,212	4	24,986	0	0	3	88,060
Institutional	0	0	1	250,111	6	60,680	3	96,215	0	0
Utilities	0	0	0	0	0	0	0	0	2	7657
Other	0	0	0	0	0	0	3	7312	2	11180
Total	4	679,971	10	1,162,147	20	306,940	9	119,927	10	117,636

Source: Baltimore Metropolitan Council, May 2021

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

Permit Type	2017		2018		2019		2020		2021	
	# of Permits	Square Footage								
Commercial	23	N/A	23	N/A	8	N/A	6	N/A	9	N/A
Industrial	3	N/A	5	N/A	6	N/A	1	N/A	2	N/A
Institutional	2	N/A	5	N/A	2	N/A	5	N/A	5	N/A
Utilities	0	N/A	6	N/A	0	N/A	0	N/A	0	N/A
Total	28	N/A	39	N/A	16	N/A	12	N/A	16	N/A

NA: Data Not Available

Source: Baltimore Metropolitan Council, May 2021

APPENDIX B

FIGURE 1B

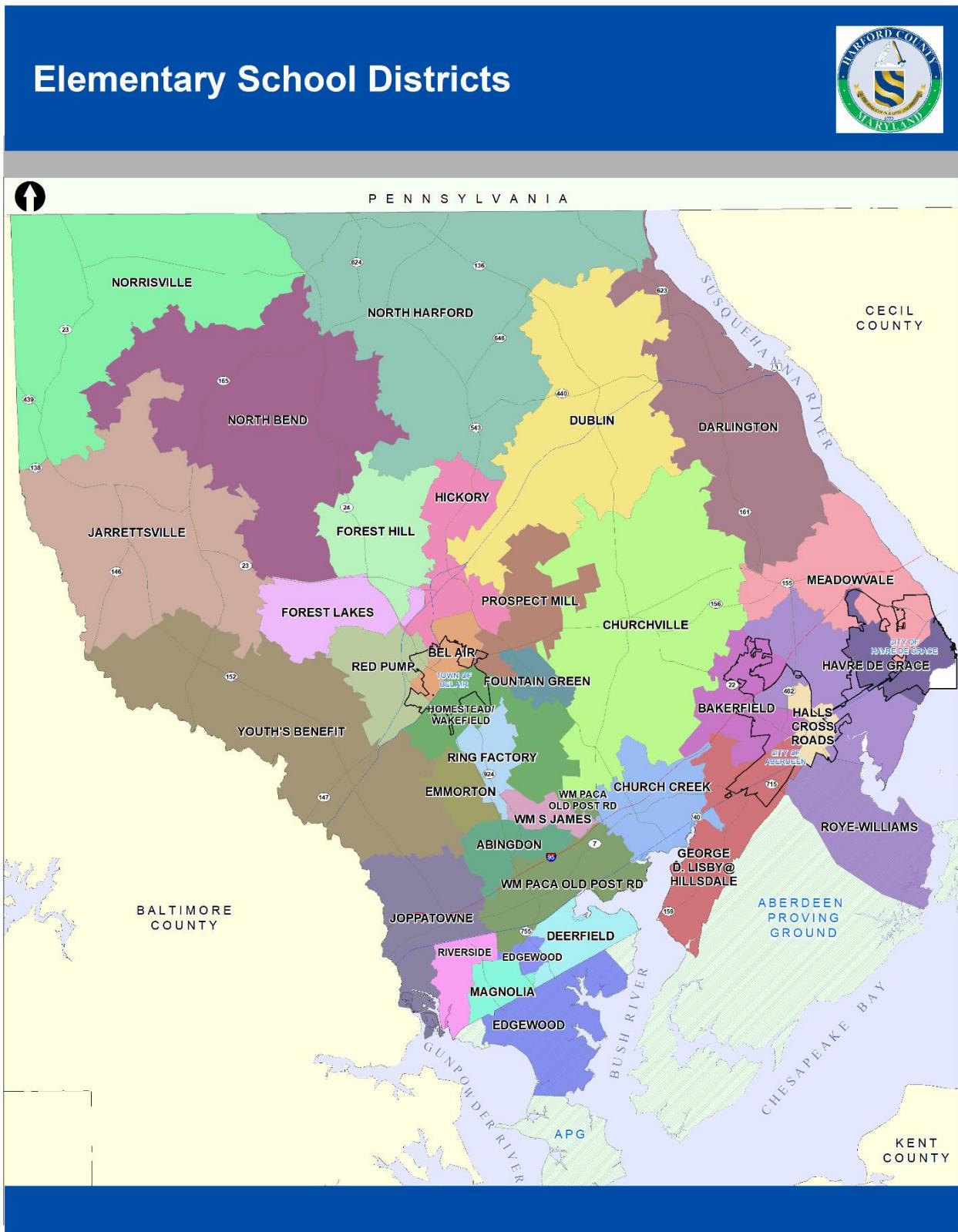


Table 6B

Elementary School	State-Rated Capacity	Actual			Projected				
		2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025				
	ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.	ENROLL	% UTIL.	
Abingdon	863	623	72.19%	624	72%	635	74%	645	75%
Bakerfield	500	421	84.20%	432	86%	434	87%	428	86%
Bel Air	486	530	109.05%	532	109%	535	110.08%	537	110.49%
Church Creek	819	681	83.15%	693	85%	677	83%	691	84%
Churchville	411	329	80.05%	326	79%	330	80%	331	81%
Darlington	157	100	63.69%	105	67%	103	66%	99	63%
Deerfield	788	734	93.15%	737	94%	736	93%	754	96%
Dublin	294	214	72.79%	224	76%	219	74%	217	74%
Edgewood	461	375	81.34%	390	85%	394	85%	398	86%
Emmorton*	570	546	95.79%	546	96%	545	96%	545	96%
Forest Hill	568	467	82.22%	482	85%	492	87%	487	86%
Forest Lakes	569	462	81.20%	463	81%	463	81%	464	82%
Fountain Green	548	444	81.02%	455	83%	454	83%	448	82%
G. Lisby at Hillsdale	455	475	104.40%	471	104%	468	103%	465	102%
Hall's Cross Roads	552	439	79.53%	442	80%	445	81%	448	81%
Havre de Grace	542	603	111.25%	607	112%	611	113%	615	113%
Hickory	668	632	94.61%	638	96%	651	97%	663	99%
Homestead/Wakefield*	920	1,047	113.80%	1,051	114%	1,058	115%	1,062	115%
Jarrettsville	525	440	83.81%	457	87%	453	86%	447	85%
Joppatowne	663	509	76.77%	500	75%	500	75%	509	77%
Magnolia*	561	514	91.62%	511	91%	526	94%	531	95%
Meadowvale	568	477	83.98%	483	85%	489	86%	495	87%
Norrisville	274	207	75.55%	207	76%	204	74%	211	77%
North Bend	498	414	83.13%	414	83%	414	83%	414	83%
North Harford	500	348	69.60%	351	70%	356	71%	362	72%
Prospect Mill	611	561	91.82%	577	94%	562	92%	572	94%
Red Pump*	737	755	102.44%	758	103%	772	105%	761	103%
Ring Factory	548	523	95.44%	525	96%	527	96%	529	97%
Riverside	588	404	68.71%	416	71%	421	72%	426	72%
Roye-Williams	703	430	61.17%	436	62%	442	63%	448	64%
Wm. Paca / Old Post Rd.	984	807	82.01%	810	82%	816	83%	820	83%
Wm. S. James	526	470	89.35%	473	90%	476	90%	479	91%
Youth's Benefit	1,120	1,103	98.48%	1,118	100%	1,134	101%	1,149	103%
TOTAL	19,577	17,084	87.27%	17,254	88%	17,342	89%	17,450	89%

*Note: preliminary subdivisions and residential site plans of greater than five lots/units will not be approved in attendance areas that are shaded.

Source: Harford County Public Schools & Dept. of Planning and Zoning, November 2021.

Table 7B

Harford County Modified Elementary School Enrollment Projections								
School District	2021	2022	2023	2024	2025	2026	2027	2028
Abingdon	623	624	635	645	652	655	663	660
Bakerfield	421	432	434	428	427	425	422	423
Bel Air	530	532	535	537	540	542	544	547
Church Creek	681	693	677	691	696	702	701	701
Churchville	329	326	330	331	335	340	347	346
Darlington	100	105	103	99	103	103	96	98
Deerfield	734	737	736	754	735	736	736	736
Dublin	214	224	219	217	218	226	224	225
Edgewood	375	390	394	398	394	405	396	398
Emmorton	546	546	545	545	534	547	549	549
Forest Hill	467	482	492	487	503	502	495	495
Forest Lakes	462	463	463	464	465	465	466	467
Fountain Green	444	455	454	448	461	446	444	441
G. Lisby at Hillsdale	475	471	468	465	468	471	474	470
Hall's Cross Roads	439	442	445	448	451	454	457	460
Havre de Grace	603	607	611	615	619	623	627	620
Hickory	632	638	651	663	662	656	655	654
Homestead/Wakefield	1,047	1,051	1,058	1,062	1,081	1,087	1,087	1,087
Jarrettsville	440	457	453	447	455	458	449	451
Joppatowne	509	500	500	509	520	530	534	533
Magnolia	514	511	526	531	536	540	533	535
Meadowvale	477	483	489	495	501	507	513	519
Norrisville	207	207	204	211	219	222	221	221
North Bend	414	414	414	414	414	414	414	414
North Harford	348	351	356	362	367	372	365	367
Prospect Mill	561	577	562	572	560	562	568	567
Red Pump	755	758	772	761	752	755	762	762
Ring Factory	523	525	527	529	531	533	535	537
Riverside	404	416	421	426	431	436	441	446
Roye-Williams	430	436	442	448	454	460	466	472
Wm. Paca / Old Post Rd.	807	810	816	820	823	826	829	832
Wm. S. James	470	473	476	479	482	485	488	490
Youth's Benefit	1,103	1,118	1,134	1,149	1,165	1,181	1,197	1,214
Total	17,084	17,254	17,342	17,450	17,554	17,666	17,698	17,737

Source: Harford County Dept. of Planning and Zoning, May 2019.

Table 8B

ELEMENTARY SCHOOL	Harford County Residential Building Permit Activity By Elementary School District: 2017 - 2021																									
	2017					2018					2019					2020										
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE										
	SF	TH	APT/ CO	MH	TOT L	SF	TH	APT/ CO	MH	TOTAL	SF	TH	APT/ CO	MH	TOT L	SF	TH	APT/ CO	MH	TOT L	SF	TH	APT/ CO	MH	TOT L	
Abingdon	12	11	138	0	161	9	0	0	0	9	1	0	57	0	58	0	0	0	0	0	0	0	0	0	0	
Bakerfield	0	0	0	0	0	2	0	0	0	2	3	0	0	0	3	73	0	0	0	73	23	0	0	0	23	
Bel Air	3	0	0	0	3	1	0	0	0	1	0	12	8	0	20	4	0	0	0	4	4	0	0	0	4	
Church Creek	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	61	0	0	61
Churchville	4	0	0	0	4	3	0	0	0	3	9	0	0	0	9	7	0	0	0	7	2	0	0	0	2	
Darlington	1	0	0	1	2	2	0	0	0	2	3	0	0	0	3	2	0	0	0	2	2	0	0	0	2	
Deerfield	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
Dublin	8	0	0	1	9	5	0	0	0	5	5	0	0	0	5	7	0	0	1	8	5	0	0	0	5	
Edgewood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Emmorton	21	0	0	0	21	39	0	0	0	39	32	0	0	0	32	13	0	0	0	13	0	0	0	0	0	
Forest Hill	23	0	0	0	23	18	0	0	0	18	14	0	0	0	14	9	0	0	0	9	0	0	0	0	0	
Forest Lakes	3	0	0	0	3	3	0	0	0	3	1	0	0	0	1	2	0	0	0	2	3	0	0	0	3	
Fountain Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
G. Lisby at Hillsdale	9	0	0	0	9	33	6	0	0	39	124	139	0	0	263	152	89	0	0	241	43	0	0	0	43	
Hall's Cross Roads	3	0	0	0	3	0	0	0	0	3	0	0	0	3	1	0	0	0	1	2	0	5	0	7		
Havre de Grace	52	64	0	0	116	81	40	0	0	121	36	13	0	0	49	16	21	0	0	37	53	2	52	0	107	
Hickory	11	0	0	0	11	22	0	0	0	22	0	0	0	0	0	1	0	72	0	73	1	0	0	1		
Homestead/Wakefield	20	37	0	0	57	29	51	0	0	80	47	40	39	0	126	77	27	0	0	104	5	22	0	0	27	
Jarrettsville	7	0	0	1	8	11	0	0	0	11	16	0	0	0	16	11	0	0	0	11	7	0	0	0	7	
Joppatowne	0	0	0	0	0	3	0	0	0	3	1	0	0	0	1	2	0	0	0	2	2	0	0	0	2	
Magnolia	33	0	0	0	33	10	48	0	0	58	0	0	0	0	0	0	20	0	0	20	0	24	0	0	24	
Meadowvale	5	0	0	0	5	0	0	0	0	0	2	37	0	0	39	0	0	0	0	0	3	2	0	0	5	
Norrisville	12	0	0	0	12	10	0	0	0	10	4	0	0	1	5	9	0	0	0	9	7	0	0	0	7	
North Bend	26	0	0	1	27	14	0	0	1	15	8	0	0	0	8	10	0	0	0	10	21	0	0	0	21	
North Harford	16	0	0	0	16	18	0	0	0	18	6	0	0	0	6	19	0	0	0	19	26	0	0	0	26	
Prospect Mill	0	14	0	0	14	9	58	0	0	67	32	55	0	0	87	32	17	0	0	49	24	0	10	0	34	
Red Pump	11	0	0	0	11	17	0	37	0	54	6	0	0	0	6	3	0	0	0	3	9	0	0	0	9	
Ring Factory	4	0	0	1	5	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	4	0	0	0	4	
Riverside	1	9	0	0	10	1	0	0	0	1	1	0	0	0	1	4	9	0	0	13	1	25	0	0	26	
Roye-Williams	20	0	144	0	164	4	3	0	0	7	3	0	0	0	3	1	0	0	1	2	3	0	237	0	240	
Wm. Paca/Old Post Rd	4	11	0	0	15	12	22	0	0	34	11	0	0	0	11	0	0	0	0	0	3	0	0	0	3	
Wm. S. James	18	28	0	0	46	23	8	0	0	31	25	0	0	0	25	33	0	0	0	33	5	3	0	0	8	
Youth's Benefit	46	33	0	0	79	48	0	0	0	48	28	0	0	0	28	36	0	56	0	92	16	40	0	0	56	
TOTAL	375	207	282	5	869	430	236	37	1	704	422	296	104	1	823	524	183	128	2	837	276	179	304	0	759	

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2021.

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

Table 9B

Harford County Population and Households By Elementary School District: 2017 - 2021

Elementary School	2017*		2018*		2019*		2020*		2021*	
	Households	Population								
Abingdon	5,097	13,568	5,250	13,961	5,259	13,984	5,314	14,130	5,314	14,130
Bakerfield	2,585	6,880	2,585	6,873	2,586	6,878	2,589	6,886	2,659	7,070
Bel Air	3,057	8,137	3,060	8,137	3,061	8,139	3,080	8,190	3,083	8,200
Church Creek	4,057	10,800	4,058	10,791	4,059	10,794	4,059	10,794	4,059	10,794
Churchville	2,494	6,638	2,497	6,641	2,500	6,649	2,509	6,671	2,515	6,689
Darlington	1,014	2,698	1,017	2,706	1,019	2,711	1,022	2,718	1,024	2,723
Deerfield	3,267	8,696	3,268	8,690	3,269	8,692	3,269	8,692	3,269	8,692
Dublin	1,704	4,535	1,712	4,554	1,717	4,566	1,722	4,579	1,729	4,599
Edgewood	1,256	3,342	1,256	3,339	1,256	3,339	1,256	3,339	1,256	3,339
Emmorton	2,741	7,296	2,761	7,342	2,798	7,440	2,828	7,521	2,841	7,554
Forest Hill	2,445	6,509	2,467	6,560	2,484	6,606	2,497	6,641	2,506	6,664
Forest Lakes	2,855	7,600	2,858	7,600	2,861	7,608	2,862	7,610	2,864	7,615
Fountain Green	1,899	5,054	1,899	5,049	1,899	5,049	1,899	5,049	1,899	5,049
G. Lisby at Hillsdale	2,520	6,708	2,528	6,724	2,565	6,822	2,815	7,486	3,044	8,094
Hall's Cross Roads	2,006	5,341	2,008	5,341	2,008	5,341	2,011	5,348	2,012	5,351
Havre de Grace	3,813	10,149	3,921	10,427	4,036	10,732	4,082	10,856	4,117	10,949
Hickory	3,025	8,051	3,035	8,071	3,056	8,127	3,056	8,127	3,125	8,311
Homestead/Wakefield	5,590	14,880	5,644	15,009	5,720	15,211	5,839	15,529	5,938	15,791
Jarrettsville	2,793	7,436	2,801	7,449	2,811	7,476	2,827	7,517	2,837	7,545
Joppatowne	3,860	10,276	3,860	10,265	3,863	10,273	3,864	10,276	3,866	10,281
Magnolia	1,819	4,841	1,850	4,919	1,905	5,066	1,905	5,066	1,924	5,116
Meadowvale	2,634	7,013	2,639	7,018	2,639	7,018	2,676	7,117	2,676	7,117
Norrisville	1,290	3,433	1,301	3,460	1,310	3,485	1,315	3,497	1,324	3,520
North Bend	2,303	6,131	2,330	6,196	2,344	6,234	2,352	6,254	2,361	6,279
North Harford	2,385	6,348	2,400	6,382	2,417	6,427	2,423	6,443	2,441	6,490
Prospect Mill	2,867	7,631	2,878	7,653	2,942	7,822	3,024	8,042	3,071	8,166
Red Pump	4,279	11,390	4,289	11,407	4,341	11,543	4,346	11,558	4,349	11,566
Ring Factory	2,727	7,260	2,732	7,265	2,733	7,268	2,734	7,270	2,734	7,270
Riverside	2,507	6,675	2,517	6,693	2,518	6,696	2,519	6,698	2,531	6,731
Roye-Williams	1,970	5,243	2,125	5,652	2,132	5,669	2,135	5,677	2,137	5,682
Wm. Paca/Old Post Rd	4,626	12,315	4,641	12,341	4,673	12,427	4,683	12,454	4,683	12,454
Wm. S. James	2,008	5,345	2,052	5,456	2,081	5,534	2,105	5,597	2,136	5,681
Youth's Benefit	5,407	14,394	5,482	14,579	5,528	14,700	5,555	14,771	5,642	15,003
TOTAL	94,898	252,615	95,721	254,549	96,389	256,326	97,170	258,403	97,964	260,515

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

Source: Harford County Dept. of Planning & Zoning, May 2021.

FIGURE 2B



Middle School Districts

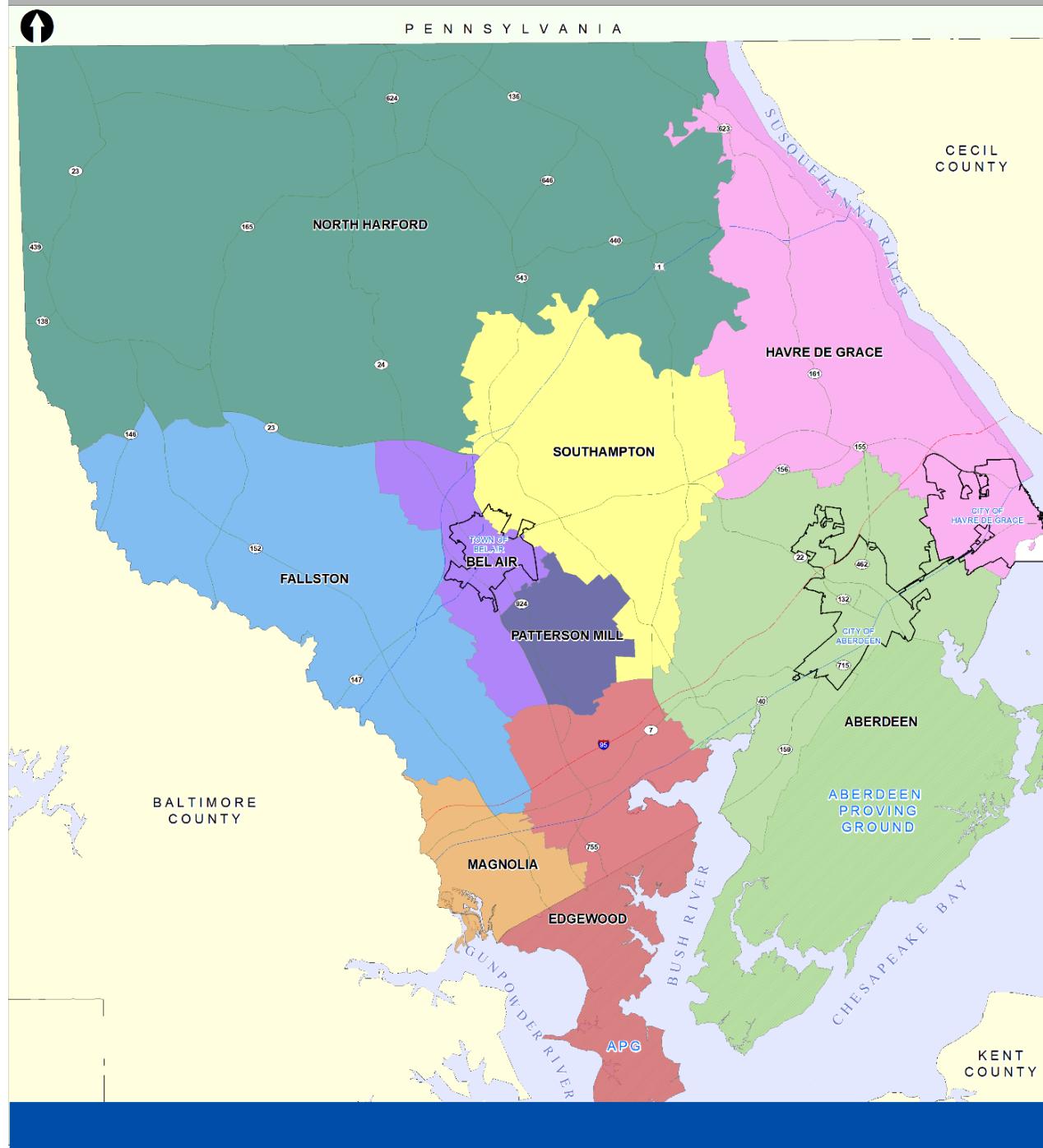


Table 10B

Middle School	State-Rated Capacity	Actual				Projected			
		2021 - 2022		2022 - 2023		2023 - 2024		2024 - 2025	
		ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1,624	1,075	66%	1,090	67%	1,105	68%	1,120	69%
Bel Air	1,243	1,354	109%	1,314	106%	1,333	107%	1,389	112%
Edgewood	1,295	1,046	81%	1,026	79%	1,018	79%	1,064	82%
Fallston	1,063	894	84%	926	87%	963	91%	957	90%
Havre de Grace	733	626	85%	640	87%	654	89%	668	91%
Magnolia	1,028	735	71%	739	72%	744	72%	748	73%
North Harford	1,210	895	74%	860	71%	878	73%	874	72%
Patterson Mill	731	758	104%	767	105%	778	106%	754	103%
Southampton	1,444	1,136	79%	1,126	78%	1,161	80%	1,173	81%
Total	10,371	8,519	82%	8,488	82%	8,634	83%	8,747	84%

Source: Harford County Public Schools & Dept. of Planning and Zoning, November 2021.

Table 11B

Harford County Modified Middle School Enrollment Projections								
School District	2021	2022	2023	2024	2025	2026	2027	2028
Aberdeen	1,075	1,090	1,105	1,120	1,135	1,150	1,165	1,180
Bel Air	1,354	1,314	1,333	1,389	1,407	1,409	1,411	1,414
Edgewood	1,046	1,026	1,018	1,064	1,091	1,089	1,083	1,071
Fallston	894	926	963	957	940	941	941	945
Havre de Grace	626	640	654	668	683	698	713	729
Magnolia	735	739	744	748	753	757	762	767
North Harford	895	860	878	874	897	900	900	897
Patterson Mill	758	767	778	754	760	766	769	770
Southampton	1,136	1,126	1,161	1,173	1,204	1,203	1,196	1,190
Total	8,519	8,488	8,634	8,747	8,870	8,913	8,940	8,963

Source: Harford County Dept. of Planning and Zoning, May, 2021.

Table 12B

MIDDLE SCHOOL	Harford County Residential Building Permit Activity By Middle School District: 2017 - 2021																								
	2017					2018					2019					2020									
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE									
	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	33	0	144	0	177	39	6	0	0	45	134	139	0	0	273	227	89	0	1	317	72	61	242	0	375
Bel Air	37	33	0	0	70	70	49	37	0	156	59	49	47	0	155	44	0	0	0	44	10	0	0	0	10
Edgewood	18	22	138	0	178	21	22	0	0	43	15	0	57	0	72	2	0	0	0	2	5	0	0	0	5
Fallston	48	33	0	1	82	64	0	0	0	64	36	0	0	0	36	48	0	56	0	104	21	40	0	0	61
Havre de Grace	57	64	0	1	122	83	43	0	0	126	43	50	0	0	93	19	21	0	0	40	57	4	52	0	113
Magnolia	34	9	0	0	43	13	48	0	0	61	1	0	0	0	1	5	29	0	0	34	3	49	0	0	52
North Harford	90	0	0	2	92	69	0	0	1	70	46	0	0	1	47	58	0	0	1	59	62	0	0	0	62
Patterson Mill	40	32	0	1	73	35	10	0	0	45	48	3	0	0	51	78	27	0	0	105	14	25	0	0	39
Southampton	18	14	0	0	32	36	58	0	0	94	40	55	0	0	95	43	17	72	0	132	32	0	10	0	42
TOTAL	375	207	282	5	869	430	236	37	1	704	422	296	104	1	823	524	183	128	2	837	276	179	304	0	759

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2021.

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

Table 13B

SCHOOL	Harford County Population and Households By Middle School District: 2017 - 2021									
	2017*		2018*		2019*		2020*		2021*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	13,774	36,665	13,941	37,073	13,984	37,186	14,243	37,875	14,543	38,675
Bel Air	14,574	38,794	14,640	38,932	14,788	39,326	14,935	39,717	14,977	39,828
Edgewood	14,232	37,884	14,401	38,295	14,441	38,404	14,510	38,586	14,512	38,591
Fallston	9,426	25,092	9,504	25,274	9,565	25,436	9,599	25,526	9,698	25,789
Havre de Grace	7,673	20,425	7,789	20,712	7,908	21,030	7,997	21,265	8,034	21,366
Magnolia	8,070	21,481	8,110	21,568	8,168	21,722	8,169	21,725	8,202	21,810
North Harford	10,596	28,205	10,684	28,412	10,750	28,589	10,795	28,707	10,851	28,856
Patterson Mill	6,422	17,095	6,491	17,261	6,534	17,374	6,582	17,503	6,682	17,768
Southampton	10,133	26,973	10,161	27,022	10,250	27,259	10,341	27,499	10,466	27,832
TOTAL	94,898	252,615	95,721	254,549	96,389	256,326	97,170	258,403	97,965	260,515

* 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 2021.

FIGURE 3B

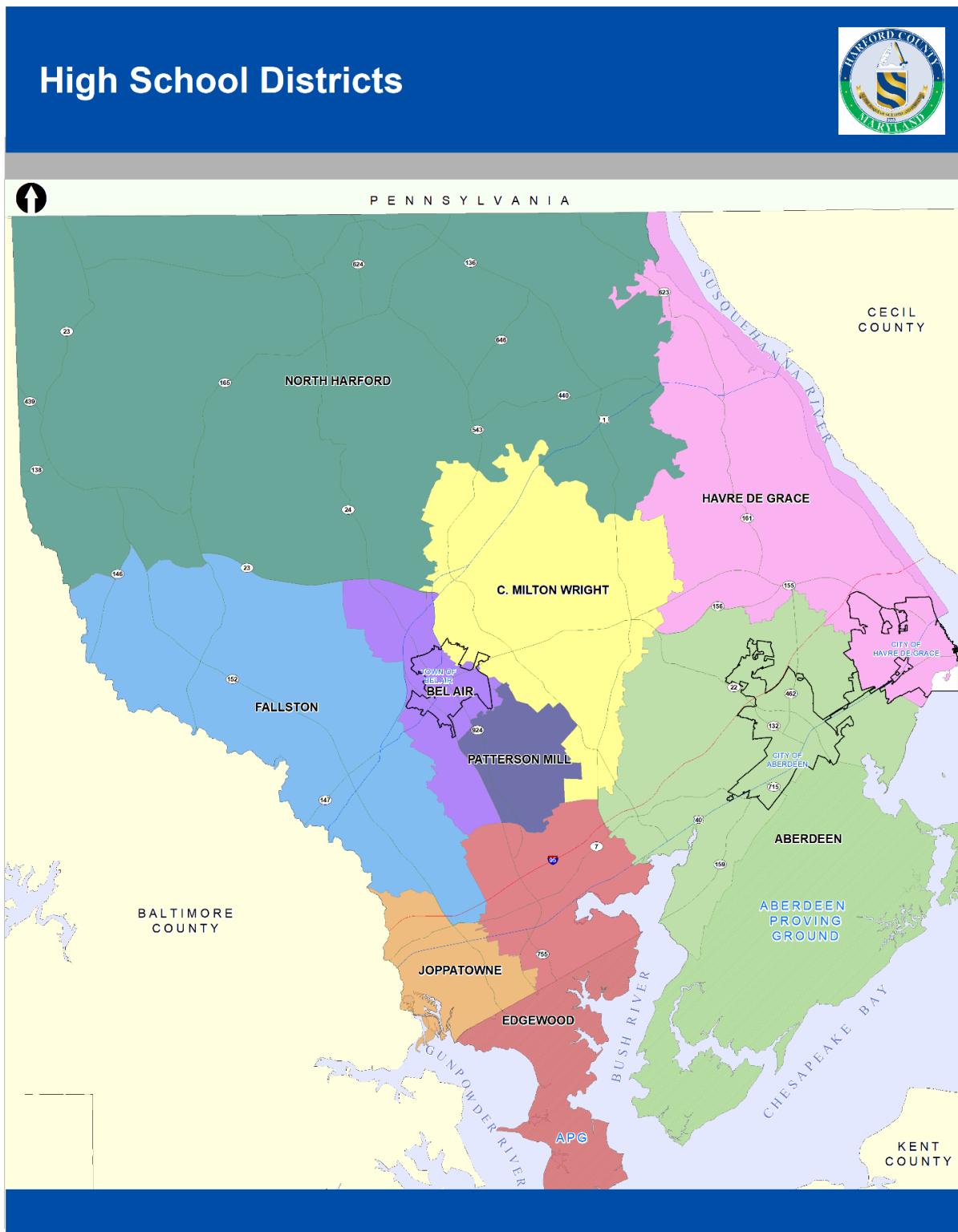


Table 14B

High School	State-Rated Capacit	Actual				Projected			
		2021 -2022	2022 -2023	2023 -2024	2024 -2025				
	Y	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1,720	1,471	86%	1,517	88%	1,565	91%	1,584	92%
Bel Air	1,768	1,523	86%	1,578	89%	1,564	88%	1,550	88%
C. Milton Wright	1,613	1,331	83%	1,286	80%	1,325	82%	1,340	83%
Edgewood	1,716	1,400	82%	1,402	82%	1,420	83%	1,466	85%
Fallston	1,573	982	62%	1,000	64%	1,012	64%	1,008	64%
Harford Technical	1,135	992	87%	989	87%	986	87%	984	87%
Havre de Grace	835	772	92%	810	97%	816	98%	822	98%
Joppatowne	1,056	788	75%	800	76%	807	76%	814	77%
North Harford	1,538	1,221	79%	1,229	80%	1,218	79%	1,250	81%
Patterson Mill	992	802	81%	820	83%	825	83%	829	84%
Total	13,946	11,282	81%	11,431	82%	11,538	83%	11,647	84%

Source: Harford County Public Schools & Dept. of Planning and Zoning, November, 2021.

Table 15B

Harford County Modified High School Enrollment Projections

School District	2021	2022	2023	2024	2025	2026	2027	2028
Aberdeen	1471	1517	1565	1584	1551	1549	1558	1567
Bel Air	1523	1578	1564	1550	1542	1486	1490	1498
C. Milton Wright	1331	1286	1325	1340	1338	1351	1348	1348
Edgewood	1400	1402	1420	1466	1427	1446	1449	1455
Fallston	982	1000	1012	1008	1014	1017	1022	1022
Harford Technical	992	989	986	984	981	978	976	973
Havre de Grace	772	810	816	822	828	834	840	835
Joppatowne	788	800	807	814	821	828	835	840
North Harford	1221	1229	1218	1250	1237	1240	1239	1241
Patterson Mill	802	820	825	829	833	836	840	838
Total	11,282	11,431	11,538	11,647	11,572	11,565	11,597	11,617

Source: Harford County Public Schools & Dept. of Planning and Zoning, November, 2021.

Table 16B

Harford County Residential Building Permit Activity By High School District: 2017 -2021																									
HIGH SCHOOL	2017					2018					2019					2020					2021				
	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				
	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	33	0	144	0	177	39	6	0	0	45	134	139	0	0	273	227	89	0	1	317	72	61	242	0	375
Bel Air	37	33	0	0	70	70	49	37	0	156	59	49	47	0	155	44	0	0	0	44	10	0	0	0	10
C.M. Wright	18	14	0	0	32	36	58	0	0	94	40	55	0	0	95	43	17	72	0	132	32	0	10	0	42
Edgewood	18	22	138	0	178	21	22	0	0	43	15	0	57	0	72	2	0	0	0	2	5	0	0	0	5
Fallston	48	33	0	1	82	64	0	0	0	64	36	0	0	0	36	48	0	56	0	104	21	40	0	0	61
Havre de Grace	57	64	0	1	122	83	43	0	0	126	43	50	0	0	93	19	21	0	0	40	57	4	52	0	113
Joppatowne	34	9	0	0	43	13	48	0	0	61	1	0	0	0	1	5	29	0	0	34	3	49	0	0	52
North Harford	90	0	0	2	92	69	0	0	1	70	46	0	0	1	47	58	0	0	1	59	62	0	0	0	62
Patterson Mill	40	32	0	1	73	35	10	0	0	45	48	3	0	0	51	78	27	0	0	105	14	25	0	0	39
TOTAL	375	207	282	5	869	430	236	37	1	704	422	296	104	1	823	524	183	128	2	837	276	179	304	0	759

* Note: Permit totals revised to reflect cancelled permits.

Source: Harford County Dept. of Planning & Zoning, May 2021.

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

Table 17B

SCHOOL	Harford County Population and Households By High School District: 2017 - 2021									
	2017*		2018*		2019*		2020*		2021*	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	13,774	36,665	13,941	37,073	13,984	37,186	14,243	37,875	14,543	38,675
Bel Air	14,574	38,794	14,640	38,932	14,788	39,326	14,935	39,717	14,977	39,828
C. Milton Wright	10,133	26,973	10,161	27,021	10,250	27,258	10,341	27,498	10,466	27,831
Edgewood	14,232	37,884	14,401	38,295	14,441	38,404	14,510	38,586	14,512	38,591
Fallston	9,426	25,092	9,504	25,274	9,565	25,436	9,599	25,526	9,698	25,789
Havre de Grace	7,673	20,425	7,789	20,712	7,908	21,030	7,997	21,265	8,034	21,366
Joppatowne	8,070	21,481	8,110	21,568	8,168	21,722	8,169	21,725	8,202	21,810
North Harford	10,596	28,205	10,684	28,412	10,750	28,589	10,795	28,707	10,851	28,856
Patterson Mill	6,422	17,095	6,495	17,272	6,538	17,386	6,586	17,515	6,686	17,780
TOTAL	94,898	252,615	95,725	254,560	96,393	256,337	97,174	258,414	97,969	260,526

* 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 2021.

APPENDIX C

Table 18C

JANUARY - DECEMBER 2021			
WATER CONSUMPTION & SEWAGE GENERATION			
Total Number of Accounts	Retail	Water and Sewer	41,421
		Water Only	1,561
		Sewer Only	3,173
	Wholesale	Water Only	16
		Sewer Only	3
	Total	Water and Sewer	46,174
WATER			
Total Number of Water Accounts (VBA)	Retail	Water	42,982
	Wholesale	Water	16
Average Daily Water Production Total Retail and Wholesale Customers	13.01 MGD		
Maximum Day Water Production Total Retail and Wholesale Customers	15.64 MGD		
Average Water Usage per Account – All Retail Accounts	194 MGD		
Average Residential Water Usage per Account – Retail Accounts	166 MGD		
Average Commercial / Industrial Water Usage per Account – Retail Accounts	1295 MGD		
SEWAGE			
Total Number of Sewer Accounts	Retail	Sewer	44,594
	Wholesale	Sewer	3
Average Treated Sewage Flow – Total Retail and Wholesale Customers	11.69 MGD		
Maximum Day Treated Sewage Flow – Total Retail and Wholesale Customers	19.56 MGD		
Average Sewage Generation per Account – All Retail Accounts	194 MGD		
Average Residential Sewage Generation per Account – Retail Accounts	166 MGD		
Average Commercial / Industrial Sewage Generation per Account – Retail Accounts	1295 MGD		

Note: MGD = Million Gallons per Day, GPD = Gallons per Day

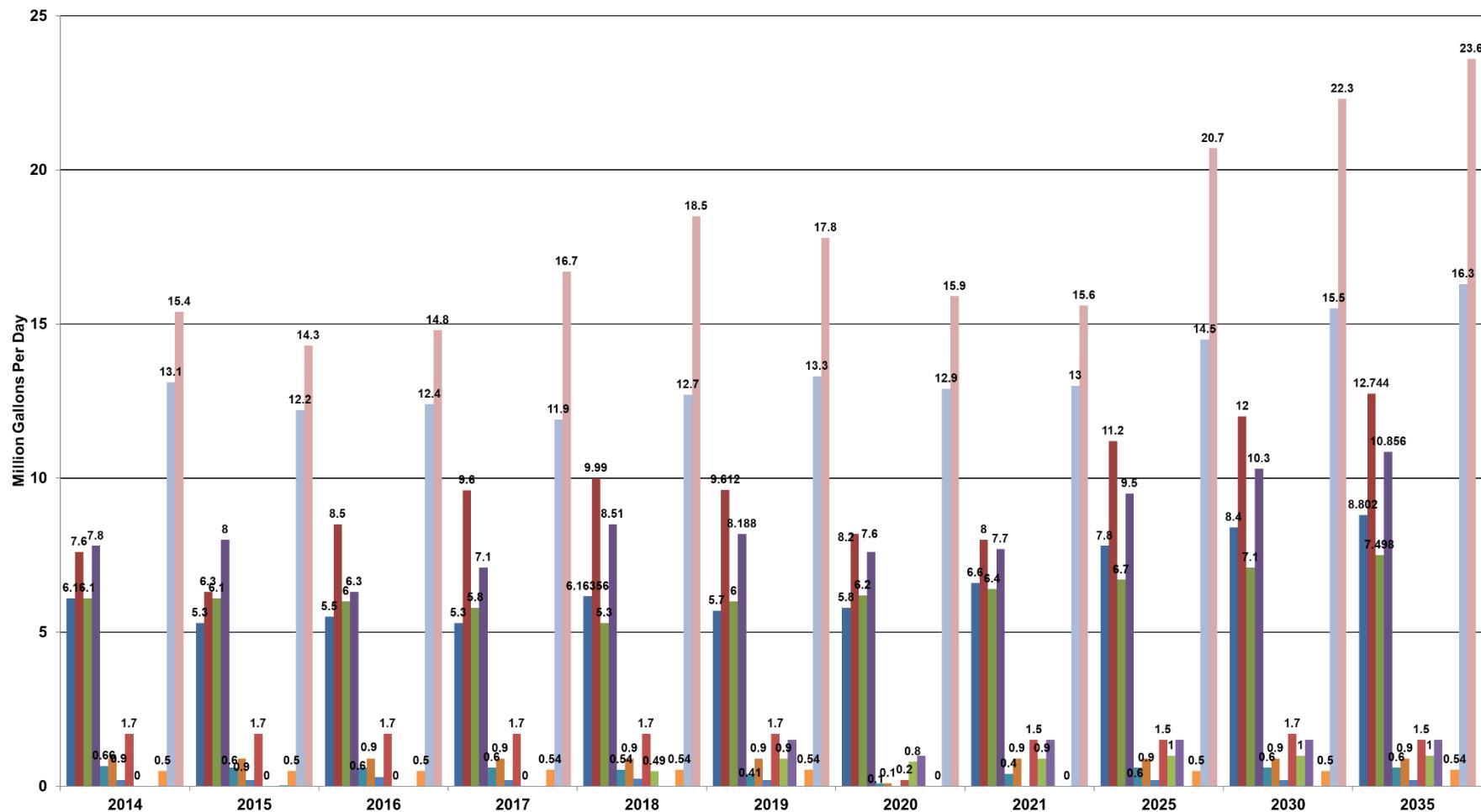
Valued Billing Accounts (VBA) - Includes all active valid billing accounts during the selected calendar year.

Valid Consumption Records (VCR) - Includes all valid active billing accounts (VBA) with consumption during the selected calendar year.

Source: 2021 Adequate Public Facilities Report, Dept. of Public Works, Division of Water and Sewer

Table 19C
Harford County Water Production Projections: 2014 - 2035 (in Million Gallons Per Day (MGD))

■ First Zone Avg. Day	■ First Zone Max. Day	■ Second - Fourth Zones - Avg. Day
■ Second-Fourth Zones - Max. Day	■ Aberdeen - Avg. Day	■ Aberdeen - Max. Day
■ Chapel Hill - Avg. Day	■ Chapel Hill - Max. Day	■ Edgewood APG - Avg. Day
■ Edgewood APG - Max. Day	■ Md. American - Avg. Day	■ Md. American - Max. Day
■ Total - Avg. Day	■ Total - Max. Day	



Source: 2021 Harford County Adequate Public Facilities Report, Dept. of Public Works, Water and Sewer Division.

Table 20C

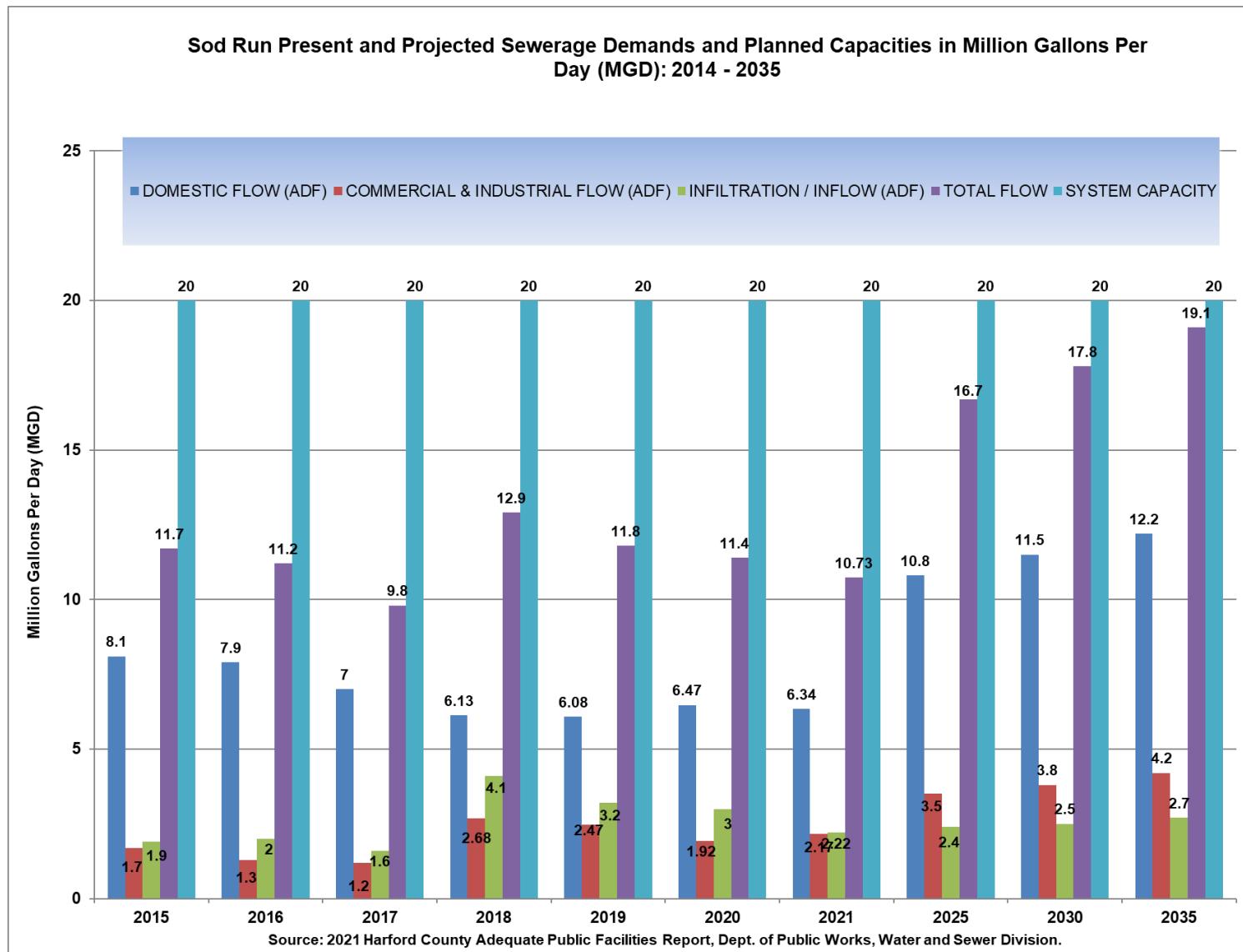


Table 21C
2021 EXISTING WATER & SEWER CAPITAL PROJECTS

The Capital Improvement Program establishes projects for expanding and improving water and sewer facilities. This list of 2021 Capital Projects includes the project status.

PROJECT NO.	PROJECT NAME	PROJECT STATUS
5401	MDTA Projects	30%-60% Design Complete
5424	Abingdon WTP Generator & Switchgear Upgrade	Preliminary Design Complete
5426	Ridgely's Reserve WBS	30% Design Phase
5425	Central Laboratory Study	100% Study Complete
6130	Abingdon WTP pH Control System	Preliminary Design Phase
6141	Havre de Grace WTP Solids Handling	Under Construction
6152	Comprehensive Water System Study	95% Study Complete
6152	Water Tank Design and Construction	Future Project
6492	Replacement of Water Booster SCADA	95% Design Complete
6660	Water Zone Improvements	On-going
6687	Abingdon Road Water Main	30% Design Complete
6709	Magnolia Booster Station Improvements - Hydro-Pneumatic Tank Replacement	Value Engineered - Under Redesign
6718	Baltimore City Deer Creek P.S. Improvements	Preliminary Engineering
6723	Conowingo Road Water Main Replacement	Preliminary Engineering
5401	MDTA Projects	30%-60% Design Complete
5428	Magnolia Road Sewer Petition	Preliminary Design Phase
5429	Woodridge Manor Area Sewer Petition	30% Design Complete
6019	Sod Run Bio-solids Facility Enhancements	Preliminary Engineering
6057	Brentwood Park P.S. Upgrade	100% Design Complete
6104	Storage/Inventory Study	Preliminary Design Phase
6112	Pump Station Improvements	Preliminary Design Phase
6113	Sod Run Ultraviolet Disinfection System	60% Design Complete
6190	Frey's Road Sewer Petition	70% Design Complete
6692	Bush Creek P.S. Improvements	30% Design Complete
6703	Bynum Run Parallel Phase 6 & 7	Phase 7 - Construction Complete Phase 6 - Design is a Future Project
6712	Edgewood Interceptor Parallel	Project on Hold, Awaiting Modeling
6714	Infiltration/Inflow	On-going
6724	Sod Run WWTP Facility Improvements	95% Design Complete
6726	Sewer System Model Study	80% Study Complete
6726	West MacPhail Road Sewer Replacement	30% Design Complete
6730	Bill Bass P.S. Force Main Parallel Replacement	50% Design Complete
FY 21 Submitted	Plum Tree Collector Sewer and Pumping Station	Future Project

APPENDIX D

Table 22D
Signalized Intersection Capacity Analyses
Level Of Service And Delay In Seconds: 2017 - 2022

Intersection	Peak Hour Level Of Service (LOS) Rating					
	A	B	C	D	E	F
Maryland Route 24 @ I-95 Northbound On/Off Ramp	2021	2021	2021	2021	2021	2021
Maryland Route 24 @ I-95 Southbound Off Ramp	2021	2021				
Maryland Route 7 and U.S. Route 40*		2020	2020	2020	2020	2020
Maryland Route 924 and Moores Mill Road	2020	2020				
Maryland Route 24 and Trimble Road	2020	2020	2020	2020	2020	2020
Maryland Route 152 and U.S. Route 1	2019	2019	2019	2019	2019	2019
Maryland Route 24 and U.S. Route 1	2019	2019	2019	2019	2019	2019
Maryland Route 152 and Trimble Road	2020	2020	2020	2020	2020	2020
Maryland Route 24 and Jarrettsville Road	2020	2020	2020	2020	2020	2020
Maryland 147 and Connolly Road	2020	2020	2020	2020	2020	2020
Maryland Route 152 and Hanson Road	2020	2020	2020	2020	2020	2020
Maryland Route 152 and Singer Road	2020	2020	2020	2020	2020	2020
Maryland 22 and Thomas Run Road/Schucks Road	2018	2018	2018	2018	2018	2018
Maryland 715 and Old Philadelphia Road	2021	2021	2021	2021	2021	2021
Maryland Route 22 and Brier Hill Road	2021	2021	2021	2021	2021	2021
Maryland Route 22 and Maryland Route 136	2021	2021	2021	2021	2021	2021
Maryland Route 24 and Bel Air South Parkway	2019	2019	2019	2019	2019	2019
Maryland Route 24 and Forest Valley Drive	2021	2021	2021	2021	2021	2021
Maryland Route 24 and Plumtree Road	2019	2019	2019	2019	2019	2019
Maryland Route 24 and Ring Factory Road	2019	2019	2019	2019	2019	2019
MD 924 @ MD 24 North Bound Ramp	2021	2021	2021	2021	2021	2021
Tollgate Rd @ MD 24 Southbound Ramp	2021	2021	2021	2021	2021	2021
Maryland Route 543 and U.S. Route 1	2019	2019	2019	2019	2019	2019
Maryland Route 543 and Maryland Route 22	2019	2019	2019	2019	2019	2019
Maryland Route 924 and Abingdon Road **	2019	2019	2019	2019	2019	2019

General Definition of Level Of Service Ratings

LOS A – free flow of traffic with no restriction of significant delay (<= 10 seconds).

LOS B – stable flow of traffic with very little restriction or delay (> 10 & \leq 20 seconds).

LOS C – stable flow of traffic with low to moderate restriction or delay ($>=20$ & $<=35$ seconds).

LOS D – approaching unstable flow of traffic with moderate to heavy restriction and delay ($> 35 \text{ s} \& \leq 55 \text{ seconds}$)

LOS E – unstable flow of traffic with significant restriction and delay (>55 & ≤ 80 seconds)

LOS E - forced flow or cases of "grid lock". The flow rate drops significantly (> 80 seconds).

LOS F – forced flow or cases of "grid lock". The flow rate drops significantly (> 80 seconds).

* SHA improvement at this intersection

** Improvement funded by developer at this intersection

Improvement funded by developer at

Source: Franklin County Dept. of Planning and Zoning, May 2022.

Unsignalized Intersection Capacity Analyses

Level Of Service And Delay In Seconds: 2017 - 2022

Intersection	Peak Hour Level Of Service (LOS) Rating							
	A	B	C	D	E	F		
Business US 1 and Henderson Road	2020				2020			
Maryland 23 and Grafton Shop Road	2020				2020			
Tollgate Road and MacPhail Road	2019							
	2019							
US 1 and Reckord Road***	2021				2021			
Maryland 7 and Brass Mill Road ***	2021				2021			
Woodsdale Road and Box Hill Corporate Center Drive	2021							
	2021							
Maryland Route 7 and Maryland Route 159	2021							
	2021							
Maryland Route 7 and Joppa Farm Road	2021		2021					
Maryland Route 159 and Spesutia Road	2021		2021					
Maryland 155 and Earlton Road	2021				2021			
Maryland 543 and Henderson Road	2021				2021			
Tollgate Road and Ring Factory Road	2021							
	2021							
Maryland 22 and Aldino-Stepney Road	2021				2021			
Macphail and Ring Factory Road	2020		2020					

General Definition of Level Of Service Ratings

II QoS A – free flow of traffic with no restriction of significant delay (≤ 10 seconds)

QoS B – stable flow of traffic with very little restriction or delay (> 10 & ≤ 20 seconds)

LOS C – stable flow of traffic with low to moderate restriction or delay (≥ 20 & ≤ 35 seconds).

LOS D – approaching unstable flow of traffic with moderate to heavy restriction and delay (> 35 & \leq 55 seconds)

LOS E – unstable flow of traffic with significant restriction and delay (>55 & \leq 80 seconds).

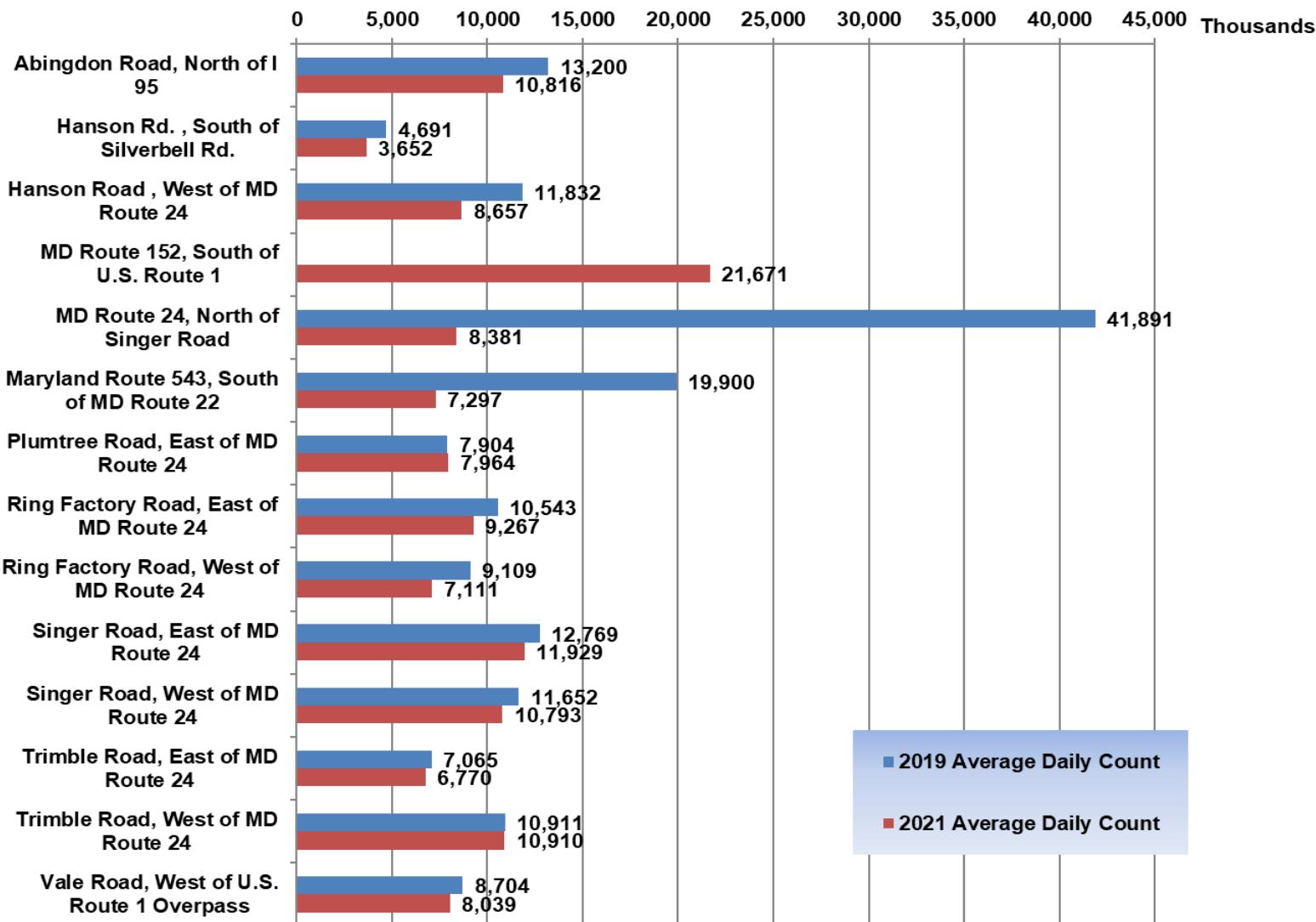
LOS E – unstable flow or traffic with significant restriction and delay (> 80 seconds).

** State Highway Administration funded improvement.

*** Improvement funded by developer

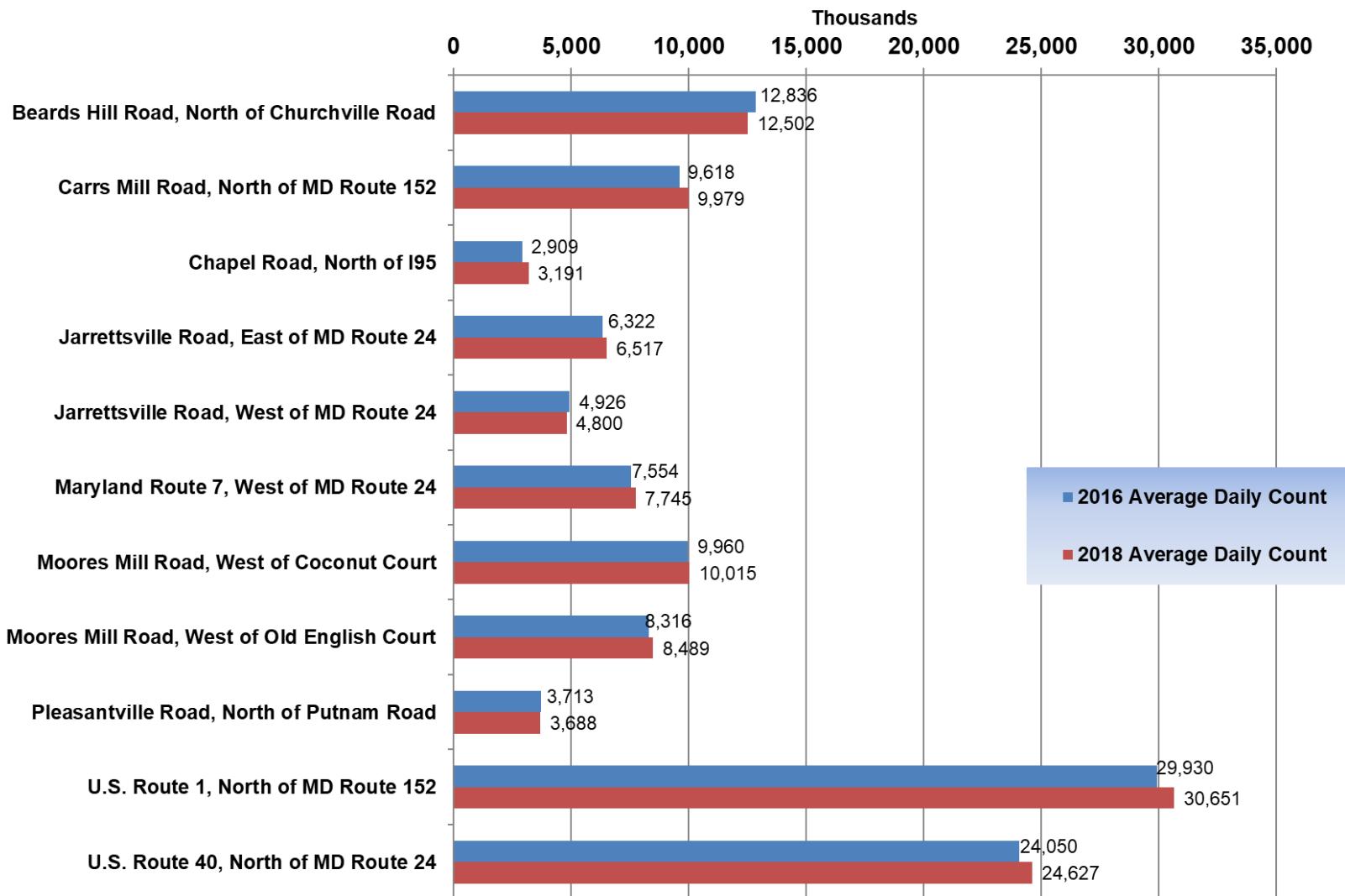
Source: Harford County Dept. of Planning and Zoning, May 2022.

Table 24D.1
48 Hour Average Weekday Daily Traffic Volume: 2019 and 2021



Source: Harford County Dept. of Planning and Zoning, May, 2021.

Table 24D.2
48 Hour Average Weekday Daily Traffic Volume: 2016 and 2018



Source: Harford County Dept. of Planning and Zoning, May, 2019.

Table 25D
List of Approved County Capital Projects Funded for Construction in Fiscal Year 2021

Project Name	Project Type
Boggs Road Bridge #66	Replacement
Carrs Mill Road Bridge #216	Rehabilitation
Chestnut Hill Bridge #40	Replacement
Deep Run Road Bridge #152	Replacement
Glen Cove Road Bridge #155	Replacement
Glen Cove Road Bridge #156	Replacement
Green Road Bridges #119 and #122	Replacement
Johnson Mill Road Bridge #45	Replacement
Madonna Road Bridge #113	Replacement
New Park Road Bridge #125	Replacement
Snake Lane Bridge #31	Replacement
Stafford Road Bridge #24	Rehabilitation
Woodley Road Extension to MD 715	Road Construction
Bridge and Culvert Rehabilitation	Maintenance/repairs/ rehabilitation
Bridge and Road Scour Repairs	Rebuild/ Rapiar
Bridge Inspection Program Over 20' Spans	Safety/Capacity Improvements
Bridge Inspection Program Under 20' Spans	Safety/Capacity Improvements
Roadways Resurfacing*	Resurfacing
Intersection Improvements*	Safety/Capacity Improvements
Structural Evaluation	Safety/Capacity Improvements

*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

Table 26D
List of State Consolidated Transportation Program Funded for Construction in Fiscal Year 2021

Project Name	Project Type
BUS US 1 (BROADWAY) SAFETY AND RESURFACE-MAIN STREET TO HICKORY AVENUE	Resurface/Rehabilitatae Completed
CHURCHVILLE ROAD-SAFETY AND RESURFACE-PROSPECT MILL ROAD TO MD 136	Resurface/Rehabilitatae Completed
W BELAIR AVENUE-SAFETY AND RESURFACE-MD 462 TO US 40	Resurface/Rehabilitatae Completed
EMMORTON RD/BOND ST (SOUTHBOUND COUPLET)-SAFETY AND RESURFACE PLUMTREE RD TO RING FACTORY RD, US 1 BUS TO KENMORE AVE	Resurface/Rehabilitatae
MILL AND RESURFACE-AT VARIOUS LOCATIONS EAST OF US-1 IN HARFORD COUNTY	Resurface/Rehabilitatae
MILL AND RESURFACE-AT VARIOUS LOCATIONS WEST OF US-1 IN HARFORD COUNTY	Resurface/Rehabilitatae
BELAIR ROAD-REHAB WEIGH STATION-CONOWINGGO TRUCK WEIGH AND INSPECTION STATION FACILITY	Safety/Capacity Improvement
ABERDEEN STATION CONNECTIVITY ENHANCE	Transportation Alternatives Program
MA & PA TRAIL, SEGMENT 2	Completed

Source: Harford County Dept. of Planning and Zoning, May 2022.

APPENDIX E

Table 27E

2021 RESIDENTIAL PRELIMINARY PLANS

2021 RESIDENTIAL PRELIMINARY PLANS																	
PLAN ID	PLAN NAME	ACREAGE	LOT ACREAGE	TAX MAP 1	PARCEL 1	TOTAL UNITS	SF UNITS	TH UNITS	APT UNITS	ENVELOPE	COMMENTS	PLAT 1	ZONING 1	ZONING 2	TYPE OF USE	DATE APPROVED	
461/2020	1001 EMMORTON ROAD (FORMERLY HOMELANDS)	1.029	1.029	0049	0071	8	8	0	0	YES	REVISE PREVIOUSLY RECORDED PLAT 4-16 BY RECONFIGURING LOT 19-29 TO CREATE LOTS 19-26 (8 LOTS)		RO		RESIDENTIAL	1/5/2021	
70/2021	BRANDENBURG, LANDS OF	7.152	6.549	0037	0034	1	1	0	0	NO	SUBDIVIDE LOT 1 FROM PARCEL 34	214/13	AG		RESIDENTIAL	9/24/2021	
352/2020	BURRESS, JR., LDS OF ALVIN M.	7.74	7.74	0038	0065	2	2	0	0	NO	CREATE (2) RESIDENTIAL LOTS FROM AN EXISTING PARCEL	212/83	RR		RESIDENTIAL	2/19/2021	
184/2021	CUMMINGS, LDS OF	14.233	14.233	0022	0023	2	2	0	0	NO	RECONFIGURE TWO EXISTING PARCELS AND RECORD EACH AS SINGLE FAMILY RESIDENTIAL LOTS	213/65	AG		RESIDENTIAL	7/12/2021	
404/2021	EMMIE OVERLOOK LOTS 1 & 2	4.649	4.649	0009	0018	2	2	0	0	NO	CREATE (2) SINGLE FAMILY RESIDENTIAL LOTS FROM AN EXISTING PARCEL	213/97	AG		RESIDENTIAL	12/10/2021	
139/2021	ENG PROPERTY	2.99	2.99	0062	0134	3	3	0	0	YES	CREATE (3) SINGLE FAMILY RESIDENTIAL LOTS		R1		RESIDENTIAL	11/23/2021	
531/2020	FLETCHER, LDS OF	18.465	18.465	0006	0014	2	2	0	0	NO	SUBDIVIDE PARCEL 14 INTO 2 LOTS	212/62	AG		RESIDENTIAL	4/29/2021	
326/2021	GLOCK, LAND OF - LOT 19	126.204	2	0055	0624	1	1	0	0	NO	TO CREATE LOT 19 AS AN AG PRES CHILD LOT		AG		RESIDENTIAL	9/10/2021	
	HARKINS, LDS OF W. HERBERT AND PATRICIA A. - LOT 18	4.305	4.305	0033	0381	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT	214/27	AG		RESIDENTIAL	9/3/2021	
517/2021	HEAPS FAMILY LLC	2	2	0019	0315	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT AS AN AG PRES CHILD LOT	214/16	AG		RESIDENTIAL	12/3/2021	
175/2021	HOLBROOK, LDS OF CECIL F. ESTATE	24.697	2.555	0011	0086	1	1	0	0	NO	SUBDIVIDE LOT 10 FROM EXISTING LOT 3	212/66	AG		RESIDENTIAL	7/2/2021	
445/2020	HUGHES PROPERTY	1.499	1.499	0026	0188	1	1	0	0	NO	CREATE A SINGLE FAMILY RESIDENTIAL LOT AROUND AN EXISTING DWELLING		AG		RESIDENTIAL	2/12/2021	
315/2021	KIRKWOOD ENTERPRISES LLC, LANDS OF	26.7619	3.775	0020	0121	1	1	0	0	NO	REVISE PLAT 111-48 BY CREATING LOT 2 AROUND AN EXISTING DWELLING FROM THE EXISTING PARCEL	213/07	VR	AG	RESIDENTIAL	9/20/2021	
397/2021	LATTA HALL - LOT 3	2.67		0065	0610	1	1	0	0	YES	SUBDIVIDE LOT 3 FROM EXISTING LOT 2	214/01	R1		RESIDENTIAL	12/3/2021	
485/2020	MARTIN MEADOWS - LOT 46	25.661	2.471	0054	0027	1	1	0	0	NO	CREATE (1) SINGLE FAMILY RESIDENTIAL LOT BY SUBDIVIDING LOT 32 TO CREATE LOT 46	211/74	AG		RESIDENTIAL	1/23/2021	
	PATTISALL, LDS OF ADAM C.	32.54	0	0042	0003	2	2	0	0	NO	SUBDIVIDE AN EXISTING PARCEL INTO 2 SINGLE FAMILY RESIDENTIAL LOTS AROUND EXISTING DWELLINGS AND REMAINING LANDS	212/99	AG		RESIDENTIAL	6/11/2021	
287/2020	PERRI, LDS OF	2	2	0060	0142	1	1	0	0	NO	REDUCE THE SIZE OF PARCEL 142 FROM 15.253 +/- ACRES TO A LOT WITH 2.00 +/- ACRES TO COMPLY WITH REQUIREMENTS OF A MD AG LAND PRESERVATION FOUNDATION DEED OF EASEMENT		AG		RESIDENTIAL	7/28/2021	
229/2021	SCHAFFER, LDS OF THE ESTATE OF GLADYS	15.582	15.582	0031	0186	2	2	0	0	NO	CREATE TWO SINGLE FAMILY RESIDENTIAL LOTS FROM AN EXISTING PARCEL	212/87	AG		RESIDENTIAL	7/3/2021	
54/2021	WILMOTH, LDS OF	3.05	3.05	0019	0524	1	1	0	0	NO	SUBDIVIDE EXISTING LOT 1 TO CREATE LOT 3	212/71	AG		RESIDENTIAL	5/2/2021	
		323.2279	94.892			34	34	0	0								

2021 NON RESIDENTIAL PRELIMINARY PLANS