Traffic Volume Trends

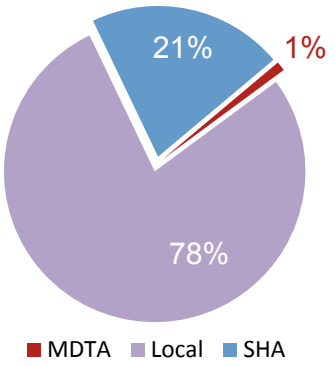
Although across the country travel growth has remained constant due to factors such as the slowly rebounding economy and younger adults either receiving their licenses later or driving less, there are still areas that experience immense amounts of congestion. This includes major population and activity centers such as the Baltimore - Washington region. This occurs as a result of too many users including automobiles, buses and trucks trying to share a common roadway segment at the same time. Due to the limited availability of funding for new projects in past years, infrastructure improvements in roads and public transportation have not been able to keep up with the growth in demand. This is further exacerbated by the non-recurring nature of the congestion due to crashes, vehicle breakdowns, special events and weather events. The impacts of a congested system are detrimental in several ways including increased costs to the individual user, environmental impacts and the overall quality of life.

The following facts highlight trip patterns in Maryland:

- Maryland is second in the nation in terms of commuters who travel over 60 minutes one way to reach their place of employment based on the American Community Survey. The Washington D.C. region is second in the nation with commuting times on average of 34.5 minutes each way.
- The 2012 data from the 2013 Urban Mobility Report lists the Washington, DC region with the fourth highest travel delay in the country amounting to approximately 1.8 billion hours of travel delay. The average D.C. region auto commuter experienced 67 hours of annual delay which is the highest in the country.
- The Baltimore region is better than the Washington region related to delay experienced by motorists. The Baltimore area ranks as the seventeenth highest delay in the country at approximately 70 million hours. On average the Baltimore area auto commuter experienced an annual delay of 41 hours.
- Maryland's population in 2013 was approximately 5.9 million, about 150,000 people greater than in 2010 according to the US Census Bureau. By 2040, population is projected to increase to over 6.8 million people. In addition, job growth in Maryland is expected to keep pace with an estimated 800,000 additional jobs between 2010 and 2040.

The majority of roadways in Maryland are locally owned either by counties, cities, local municipalities or private entities. These roadways carry mostly lower volumes of traffic. The higher volume roadways are mainly owned and operated by SHA and MDTA. SHA owns and maintains the numbered, non-toll routes in Maryland's 23 counties - a total of 14,800 lane-miles* and 2,576 bridges that represent the backbone of Maryland's transportation system. This infrastructure forms the majority of the National Highway System (NHS) in Maryland that connects local and county roads to major commercial and residential centers and other modes of transportation such as mass transit, the port, airports and railroads. Although SHA roadways account for only 21% of the state's roadways they carry 65% of the state's traffic. The MDTA owns and operates all toll roads in the state. This includes I-95 in Baltimore City to the Delaware State Line, I-895 including spurs to I-97 and MD 2, MD 695 from east of MD 10 to MD 151, the Hatem Bridge (US 40), the Bay Bridge (US 50/301), the Nice Bridge (US 301) and MD 200 (Intercounty Connector).

MARYLAND HIGHWAY LANE MILEAGE



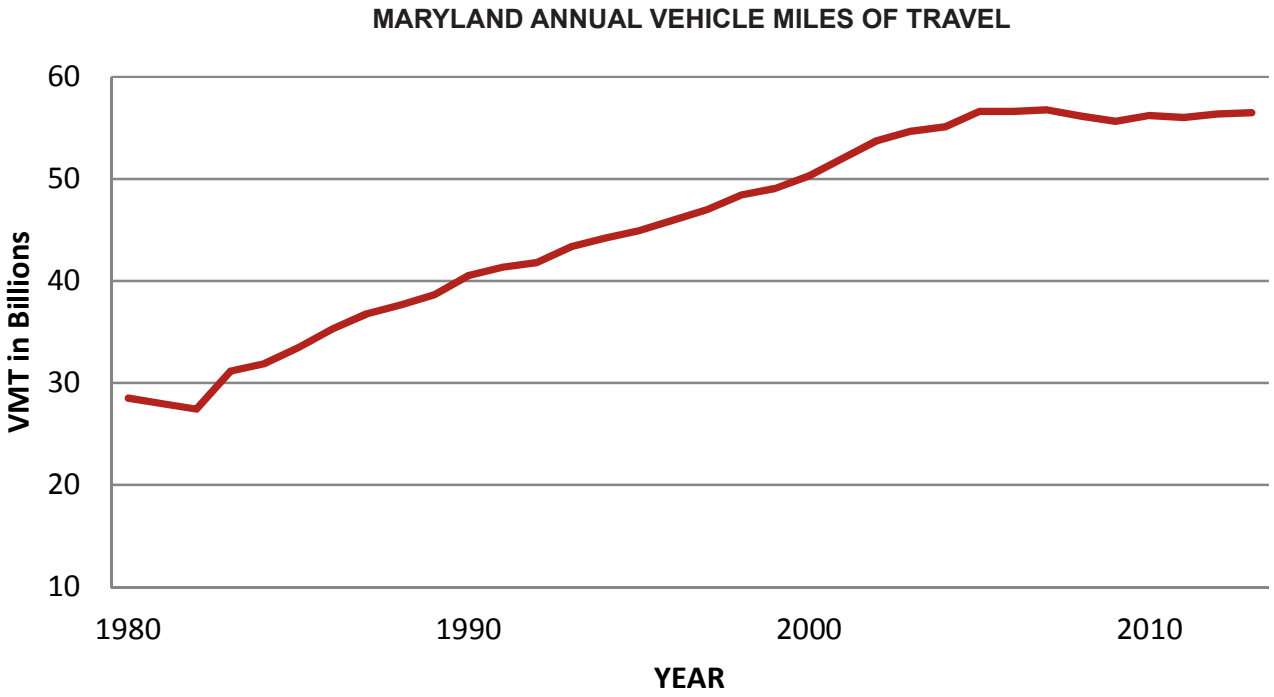
Traffic volume growth throughout Maryland varies according to region and roadway. While travel on several roadways on the Eastern Shore or Western Maryland have remained relatively constant for years, other roadways have seen a large growth in volume. The I-270 "Technology Corridor" in Montgomery County is one of those roadways. In less than 30 years, traffic volumes along I-270 have increased by 100,000 vehicles per day since the implementation of the collector-distributor roadway system. Other roadways such as MD 5 in Prince George's County and I-70 in Frederick County have experienced a growth in traffic of approximately 140% in less than 30 years.

The mobility of people utilizing Maryland's roadway system is reflected in the number of Vehicle Miles Traveled (VMT) and the traffic volumes along the various roadways. VMT on Maryland's roadways during past decades has steadily increased as a result of population growth and economic activity in the region.

VMT is a standard performance measure of travel at various levels of geography; local, regional, state and national. VMT is defined as the number of vehicles times the distance they traverse along the network. VMT has been measured for decades in each state throughout the nation and thereby gives a comparison in growth from one year and one decade to the next. Many areas in Maryland have seen growth in VMT that has outpaced population growth and SHA's ability to expand the roadway network especially in the Baltimore - Washington region. This has caused an increase in congestion on the roadway network. In order to keep pace with the VMT and congestion, various multi-modal and traveler incentive programs are utilized to help manage the demand for transportation services.

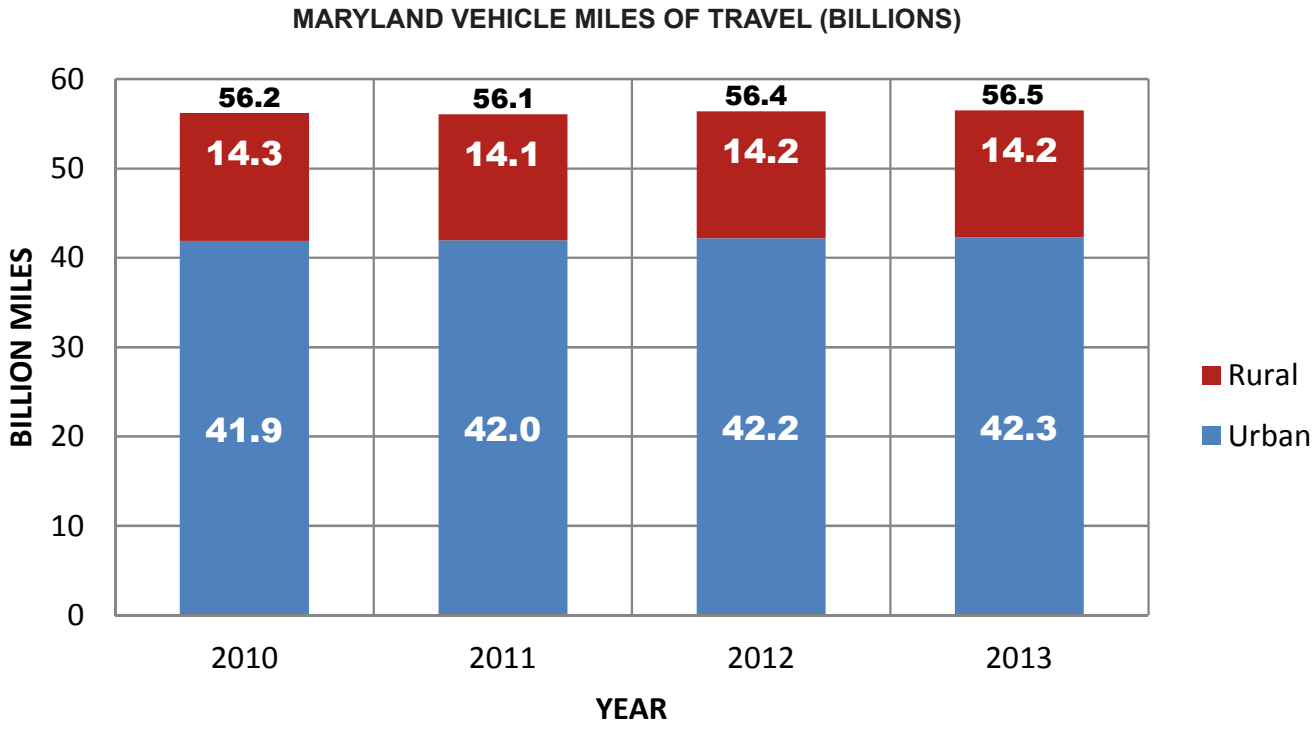
* Lane mileage from previous reports reflected ramps, spurs and service roads.

Economic and social conditions such as the increase of women in the work force in the 1970s and 1980s directly influence the number of vehicle miles traveled. Other items such as people moving to suburbs and further out areas increase the VMT while increases in gasoline prices reduce the VMT. In the last few years trends have seen a relatively flattening out of VMT due to the recession both nationally and in Maryland as compared to the rapid growth between 1980 and the mid 2000's as shown in the following graph.



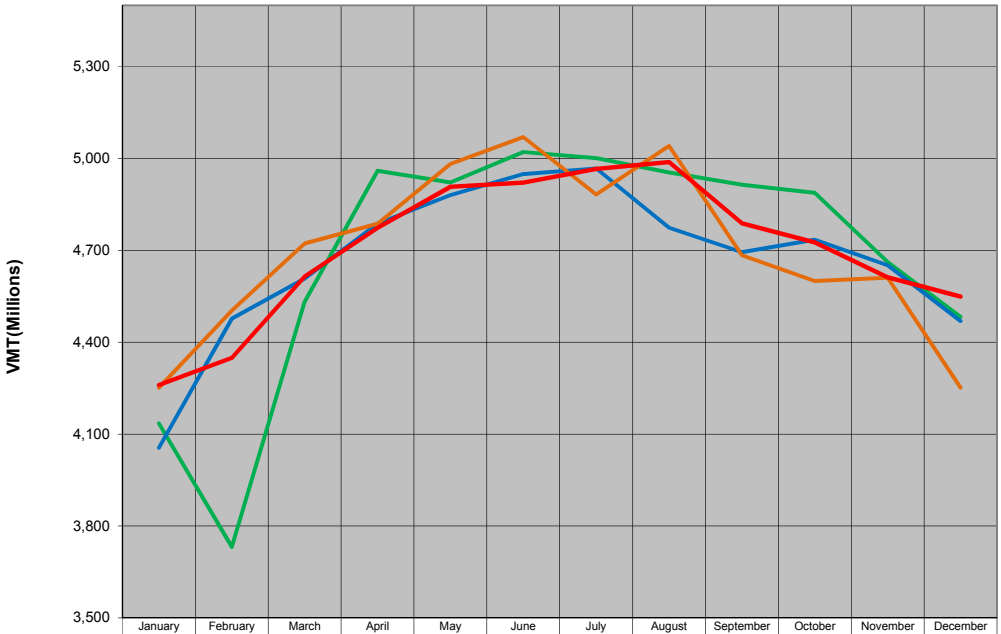
VMT is estimated to be 56.5 billion vehicle miles for 2013. VMT in 2013 is about 0.2% more than 2012 and 0.3 billion vehicle miles off the all-time high of 56.8 billion vehicle miles in 2007. The highest volume roadway sections are I-270 north of the I-270/I-495 split and I-495 west of I-270 which carry more than 240,000 vehicles per day. Sections of the Capital Beltway (I-495) both in Montgomery and Prince George's County and Baltimore Beltway (I-695) between the I-83s' in Baltimore County have volumes of over 220,000 vehicles per day.

The 2013 VMT on the state and toll maintained roadways was 40.4 billion, approximately the same as 2012. Similarly, along other roadways in Maryland, the VMT increased slightly to 16.1 billion vehicle miles in comparison to 16 billion vehicle miles in 2012. The urban areas are experiencing growth while rural areas have remained relatively constant as shown in the following chart.



The charts below show the monthly distribution and the disaggregation of VMT by ownership and roadway type.

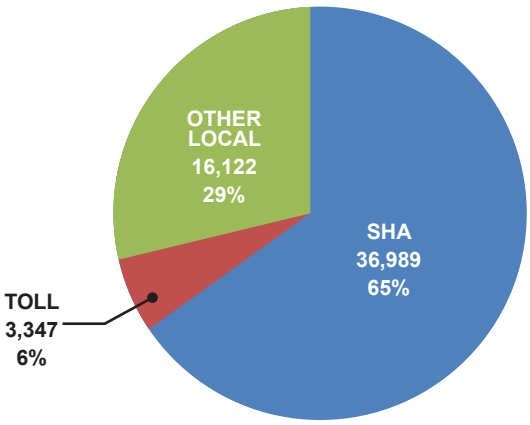
MONTHLY DISTRIBUTION OF ANNUAL VEHICLE MILES OF TRAVEL



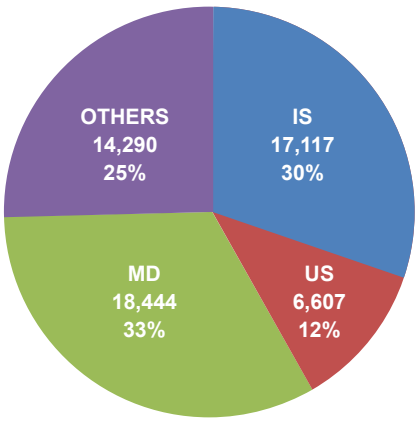
	January	February	March	April	May	June	July	August	September	October	November	December
2010 VMT (Millions)	4135	3731	4533	4960	4922	5021	5001	4954	4915	4888	4662	4483
2011 VMT (Millions)	4056	4477	4608	4788	4880	4949	4968	4775	4694	4735	4652	4469
2012 VMT (Millions)	4252	4504	4723	4787	4982	5070	4883	5042	4684	4600	4611	4252
2013 VMT (Millions)	4260	4349	4615	4774	4908	4921	4966	4989	4789	4726	4612	4549

NOTE: This chart displays estimated monthly Vehicle Miles of Travel compared with the previous year based on data collected at approximately 67 continuous count stations throughout the State.

2013 VMT BY OWNERSHIP ('000)

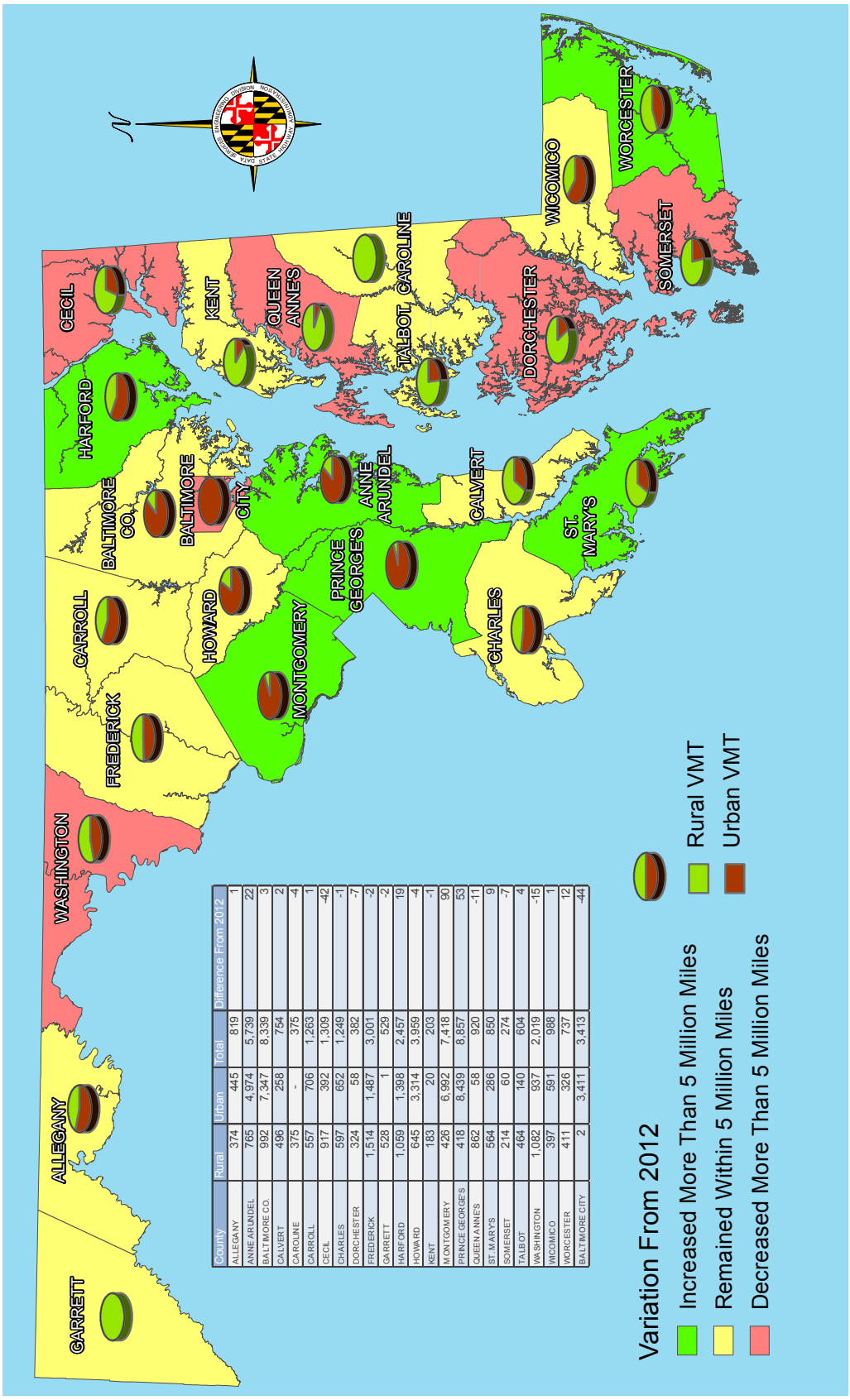


2013 VMT BY ROADWAY TYPE ('000)



On a countywide basis the change in VMT from county to county varies with some counties increasing, some decreasing and other remaining virtually the same. As shown in the following figure Montgomery County experienced the largest increase while Baltimore City had the greatest decrease in VMT.

VEHICLE MILES OF TRAVEL - 2013 DATA



County	Rural	Urban	Total	Difference From 2012
ALLEGANY	374	445	819	1
ANNE ARUNDEL	765	4,974	5,739	22
BALTIMORE CO.	992	7,347	8,339	3
CALVERT	496	258	754	2
CAROLINE	375	-	375	-4
CARROLL	557	706	1,263	1
CECIL	917	392	1,309	-42
CHARLES	597	652	1,249	-1
DORCHESTER	324	58	382	-7
FREDERICK	1,514	1,487	3,001	-2
GARRETT	528	1	529	-2
HARFORD	1,059	1,398	2,457	19
HOWARD	645	3,314	3,959	-4
KENT	183	20	203	-1
MONTGOMERY	426	6,992	7,418	90
PRINCE GEORGE'S	418	8,439	8,857	53
QUEEN ANNE'S	862	58	920	-11
ST. MARY'S	564	286	850	9
SOMERSET	214	60	274	-7
TALBOT	464	140	604	4
WASHINGTON	1,082	937	2,019	-15
WICOMICO	397	591	988	1
WORCESTER	411	326	737	12
BALTIMORE CITY	2	3,411	3,413	-44

The state was split up into five regions for purposes of analysis throughout this report. The regions and the Counties within those regions are as follows:

BALTIMORE METROPOLITAN REGION

- Anne Arundel County
- Baltimore City
- Baltimore County
- Carroll County
- Harford County
- Howard County

WASHINGTON METROPOLITAN REGION (MARYLAND COUNTIES)

- Frederick County
- Montgomery County
- Prince George's County

SOUTHERN MARYLAND

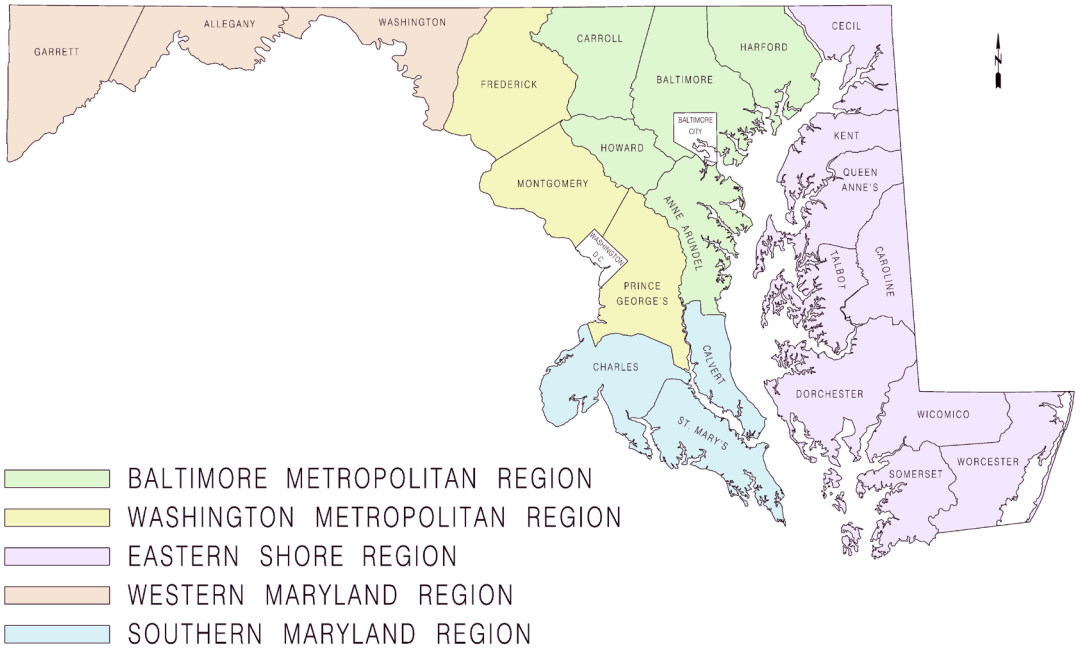
- Calvert County
- Charles County
- St. Mary's County

EASTERN SHORE

- Caroline County
- Cecil County
- Dorchester County
- Kent County
- Queen Anne's County
- Somerset County
- Talbot County
- Wicomico County
- Worcester County

WESTERN MARYLAND

- Allegany County
- Garrett County
- Washington County



The VMT was determined for the five regions. As shown by the following chart the Washington region continues to experience the highest growth while most of the other regions are fairly flat:

VMT	2013	2012	2011	2010
Baltimore Region	25.2	25.2	25.0	25.1
Washington Region	19.2	19.1	19.1	19.0
Southern Region	2.9	2.8	2.8	2.9
Eastern Shore Region	5.8	5.9	5.8	5.8
Western Region	3.4	3.4	3.4	3.4
Total	**56.5**	**56.4**	**56.1**	**56.2**