

***Washington-Baltimore  
Regional Air Passenger  
Origin/Destination Forecast Update***

May 2011



***Metropolitan Washington Council of Governments***

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## **1. Introduction**

The Washington-Baltimore metropolitan area is one of the few places in the country where air passengers have a choice of multiple airports. These facilities are: Washington Dulles International Airport (IAD), Ronald Reagan Washington National Airport (DCA) and Baltimore/Washington Thurgood Marshall International Airport (BWI).

Forecasts of key aviation activity measures for the Washington-Baltimore region are published periodically by the Federal Aviation Administration (FAA). While these forecasts are produced to predict air passenger enplanements at the three above airports, no origin/destination forecasts are produced. Origin/destination information is essential for use in airport-related transportation studies, and for determining airport master plan landside facility needs.

This report documents the procedures used to develop forecasts of locally originating air passenger trips from each regional aviation analysis zone (AAZ, aggregations of traffic analysis zones, or TAZs) to each of the three major commercial airports in the Washington-Baltimore region. The air passenger forecasts are developed as part of the Metropolitan Washington Council of Governments / National Capital Region Transportation Planning Board's (COG/TPB) Continuous Airport System Planning (CASP) program.

The COG/TPB Models Development program identifies the improvement of the representation of special traffic generators as an important component of the travel demand forecasting process. COG/TPB has performed several special generator surveys in recent years, relating to military facilities, universities, tourist locations, and major shopping centers. As these data become available, the review of special generator data for the purpose of refining the regional travel model is envisioned to be an ongoing work activity. The principal purpose of the air passenger trip origin/destination forecast is to provide annual air passenger control totals to be used as an input to the regional travel forecasting process.

This model does not forecast enplanements from each aviation analysis zone; rather, it uses the official enplanements forecast made by the FAA as a base to distribute originating trips within the study area. The factors and rates developed in this report are based on data from the 2009 Washington-Baltimore Regional Air Passenger Survey and Cooperative Land Use Forecasts from MWCOG and the Baltimore Metropolitan Council (BMC). This model is not an airport choice model and does not take into consideration variables such as travel time to the airports, ticket price, travel mode to the airports, flight frequency, and others. The output of the regional air passenger origin/destination report presents a set of forecasted air passenger trips originating from aviation analysis zones to each of the three major airports in the Washington-Baltimore region.

## **2. The Study Area**

The Washington-Baltimore air service area market is larger than the combined metropolitan planning areas of the TPB and BMC. The market stretches from Harford County, Maryland (along the Susquehanna River) in the northeast, down to Spotsylvania County, Virginia in the south, and from the Chesapeake Bay in the east to the foothills of the Appalachian Mountains in the west. Figure 1 represents the jurisdictions that combine to make up this region, and locates

the three airports. The region consists of 25 jurisdictions, 161 Aviation Analysis Zones (AAZs) and 4,374 Transportation Analysis Zones (TAZ). Figure 2 shows the AAZ boundaries. Even with such a large area, in 2009 approximately 10 percent of the air travelers using the Washington-Baltimore regional airports came from areas beyond these boundaries.

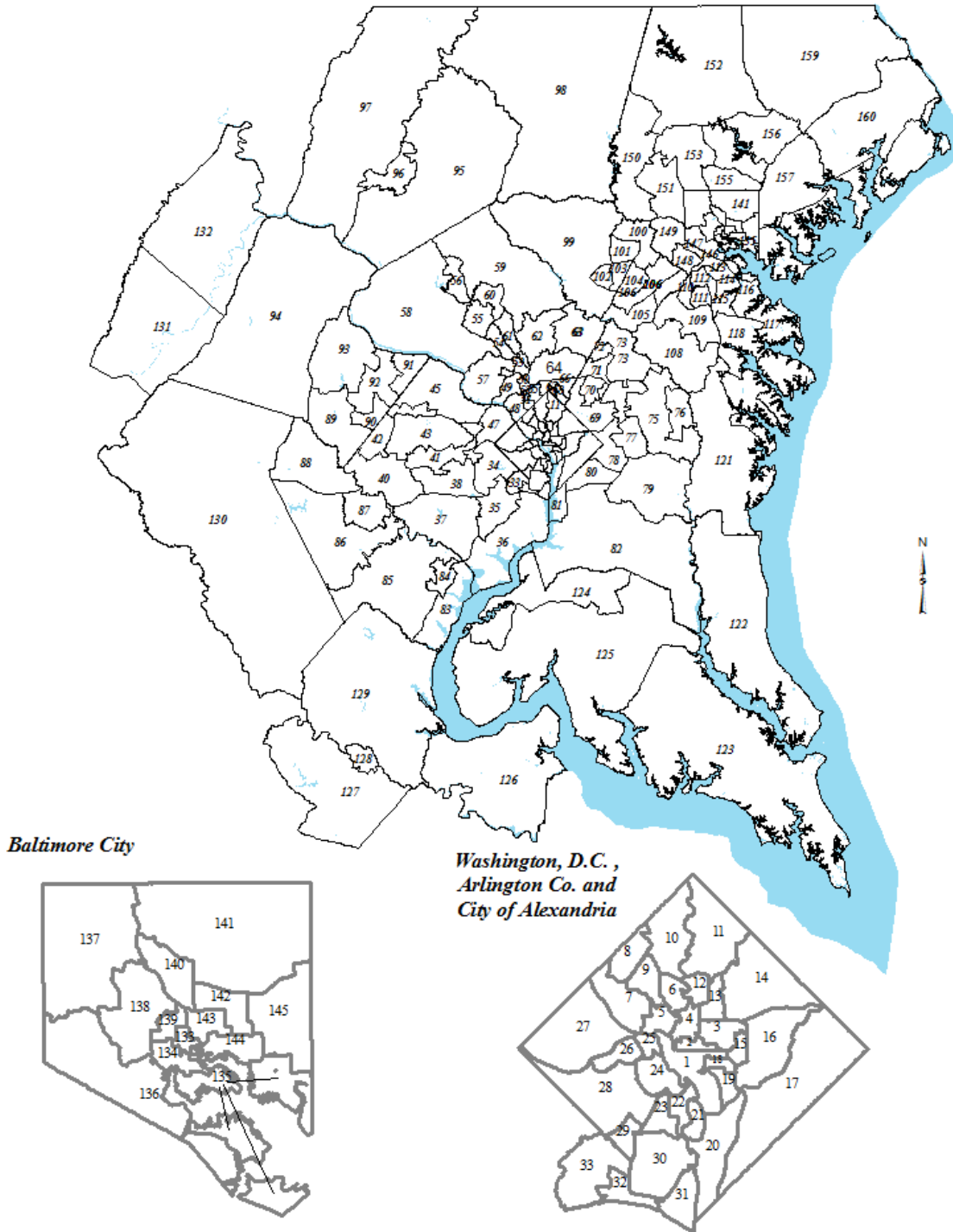
The airports are not only an entry point for local originating passengers, but also a destination for the majority of their air passengers. Based on the 2009 Air Passenger Survey, almost 50 percent of the airports' passengers do not reside within the study area. This proportion is similar for all types of trips, such as business, personal, vacation, school, etc, indicating that these airports provide an important link to governments (local and federal), firms, and individuals for areas outside the region.

Figure 1: Washington-Baltimore Air System Planning Region



**Note:-**  
**BWI = Baltimore Washington International Thurgood Marshall Airport**  
**DCA = Ronald Reagan Washington National Airport**  
**LAD = Washington Dulles International Airport**

Figure 2: Washington-Baltimore Air System Planning Region Aviation Analysis Zone System



Note:- See list of Aviation Analysis Zones in Appendix A, Table A-10



### **3. Demographic Background**

In 2010, the Washington-Baltimore region was home to approximately 8.3 million people. Table 1 shows that 6.6 million people, or about 79 percent of the region's population (6.6 million people), resides in the MWCOG planning area. Of the 25 jurisdictions which comprise the Washington-Baltimore Air System Planning region, Fairfax County is the largest with one million people, followed by Montgomery County, Prince George's County, and Baltimore County respectively. The population within the air system region is projected to grow at an average of 1.3 percent per year through 2040. By 2040, the region will have 10.5 million residents, an increase of 25 percent over 2010.

The distribution of households reflects the pattern of population distribution. As shown in Table 2, there were over 3 million households in the Washington-Baltimore Air System Planning region in 2010. The table also shows that approximately 78 percent of the households reside in the MWCOG planning area. In terms of individual jurisdictions, Fairfax County ranked first with 400,000 households in 2010, followed by Montgomery County (360,500) and Baltimore County (325,000). Regional households are estimated to increase by almost 30 percent between 2010 and 2040, with an average of 1.5 percent per year.

Table 3 shows the employment distribution for the Washington-Baltimore region. In 2010, there are almost 5 million jobs in the region. Of the total employment, over 78 percent of them are located within the MWCOG planning area. The District of Columbia, Montgomery County and Fairfax County, combined accounted for over half of the total employment within the MWCOG region. Within the BMC planning area, Baltimore City and Baltimore County have almost an equal share of employment. The combined Washington-Baltimore Air System Planning regional employment is expected to increase by 33 percent between 2010 and 2040, with an average of 1.6 percent per year.

Table 1: Washington-Baltimore Air System Planning Region, Population by Jurisdiction

Jurisdiction	Population						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	605,513	651,526	669,790	693,825	711,890	730,363	760,538
Montgomery County	979,996	1,016,996	1,064,995	1,108,997	1,151,997	1,181,997	1,198,997
Prince George's County	846,171	873,103	895,742	913,402	928,281	939,908	950,119
Arlington County	212,318	224,816	235,544	241,394	247,275	249,566	251,969
City of Alexandria	145,011	149,077	158,464	166,919	173,331	180,863	188,288
Fairfax County	1,091,566	1,132,585	1,187,939	1,237,004	1,274,820	1,307,261	1,326,117
Loudoun County	290,002	318,675	357,678	397,114	418,952	431,179	439,707
Prince William County	451,852	501,060	539,317	571,785	598,946	621,209	639,197
Frederick County	243,221	265,566	287,913	311,071	340,030	371,719	406,401
Howard County	285,936	300,337	311,666	317,929	324,119	328,465	328,465
Anne Arundel County	532,582	546,304	556,352	565,359	574,020	581,364	581,364
Charles County	144,594	160,098	175,953	191,475	202,552	213,651	224,871
Carroll County	175,516	183,603	192,253	199,961	207,314	213,528	220,067
Calvert County	91,748	96,500	100,450	103,253	105,099	106,980	108,882
St. Mary's County	104,854	118,184	130,098	141,135	151,403	162,572	173,832
King George County	24,171	26,848	30,323	33,758	37,275	40,748	44,265
City of Fredericksburg	23,193	23,743	25,293	26,817	28,346	29,853	31,382
Stafford County	132,183	156,237	177,025	197,725	218,017	238,207	258,499
Spotsylvania County	105,124	121,378	136,404	151,352	165,221	179,011	192,880
Fauquier County	74,762	86,175	99,438	114,681	132,294	152,587	175,906
Clarke County	15,421	16,175	16,915	17,870	18,806	19,792	20,831
Jefferson County	51,189	56,669	62,144	68,854	75,565	83,109	91,394
Baltimore City	659,496	674,928	683,634	690,523	694,576	694,778	696,810
Baltimore County	815,701	833,781	846,126	856,081	861,355	864,521	867,701
Harford County	249,306	265,706	276,502	280,996	283,598	286,694	292,895
<b>Total</b>	<b>8,351,426</b>	<b>8,800,070</b>	<b>9,217,958</b>	<b>9,599,280</b>	<b>9,925,082</b>	<b>10,209,925</b>	<b>10,471,377</b>

Source:- MWCOG Round 8 and BMC Round 7.2 Cooperative Land Use Forecast

Table 2: Washington-Baltimore Air System Planning Region, Households by Jurisdiction

Jurisdiction	Households						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	265,190	287,323	296,765	308,980	317,235	325,420	338,980
Montgomery County	360,500	377,000	398,000	417,000	438,000	453,000	463,000
Prince George's County	306,006	319,057	331,066	340,456	348,806	355,337	360,110
Arlington County	100,476	108,091	114,382	118,013	121,341	122,712	124,207
City of Alexandria	66,632	68,508	73,678	78,629	82,884	87,013	90,555
Fairfax County	400,172	418,742	442,272	463,570	479,839	493,851	502,041
Loudoun County	102,331	112,669	127,409	141,848	150,209	154,978	158,299
Prince William County	152,404	172,583	188,801	202,785	214,454	223,935	231,495
Frederick County	87,708	95,923	104,139	112,481	123,125	134,778	147,529
Howard County	108,729	117,732	125,045	130,198	132,996	135,065	135,065
Anne Arundel County	202,314	210,888	217,782	223,822	229,368	234,335	234,335
Charles County	50,950	57,528	64,299	70,833	75,847	80,876	85,901
Carroll County	61,592	65,657	69,642	73,438	76,145	78,732	81,453
Calvert County	32,046	34,298	36,027	37,374	38,348	39,322	40,301
St. Mary's County	38,870	44,443	49,352	53,960	58,143	62,326	66,509
King George County	8,852	10,097	11,411	12,689	14,030	15,318	16,659
City of Fredericksburg	10,231	11,700	12,462	13,206	13,971	14,704	15,469
Stafford County	43,366	52,079	59,037	65,913	72,712	79,406	86,205
Spotsylvania County	36,434	43,170	48,536	53,836	58,796	63,671	68,631
Fauquier County	26,871	30,982	35,730	41,197	47,502	54,773	63,154
Clarke County	6,069	6,423	6,722	7,108	7,487	7,886	8,308
Jefferson County	20,427	23,192	25,957	29,518	33,075	37,062	41,527
Baltimore City	266,180	276,661	282,164	286,301	288,728	289,727	290,815
Baltimore County	325,060	334,777	342,448	346,782	348,949	350,700	352,460
Harford County	93,451	101,043	106,739	110,062	112,429	114,807	118,010
<b>Total</b>	<b>3,172,861</b>	<b>3,380,566</b>	<b>3,569,865</b>	<b>3,739,999</b>	<b>3,884,419</b>	<b>4,009,734</b>	<b>4,121,017</b>

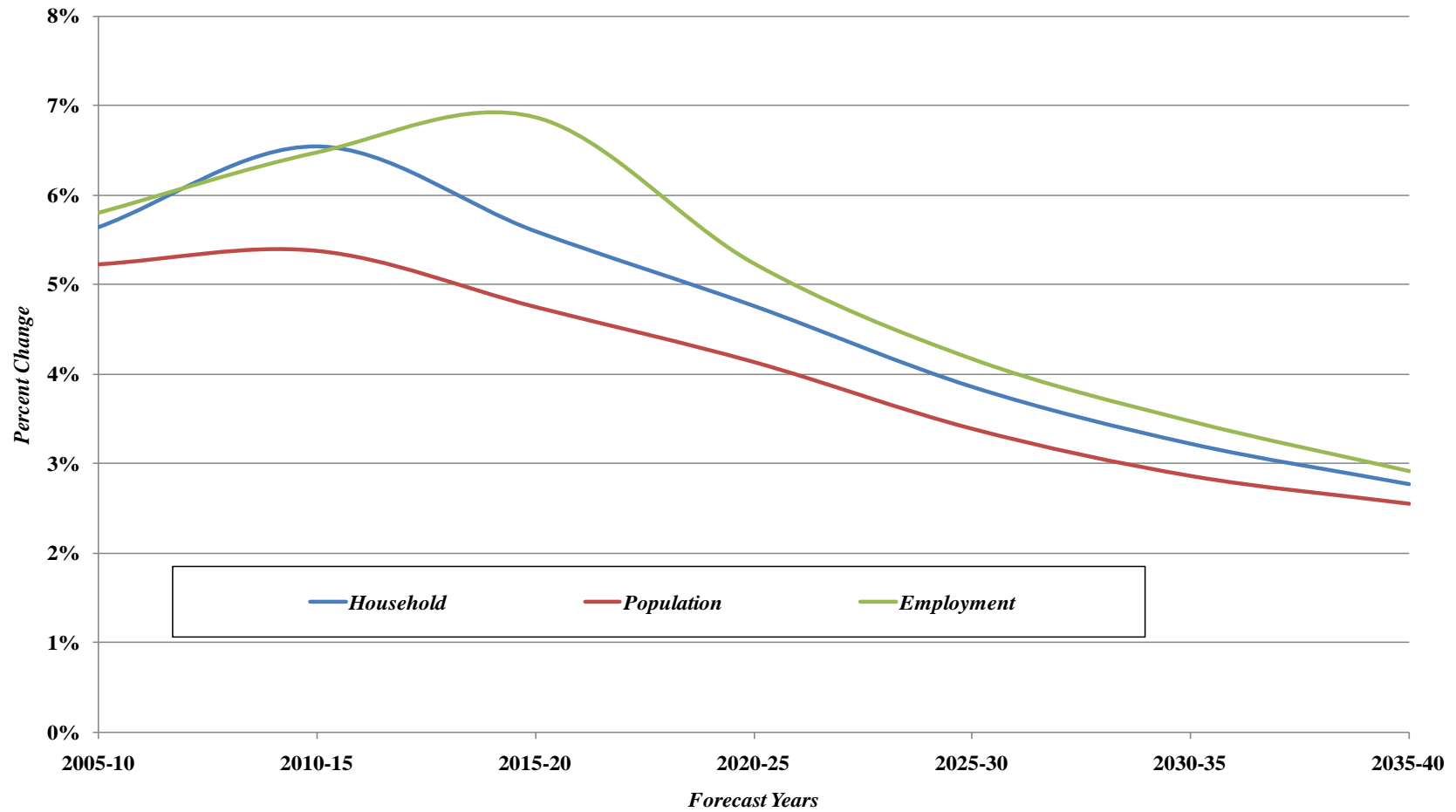
Source:- MWCOG Round 8 and BMC Round 7.2 Cooperative Land Use Forecast

Table 3: Washington-Baltimore Air System Planning Region, Employment by Jurisdiction

Jurisdiction	Employment						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	785,963	822,911	868,256	897,872	923,988	950,104	977,163
Montgomery County	506,000	540,000	585,000	628,000	673,000	703,000	723,000
Prince George's County	358,385	370,135	383,635	399,635	419,635	444,135	474,635
Arlington County	205,175	218,214	243,835	262,358	268,606	278,539	281,120
City of Alexandria	108,895	117,666	124,115	135,439	142,257	153,606	160,447
Fairfax County	680,041	725,524	788,508	830,009	863,803	891,296	917,484
Loudoun County	143,736	167,570	206,458	236,327	257,195	271,462	285,415
Prince William County	144,532	166,671	188,769	209,892	232,597	256,059	280,697
Frederick County	142,412	151,456	158,278	163,464	167,257	171,139	175,109
Howard County	196,382	214,854	231,167	247,358	260,244	264,539	268,828
Anne Arundel County	339,012	361,961	384,441	403,190	418,775	433,501	433,501
Charles County	62,199	68,405	71,695	74,695	77,499	80,298	83,097
Carroll County	84,255	86,767	88,267	89,280	90,301	91,318	92,335
Calvert County	35,200	41,097	44,501	46,305	47,206	48,102	49,003
St. Mary's County	62,994	68,202	71,601	74,599	76,596	78,637	80,731
King George County	9,039	11,377	13,150	14,855	16,390	17,825	19,339
City of Fredericksburg	28,377	31,305	34,848	38,338	41,034	43,694	46,360
Stafford County	42,129	48,626	54,627	60,396	65,101	69,576	74,224
Spotsylvania County	33,236	38,794	43,578	48,255	51,966	55,553	59,240
Fauquier County	22,313	24,907	29,202	32,155	35,409	38,990	42,932
Clarke County	5,055	5,387	5,718	6,032	6,363	6,713	7,082
Jefferson County	16,786	18,803	20,818	22,639	24,452	26,410	28,524
Baltimore City	451,052	461,744	471,299	479,870	485,002	485,012	485,023
Baltimore County	511,419	530,142	545,114	553,034	558,840	563,630	568,464
Harford County	129,702	142,294	151,226	158,221	163,502	165,002	166,530
<b>Total</b>	<b>5,104,289</b>	<b>5,434,812</b>	<b>5,808,106</b>	<b>6,112,218</b>	<b>6,367,018</b>	<b>6,588,140</b>	<b>6,780,283</b>

Source:- MWCOG Round 8 and BMC Round 7.2 Cooperative Land Use Forecast

**Figure 3: Washington-Baltimore Air System Planning Region,  
Percent Change in Forecast Population, Households, and Employment**



## **4. Development of Air Passenger Origin/ Destination Forecasts**

The process of developing the air passenger origin/destination forecasts involved many steps, including:

1. Obtaining FAA enplanement statistics and forecasts for the three regional airports through 2040
2. Converting FAA's U.S. Government fiscal year basis enplanement forecast to a calendar year enplanement forecast
3. Reviewing the 2009 Air Passenger Survey data files
4. Reviewing land use data files
5. Developing trip rates
6. Distributing the air passenger forecasts of local originating trips from each AAZ to each of the three regional airports

Each of the six steps is described in detail below.

### **4.1 Air Passenger Enplanements Forecasts**

The FAA Office of Aviation Policy and Plans (APO) produces the Terminal Area Forecast (TAF). The TAF is the official forecast of aviation activity at FAA facilities. The TAF is produced each year covering airports in the National Plan of Integrated Airport Systems (NPIAS). The forecast is made at the individual airport level and assumes an unconstrained demand for aviation services. TAF data cover 264 FAA towered airports, 244 Federal contract tower airports, 32 Terminal Radar Approach Control (TRACON) facilities, and 2,828 non-FAA airports. Data in the TAF are presented on a U.S. government fiscal year basis (October 1 through September 30), and generally cover 10 years of history and 15 or more years of forecast.

Aviation activity forecasts for FAA-towered (which includes BWI, DCA, and IAD) and Federal contract towered airports are developed using historical relationships between airport passenger demand and/or activity measures and local and national factors that influence aviation activity. Forecasts at individual airports reflect to varying degrees national aviation trends as well as dynamics at individual airports.

National TAF forecast data are divided into nine regions; the Washington-Baltimore regional airports fall within the Eastern Region. This region accounted for 16 percent of total enplanements in 2009 and is forecasted to remain the same in 2030. The region includes 7 of the 29 large hub tower airports (an airport with one percent or more of total U.S. passenger enplanements) in the nation and enplanements in this region are forecast to increase by 78 percent between 2009 and 2030.

FAA's enplanement forecast methodology includes the future schedules published in the Official Airline Guide (OAG) to generate the short-term forecast (two years out) for both mainline and regional carriers for fiscal and calendar years 2010-2011. The medium to long-term forecasts (2012-2030) are based on results of econometric models.

#### **4.1.1 FAA Economic Forecast Assumptions**

- Between 2011 and 2015, U.S. economic growth is projected to average 3.0 percent per year with rates ranging between 2.6 and 3.6 percent. Beyond 2015, U.S. real gross domestic product (GDP) growth slows to around 2.6 percent annually for the balance of the forecast period.
- In 2010, global economic growth is projected to resume (2.5 percent annually) as stimulus plans in the U.S. and in China provide the basis for recovery. Beyond 2010 through the balance of the forecast period, world real GDP is projected to increase an average of 3.2 percent per year.

#### **4.1.2 FAA Commercial Aviation Assumptions**

- Total mainline air carrier and regional enplanements are forecast to increase from 704.0 million in 2009 to 1.21 billion in 2030, an average annual rate of 2.6 percent.
- Domestic enplanements are projected to increase 0.4 percent in 2010 and then grow an average of 2.5 percent per year during the remaining 20-year forecast period.
- International enplanements are forecast to increase 0.9 percent in 2010 and then grow an average of 4.1 percent per year for the rest of the forecast period.
- Planes will remain crowded, with load factor projected to grow moderately during the early years of the forecast period and then tapering during the mid to latter years, growing by 2.7 points over the forecast period to 82.4 percent in 2030.
- Regional carrier aircraft size flown domestically is projected to grow at a much faster pace than their mainline counterparts. The faster growth in regional aircraft size is stimulated by the wave of 70-90 seat regional jet aircraft that are entering the fleet as well as reductions in the 50 seat and under jet fleet.
- The number of commercial aircraft is forecast to grow at an average annual growth rate of 1.8 percent or 150 aircraft annually during the forecast years 2010- 2030. During the forecast period the mainline air carrier passenger fleet increases an average of 85 aircraft a year while regional carrier passenger fleet is expected to increase by an average annual increase of 1.7 percent.

There were three unconstrained forecast scenarios developed by FAA to show the broad range of possible aviation activity that could be experienced over the next 20 years through 2030, which are Baseline, Pessimistic and, Optimistic. The baseline forecast represents the most likely scenario. The following assumptions were considered for each scenario:

##### **4.1.2.1 Baseline Scenario**

- The economy recovers from the current downturn and suffers no major mishaps such as large oil price shocks, swings in macroeconomic policy, or financial meltdowns.
- Steady increases in oil prices after 2009. The increases are relatively modest, with the price of oil only exceeding \$100/barrel after 2025.

- Strong passenger growth for travel between the United States and other world regions.
- Passengers are forecast to grow at an average annual rate of 2.6 percent per year over the forecast horizon (with domestic and international passengers up 2.4 and 4.0 percent, respectively), notching one billion passengers in the year 2023.
- System Revenue Passenger Miles (RPMs, the product of the number of passengers and trip length) grow at an average annual rate of 3.5 percent per year, with domestic RPMs up 3.1 percent annually and international RPMs up 4.4 percent annually.
- Capacity, expressed in Available Seat Miles (ASMs, the product of RPMs and load factor) is forecast to increase an average of 3.4 percent annually over the 21-year forecast horizon (with average growth of 2.9 percent domestically and 4.3 percent internationally).
- Load factor rising from 79.7 percent in 2009 to 82.5 percent 2030.
- Passenger trip length to grow an average of 10.5 miles per year.

#### **4.1.2.2 Pessimistic Scenario**

- Population grows more slowly than the baseline forecast due to slower net immigration.
- Inflation runs higher and the labor force and capital stock growth run lower than in the baseline. As a result, the U.S. economy grows 0.7 percentage points slower per year than in the baseline due to slower productivity and lower potential output growth.
- Scarcity of oil and lower productivity gains create upward pressure in oil prices, rising to \$141 by 2030.
- Trip length rises at a slower pace than in the baseline forecast
- Increase of costs of capital resulting from higher interest rates, weakened consumer confidence brought on by rising unemployment, and higher inflation. In this scenario passengers grow an average of 1.9 percent per year (domestic up 1.8 percent and international up 2.8 percent). In the low case, one billion passengers are reached in 2028, five years behind the baseline forecast.
- Slower RPM growth to an average of 2.5 percent annually (up 2.2 percent domestically and up 3.2 percent internationally).
- Demand for air travel is lower than in the baseline, thus system capacity grows at a slower pace of 2.4 percent annually (domestic up 2.1 percent annually and international up 3.0 percent annually).
- Load factor rising from 79.7 percent in 2009 to 82.5 percent 2030, same as baseline scenario.
- Fuel costs makes flying longer-haul routes less affordable to the carriers; hence passenger trip length trails the baseline forecast by 3.0 miles per year, growing an average of 7.5 miles per year.



#### **4.1.2.3 Optimistic Scenario**

- Population grows more rapidly than in the baseline due to higher net immigration.
- Lower inflation and faster growth in the labor force and capital stock than in the baseline forecast. In this scenario productivity growth is higher and potential output climbs more rapidly, with GDP growing about 0.7 percentage points quicker per year than the baseline forecast.
- Oil price increases at a slower pace landing at \$87 per barrel at the end of the forecast period.
- Fuel prices are lower than projected in the baseline, pushing trip length up as lower fuel prices make flying longer-haul routes more affordable.
- Passengers grow at a quicker pace, averaging 3.3 percent per year (up 3.1 percent domestically and 4.8 percent internationally). This scenario is marked by a more favorable business environment, lower inflation, and lower fuel prices which make the price of flying more affordable to business and leisure travelers. In the high case, one billion passengers are forecast for 2021, two years earlier than predicted in the baseline forecast.
- A more optimistic economic environment drives RPMs higher than the baseline, with growth averaging 4.3 percent per year (domestic and international RPMs up 3.9 and 5.2 percent, respectively).
- The Available Seat Miles (capacity) grows at a faster clip than in the baseline forecast, averaging growth of 4.1 percent annually (up 3.7 percent domestically and up 5.0 percent internationally). Carriers increase capacity compared to the baseline forecast to accommodate increased travel demand brought about by a more favorable economic environment.
- Load factor rising from 79.7 percent in 2009 to 82.5 percent 2030, same as baseline scenario.
- Fuel prices are lower than in the baseline which allows carriers to operate longer-haul routes more profitably.

**Table 4: FAA Forecast Assumptions for Fiscal Years 2010 through 2030**

Variable	Scenario	Historical 2009	Forecast Years				Percent Average Annual Growth			
			2010	2015	2020	2030	09-10	09-15	10-20	09-30
<b>Economic Assumptions</b>										
Gross Domestic Product (GDP Bil \$)	Pessimistic	12,972.00	12,936.00	14,511.00	16,206.00	19,298.00	-0.3%	1.9%	2.3%	1.9%
	<b>Baseline</b>	<b>12,996.00</b>	<b>13,189.00</b>	<b>15,233.00</b>	<b>17,392.00</b>	<b>22,382.00</b>	<b>1.5%</b>	<b>2.7%</b>	<b>2.8%</b>	<b>2.6%</b>
	Optimistic	13,003.00	13,386.00	15,936.00	18,655.00	25,886.00	2.9%	3.4%	3.4%	3.3%
<b>Aviation Activity Domestic</b>										
Available Seat Miles (BIL)	Pessimistic	683.8	665.8	749.2	849.3	1,048.8	-2.6%	1.5%	2.5%	2.1%
	<b>Baseline</b>	<b>683.8</b>	<b>676.2</b>	<b>788.5</b>	<b>926.5</b>	<b>1,253.6</b>	<b>-1.1%</b>	<b>2.4%</b>	<b>3.2%</b>	<b>2.9%</b>
	Optimistic	683.8	686.9	828.7	997.2	1,460.2	0.4%	3.3%	3.8%	3.7%
Revenue Passenger Miles (BIL)	Pessimistic	549.5	543.0	617.8	703.7	872.2	-1.2%	2.0%	2.6%	2.2%
	<b>Baseline</b>	<b>549.5</b>	<b>551.5</b>	<b>650.3</b>	<b>767.8</b>	<b>1,042.6</b>	<b>0.4%</b>	<b>2.8%</b>	<b>3.4%</b>	<b>3.1%</b>
	Optimistic	549.5	560.2	683.6	826.7	1,215.0	1.9%	3.7%	4.0%	3.9%
Enplanements (MIL)	Pessimistic	631.3	624.6	692.4	768.1	908.3	-1.1%	1.6%	2.1%	1.7%
	<b>Baseline</b>	<b>631.3</b>	<b>634.1</b>	<b>723.1</b>	<b>821.4</b>	<b>1,045.6</b>	<b>0.4%</b>	<b>2.3%</b>	<b>2.6%</b>	<b>2.4%</b>
	Optimistic	631.3	642.6	753.9	876.0	1,195.8	1.8%	3.0%	3.1%	3.1%
<b>Aviation Activity International</b>										
Available Seat Miles (BIL)	Pessimistic	281.7	269.1	316.1	380.2	523.6	-4.5%	1.9%	3.5%	3.0%
	<b>Baseline</b>	<b>281.7</b>	<b>274.0</b>	<b>347.3</b>	<b>436.8</b>	<b>675.6</b>	<b>-2.8%</b>	<b>3.5%</b>	<b>4.8%</b>	<b>4.3%</b>
	Optimistic	281.7	275.1	353.0	456.1	787.6	-2.3%	3.8%	5.2%	5.0%
Revenue Passenger Miles (BIL)	Pessimistic	220.1	216.9	255.4	307.9	425.5	-1.5%	2.5%	3.6%	3.2%
	<b>Baseline</b>	<b>220.1</b>	<b>220.7</b>	<b>280.5</b>	<b>353.2</b>	<b>547.9</b>	<b>0.3%</b>	<b>4.1%</b>	<b>4.8%</b>	<b>4.4%</b>
	Optimistic	220.1	221.7	285.3	369.3	639.8	0.7%	4.4%	5.2%	5.2%
Enplanements (MIL)	Pessimistic	72.7	72.2	82.8	97.4	129.4	-0.7%	2.2%	3.0%	2.8%
	<b>Baseline</b>	<b>72.7</b>	<b>73.4</b>	<b>90.6</b>	<b>111.1</b>	<b>164.5</b>	<b>-0.9%</b>	<b>3.7%</b>	<b>4.2%</b>	<b>4.0%</b>
	Optimistic	72.7	74.3	93.1	117.4	193.2	2.2%	4.2%	4.7%	4.8%

Source:- FAA Aerospace Forecast, Fiscal Years 2010-2030, U.S Department of Transportation, Federal Aviation Administration Transportation Aviation Policy and Plans pp. 61-63

## **4.2 Enplanement Forecast Assumptions**

The Washington-Baltimore regional airports are among the busiest in the nation. Combined they rank third in traffic volume with almost 31.8 million enplanements in 2010, and are projected to carry over 58.7 million enplanements by 2030. The region is one of the only metropolitan areas in the country with three world-class airports. At present, with combined domestic and international services to more than 40 world cities, these airports connect the region to markets that represent 80 percent of the world's economy.

Demand for air travel correlates strongly with fluctuations in the economy. Passenger traffic has typically declined during economic contractions and returned to positive growth during subsequent economic expansions. According to the Greater Washington Initiative 2010 regional report, the Washington region's unemployment rate historically has been at least two percentage points below the national average. The region's economy is increasingly diverse and despite the market volatility of recent years, the region has remained one of the best performing economies in the country.

The Washington-Baltimore region population is estimated to be 8.3 million in 2010 (see Table 1). 20.3 percent of the population is foreign born, which results in an increasingly diverse population<sup>1</sup>. Assuming this trend continues in the future, community interest for international travel is likely to increase.

The Washington-Baltimore region benefits from the federal government's presence and procurement, which serves both as a powerful component of its economy and contributes to the region's economic stability. While most areas are experiencing shortfalls due to the downturn in the economy and increasing unemployment, the Washington-Baltimore region appears to be more resilient.

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<sup>1</sup> Greater Washington 2010 Regional Report, Greater Washington Initiative, Washington, D.C. p. 9.

#### 4.2.1 Enplanement Forecast for 2011 - 2030

FAA’s baseline scenario enplanement forecasts were obtained for forecast years 2010 through 2030. These forecasts are based on the U.S. Government fiscal year, which runs from October 1 through September 30. Converting FAA’s 2011 – 2030 fiscal year forecast into calendar year (January 1 through December 31) forecasts were done by applying an annual percent increase to the 2010 base year, January through December observed enplanement and for forecast years 2011 through 2030 to be the same as FAA’s annual percent increase by airport. The average growth rate between 2010 and 2030 was 2.9 percent for BWI, 4.2 percent for IAD and for DCA 1.4 percent per year. Table 5, Table 6, and Table 7 show observed 2000 through 2010 and forecast 2011 through 2030 enplanements for all three regional airports.

**Table 5: BWI Annual Enplanement Forecast 2015 to 2030**

Year	Enplanements	Difference	
		No.	%
2000 <sup>1</sup>	9,784,850		
2005 <sup>1</sup>	9,865,928	81,078	0.8%
2010 <sup>1</sup>	10,996,713	1,130,785	11.5%
2015 <sup>2</sup>	12,836,588	1,839,875	16.7%
2020 <sup>2</sup>	14,654,860	1,818,272	14.2%
2025 <sup>2</sup>	16,731,879	2,077,019	14.2%
2030 <sup>2</sup>	19,104,624	2,372,745	14.2%
<b>Average Annual Percent Change 2010 - 2030</b>			<b>2.9%</b>

<sup>1</sup> Observed Years  
<sup>2</sup> Forecast Years  
 Note:- Forecast based on FAA TAF Fiscal Year annual percent increase

**Table 6: DCA Annual Enplanement Forecast 2015 to 2030**

Year	Enplanements	Difference	
		No.	%
2000 <sup>1</sup>	7,855,323		
2005 <sup>1</sup>	8,909,063	1,053,740	13.4%
2010 <sup>1</sup>	9,035,544	126,481	1.4%
2015 <sup>2</sup>	10,086,334	1,050,790	11.6%
2020 <sup>2</sup>	10,600,839	514,505	5.1%
2025 <sup>2</sup>	11,141,585	540,747	5.1%
2030 <sup>2</sup>	11,709,920	568,334	5.1%
<b>Average Annual Percent Change 2010 - 2030</b>			<b>1.4%</b>

<sup>1</sup> Observed Years

<sup>2</sup> Forecast Years

Note:- Forecast based on FAA TAF Fiscal Year annual percent increase

**Table 7: IAD Annual Enplanement Forecast 2015 to 2030**

Year	Enplanements	Difference	
		No.	%
2000 <sup>1</sup>	9,971,832		
2005 <sup>1</sup>	13,396,373	3,424,541	34.3%
2010 <sup>1</sup>	11,812,905	-1,583,468	-11.8%
2015 <sup>2</sup>	14,936,203	3,123,298	26.4%
2020 <sup>2</sup>	18,399,151	3,462,948	23.2%
2025 <sup>2</sup>	22,675,068	4,275,917	23.2%
2030 <sup>2</sup>	27,957,406	5,282,338	23.3%
<b>Average Annual Percent Change 2010 - 2030</b>			<b>4.3%</b>

<sup>1</sup> Observed Years

<sup>2</sup> Forecast Years

Note:- Forecast based on FAA TAF Fiscal Year annual percent increase

Table 8 shows the annual percent change in enplanement through 2030 at the three regional airports and Global Insight's GDP percent change for the same time period.

**Table 8: Washington-Baltimore Regional Airports, Annual Enplanement and GDP Percent Change, Observed and Forecast 2000 to 2030**

Year	Global Insight			Percent Enplanement Change								
	GDP	Avg 5-Yr	Avg 10-Yr	BWI	BWI Avg 5-Yr	BWI Avg 10-Yr	DCA	DCA Avg 5-Yr	DCA Avg 10-Yr	IAD	IAD Avg 5-Yr	IAD Avg 10-Yr
2001 <sup>1</sup>	0.8%			4.1%			-16.4%			-10.5%		
2002 <sup>1</sup>	1.6%			-6.9%			-1.6%			-4.5%		
2003 <sup>1</sup>	2.5%			4.0%			9.9%			-1.7%		
2004 <sup>1</sup>	3.6%			3.1%			12.0%			35.4%		
2005 <sup>1</sup>	2.9%	2.3%		-3.0%	0.3%		12.0%	3.2%		18.3%	7.4%	
2006 <sup>1</sup>	2.7%			4.8%			3.7%			-15.0%		
2007 <sup>1</sup>	2.1%			1.8%			0.6%			7.7%		
2008 <sup>1</sup>	1.5%			-2.6%			-3.4%			-3.4%		
2009 <sup>1</sup>	-2.8%			2.4%			-2.3%			-2.6%		
2010 <sup>1</sup>	1.5% <sup>3</sup>	0.9%	1.7%	4.8%	2.2%	1.2%	3.1%	0.3%	1.8%	2.3%	-2.2%	2.6%
2011 <sup>2</sup>	2.6% <sup>3</sup>			3.9%			7.3%			3.2%		
2012 <sup>2</sup>	3.6% <sup>3</sup>			3.0%			1.0%			5.6%		
2013 <sup>2</sup>	3.2% <sup>3</sup>			2.8%			1.0%			5.0%		
2014 <sup>2</sup>	2.6% <sup>3</sup>			3.1%			1.0%			5.3%		
2015 <sup>2</sup>	2.6% <sup>3</sup>	2.9%		3.0%	3.1%		1.0%	2.3%		4.9%	4.8%	
2016 <sup>2</sup>	2.5% <sup>3</sup>			2.7%			1.0%			4.3%		
2017 <sup>2</sup>	2.5% <sup>3</sup>			2.7%			1.0%			4.3%		
2018 <sup>2</sup>	2.6% <sup>3</sup>			2.7%			1.0%			4.3%		
2019 <sup>2</sup>	2.8% <sup>3</sup>			2.7%			1.0%			4.3%		
2020 <sup>2</sup>	3.1% <sup>3</sup>	2.7%	2.8%	2.7%	2.7%	2.9%	1.0%	1.0%	1.6%	4.3%	4.3%	4.5%
2021 <sup>2</sup>	2.7% <sup>3</sup>			2.7%			1.0%			4.3%		
2022 <sup>2</sup>	2.6% <sup>3</sup>			2.7%			1.0%			4.3%		
2023 <sup>2</sup>	2.6% <sup>3</sup>			2.7%			1.0%			4.3%		
2024 <sup>2</sup>	2.5% <sup>3</sup>			2.7%			1.0%			4.3%		
2025 <sup>2</sup>	2.6% <sup>3</sup>	2.6%		2.7%	2.7%		1.0%	1.0%		4.3%	4.3%	
2026 <sup>2</sup>	2.6% <sup>3</sup>			2.7%			1.0%			4.3%		
2027 <sup>2</sup>	2.5% <sup>3</sup>			2.7%			1.0%			4.3%		
2028 <sup>2</sup>	2.5% <sup>3</sup>			2.7%			1.0%			4.3%		
2029 <sup>2</sup>	2.4% <sup>3</sup>			2.7%			1.0%			4.3%		
2030 <sup>2</sup>	2.5% <sup>3</sup>	2.5%	2.6%	2.7%	2.7%	2.7%	1.0%	1.0%	1.0%	4.3%	4.3%	4.3%

<sup>1</sup> Observed Years

<sup>2</sup> Forecast Years

<sup>3</sup> Global Insight GDP Forecast

#### 4.2.2 Enplanement Forecast for 2031 - 2040

Using FAA’s baseline scenario forecasts shown previously, for the remaining forecast years of 2031 through 2040 the following two assumptions were tested for each airport:

1. *Forecast based on average annual percent increase 2020 – 2030*
2. *Adjusted enplanement forecast based on Global Insight annual GDP percent growth between 2035 through 2040.*

Table 9 shows Global Insight’s GDP forecast for the period 2031 though 2040 and enplanement annual percent growth for each of the airports. The same data are illustrated in Figure 4 below. Enplanement forecasts developed based on assumption #2 above for the years 2031 through 2040 are presented in Table 10, Table 11, and Table 12 for all three airports relative to the IHS Global Insight Projected Growth.

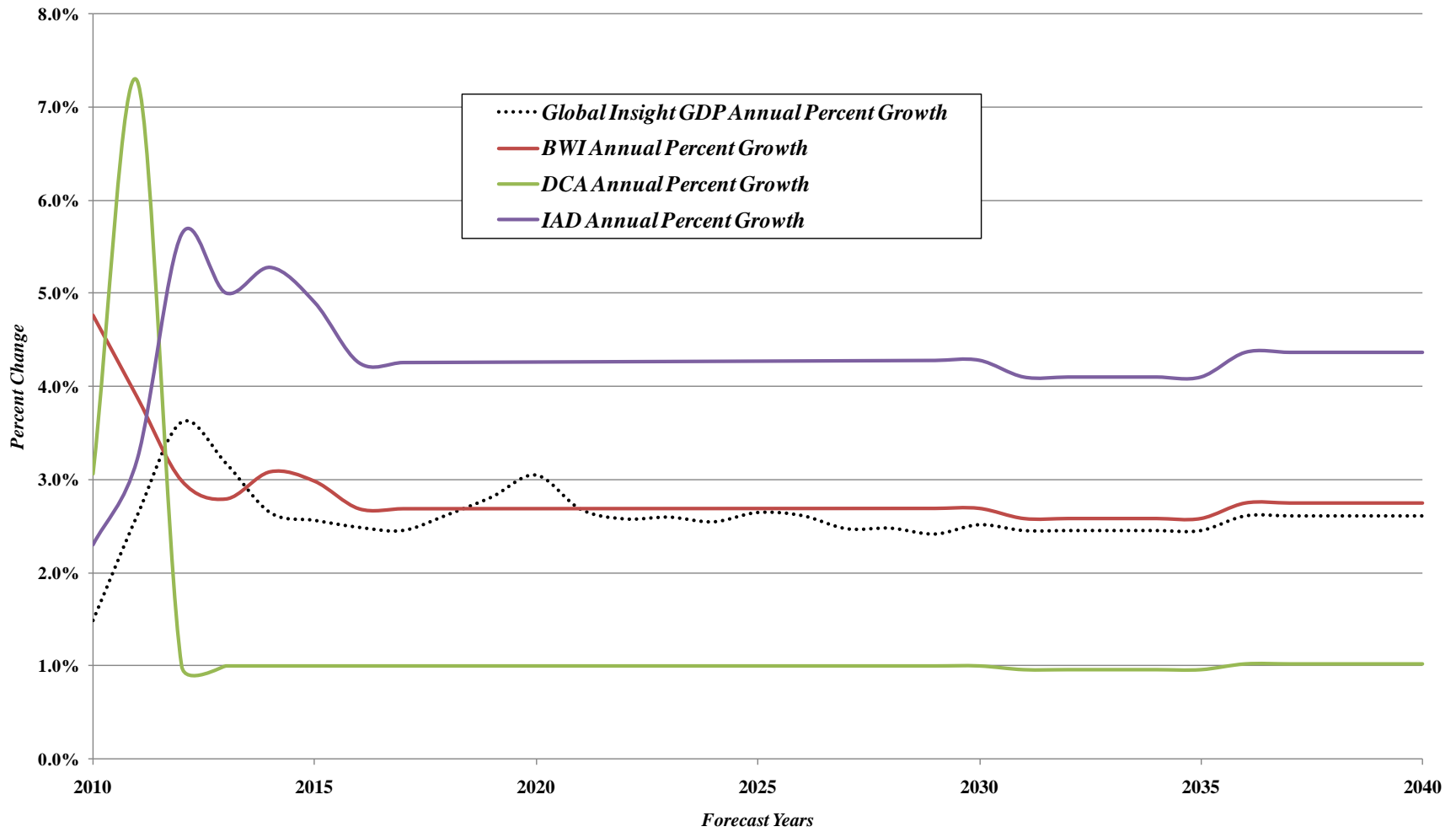
**Table 9: Washington-Baltimore Regional Airports, Annual Enplanement and GDP Percent Change Forecast 2031-2040**

Year	Global Insight			Percent Enplanement Change								
	GDP	Avg 5-Yr	Avg 10-Yr	BWI	BWI Avg 5-Yr	BWI Avg 10-Yr	DCA	DCA Avg 5-Yr	DCA Avg 10-Yr	IAD	IAD Avg 5-Yr	IAD Avg 10-Yr
2031 <sup>1</sup>	2.5%			2.6%			1.0%			4.1%		
2032 <sup>1</sup>	2.5%			2.6%			1.0%			4.1%		
2033 <sup>1</sup>	2.5%			2.6%			1.0%			4.1%		
2034 <sup>1</sup>	2.5%			2.6%			1.0%			4.1%		
2035 <sup>1</sup>	2.5%	2.5%		2.6%	2.6%		1.0%	1.0%		4.1%	4.1%	
2036 <sup>1</sup>	2.6%			2.7%			1.0%			4.4%		
2037 <sup>1</sup>	2.6%			2.7%			1.0%			4.4%		
2038 <sup>1</sup>	2.6%			2.7%			1.0%			4.4%		
2039 <sup>1</sup>	2.6%			2.7%			1.0%			4.4%		
2040 <sup>1</sup>	2.6%	2.6%	2.5%	2.7%	2.7%	2.7%	1.0%	1.0%	1.0%	4.4%	4.4%	4.2%

<sup>1</sup> Forecast Years

<sup>2</sup> Global Insight GDP Forecast

Figure 4: Annual Enplanement Percent Change by Airport and Annual GDP Percent Change





**Table 10: BWI Annual Enplanement Forecast 2031 to 2040**

Forecast		Difference	
Year	Enplanements	No.	%
2031	19,597,430	492,805	2.6%
2032	20,102,947	505,517	2.6%
2033	20,621,504	518,557	2.6%
2034	21,153,438	531,933	2.6%
2035	21,699,092	545,655	2.6%
2036	22,294,910	595,818	2.7%
2037	22,907,088	612,178	2.7%
2038	23,536,074	628,987	2.7%
2039	24,182,332	646,258	2.7%
2040	24,846,335	664,003	2.7%

**Table 11: DCA Annual Enplanement Forecast 2031 to 2040**

Forecast		Difference	
Year	Enplanements	No.	%
2031	11,822,332	112,412	1.0%
2032	11,935,824	113,492	1.0%
2033	12,050,405	114,581	1.0%
2034	12,166,086	115,681	1.0%
2035	12,282,877	116,792	1.0%
2036	12,408,392	125,515	1.0%
2037	12,535,190	126,798	1.0%
2038	12,663,283	128,093	1.0%
2039	12,792,685	129,402	1.0%
2040	12,923,410	130,724	1.0%

**Table 12: IAD Annual Enplanement Forecast 2031 to 2040**

Forecast		Difference	
Year	Enplanements	No.	%
2031	29,104,088	1,146,682	4.1%
2032	30,297,802	1,193,713	4.1%
2033	31,540,475	1,242,674	4.1%
2034	32,834,118	1,293,643	4.1%
2035	34,180,820	1,346,702	4.1%
2036	35,673,144	1,492,325	4.4%
2037	37,230,623	1,557,479	4.4%
2038	38,856,101	1,625,478	4.4%
2039	40,552,547	1,696,446	4.4%
2040	42,323,060	1,770,512	4.4%

**Table 13: Washington-Baltimore Regional Airports Annual Enplanement Forecast 2031 to 2040**

Forecast		Difference	
Year	Enplanements	No.	%
2031	60,523,850	1,751,900	3.0%
2032	62,336,572	1,812,722	3.0%
2033	64,212,385	1,875,812	3.0%
2034	66,153,642	1,941,257	3.0%
2035	68,162,790	2,009,148	3.0%
2036	70,376,447	2,213,657	3.2%
2037	72,672,901	2,296,454	3.3%
2038	75,055,459	2,382,558	3.3%
2039	77,527,565	2,472,106	3.3%
2040	80,092,805	2,565,240	3.3%

## **5. Review of 2009 Air Passenger Survey Data**

The 2009 Air Passenger Survey data file was reviewed to produce AAZ output calibration data files. The development of the calibration file was based on those trips that were made to the three airports by ground transportation; therefore, the analysis does not include passengers who made connecting trips. The 2009 survey data file initially had 19,971 records, and with the exclusion of the connecting passengers the number of records used for the calibration process was 15,414 records.

The Washington-Baltimore region is divided into 168 AAZs, including the outlying areas of Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the rest of the United States. The zone number system is listed in Table 14 and was shown earlier in Figure 2.

The 2009 air passenger survey data file was geocoded to include trip origin TAZs and AAZs. As a part of this study, the MWCOG and BMC TAZ systems were merged to create one combined Air System Planning regional TAZ system. Therefore, TAZs in the BMC jurisdictions of Baltimore City, Baltimore County, and Harford County were added to the MWCOG model TAZ system. The combined MWCOG and BMC regional TAZ system has 4,374 zones.

**Table 14: Washington-Baltimore Air System Planning Region, Aviation Analysis Zone System**

No.	Jurisdiction	No. of AAZs	AAZs Range	No. of TAZs
1	District of Columbia	20	1 - 20	393
2	Arlington County	9	21 - 29	141
3	City of Alexandria	4	30 - 33	65
4	Fairfax County	15	34 - 47	549
5	Montgomery County	20	48 - 68	375
6	Prince George's County	14	69 - 82	636
7	Prince William County	6	83 - 88	378
8	Loudoun County	6	89 - 94	282
9	Frederick County	3	95 - 97	130
10	Carroll County	1	98	58
11	Howard County	9	99 - 107	68
12	Anne Arundel County	14	108 - 121	99
13	Calvert County	1	122	47
14	St. Mary's County	1	123	75
15	Charles County	2	124 - 125	113
16	King George County	1	126	25
17	Spotsylvania County	1	127	62
18	City of Fredericksburg	1	128	14
19	Stafford County	1	129	93
20	Fauquier County	1	130	50
21	Clarke County	1	131	9
22	Jefferson County	1	132	13
23	Baltimore City	13	133 - 145	217
24	Baltimore County	13	146 - 158	342
25	Harford County	3	159 - 161	140
<b>Total Washington/Baltimore Air System Planning Area</b>		<b>161</b>		<b>4,374</b>
26	External Maryland	1	162	NA
27	External Virginia	1	163	NA
28	External West Virginia	1	164	NA
29	Pennsylvania	1	165	NA
30	Delaware	1	166	NA
31	New Jersey	1	167	NA
32	Other	1	999	NA
<b>Total Externals</b>		<b>7</b>		
<b>Grand Total</b>		<b>168</b>		

## 6. Market Segmentation

The first step in the update of airport origin/destination trips was calculating local originating trips from the 2009 Washington-Baltimore Regional Air Passenger Survey. This was accomplished in three steps:

1. Adjust the annual passenger survey weights to exactly match the year 2010 observed enplanements at the three commercial airports
2. Select only the survey records for local originating air passengers
3. Summarize local originating trips to home and non-home based originations for areas within the Washington-Baltimore Air System Planning region<sup>2</sup>

Table 15 and Table 16 show annual enplanement type and Table 17 shows home and non-home trip originations to the three commercial airports, respectively.

**Table 15: 2009 Washington-Baltimore Regional Air Passenger Survey, Annual Enplanement Type by Airport (year 2010, in thousands)**

Enplanement Type		Airport			Total
		BWI	DCA	IAD	
Local origination	<i>Number</i>	9,337,225	8,220,267	7,058,541	24,616,033
- (Came by ground transportation)	<i>Percent</i>	85%	91%	60%	77%
Connected from another Flight	<i>Number</i>	1,659,489	815,277	4,754,364	7,229,129
- (Local and/or International)	<i>Percent</i>	15%	9%	40%	23%
<b>Total Annual Enplanements</b>	<i>Number</i>	<b>10,996,714</b>	<b>9,035,544</b>	<b>11,812,905</b>	<b>31,845,162</b>
	<i>Percent</i>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source:- 2009 Washington-Baltimore Regional Air Passenger Survey

Note:- Originating Trips are factored to 2010 observed enplanements

<sup>2</sup> Local and internal trip origination percentages are held constant for the forecast years. This assumption may overstate future local and internal originations, as the future regional air service network will likely include more connections from other hub airports.

**Table 16: 2009 Washington-Baltimore Regional Air Passenger Survey, Internal and External Annual Trip Originations by Airport (in thousands)**

Enplanement Type		Airport				
		BWI	DCA	IAD	Total	
Within Air System Planning Region - (Internals)	Number	8,002,149	7,981,932	6,239,591	22,223,672	
	Percent	86%	97%	88%	90%	
Outside Air System Planning Region - (Externals)	Number	1,335,075	238,335	818,950	2,392,360	
	Percent	14%	3%	12%	10%	
<b>Total Annual Enplanements</b>		<b>Number</b>	<b>9,337,224</b>	<b>8,220,267</b>	<b>7,058,541</b>	<b>24,616,032</b>
		<b>Percent</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

- **Internal** originating trips are local originating trips within the Washington/Baltimore Air System Planning Area.

- **External** originating trips are trips originating from PA, DE, WV, NJ or external VA and MD

Source:- 2009 Washington-Baltimore Regional Air Passenger Survey

Note:- Originating Trips are factored to 2010 observed enplanements

- Numbers may not add to total due to rounding

**Table 17: 2009 Washington-Baltimore Regional Air Passenger Survey, Home and Non-Home Annual Local Trip Originations by Airport (in thousands)**

Enplanement Type		Airport				
		BWI	DCA	IAD	Total	
Home	Number	5,164,681	3,997,098	4,062,141	13,223,920	
	Percent	65%	50%	65%	60%	
Non-Home	Number	2,837,461	3,984,834	2,177,439	8,999,734	
	Percent	35%	50%	35%	40%	
<b>Total Annual Enplanements</b>		<b>Number</b>	<b>8,002,142</b>	<b>7,981,932</b>	<b>6,239,580</b>	<b>22,223,654</b>
		<b>Percent</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source:- 2009 Washington-Baltimore Regional Air Passenger Survey

Note:- Originating Trips are factored to 2010 observed enplanements

- Numbers may not add to total due to rounding

The next step in the process was to calculate trips originating at each of the three airports out of the total enplanements, and then calculate trips originating within the Washington-Baltimore Air System Planning region. These data were obtained using percent local originations (in Table 16) from total enplanements by airport (in Table 5, Table 6, and Table 7). Air passenger enplanement type within the Washington-Baltimore Air System Planning region is shown in Table 15 and Table 16 illustrates local originating air passenger trips. Total enplanements for local originating trips and internal enplanements within the Washington-Baltimore Air System Planning region for base and forecast years are shown below in Table 18.

**Table 18: Washington-Baltimore Air System Region, Regional Airports Annual and Local and Internal Trip Originations**

Year	Local Originations				Internal Originations			
	BWI	DCA	IAD	Total	BWI	DCA	IAD	Total
2010	9,337,224	8,221,177	7,058,541	<b>24,616,943</b>	8,002,149	7,982,816	6,239,591	<b>22,224,556</b>
2015	10,878,445	9,176,245	8,924,799	<b>28,979,488</b>	9,323,000	8,910,192	7,889,321	<b>26,122,513</b>
2020	12,419,350	9,644,326	10,994,007	<b>33,057,683</b>	10,643,580	9,364,702	9,718,454	<b>29,726,736</b>
2025	14,179,533	10,136,280	13,548,987	<b>37,864,800</b>	12,152,084	9,842,393	11,976,999	<b>33,971,476</b>
2030	16,190,330	10,653,334	16,705,332	<b>43,548,996</b>	13,875,370	10,344,456	14,767,136	<b>38,986,962</b>
2035	18,389,028	11,174,594	20,423,996	<b>49,987,617</b>	15,759,689	10,850,602	18,054,351	<b>44,664,642</b>
2040	21,056,178	11,757,331	25,289,212	<b>58,102,720</b>	18,045,478	11,416,444	22,355,093	<b>51,817,015</b>

Note:-

- Local originating trips are departing passengers whose trip starts from one of the region's three airports and does not include connecting passengers
- Internal originating trips are local originating trips within the Washington - Baltimore Air System Planning Area
- Local originating trips are calculated based on the 2009 Air Passenger Survey data to be 85% for BWI, 91% for DCA and 60% for IAD, of the total departing passengers shown on Tables 5, 6 and 7 respectively.
- Internal originating trips are calculated based on the 2009 Air Passenger Survey to be 86% for BWI, 97% for DCA, and 88% for IAD, of the total local originating trips, that are within the 161 internal AAZ's.

## 7. Estimation of Rates

Base year household and employment land activity data for 2010 and household and employment five-year forecasts for 2010 through 2040 by TAZ were obtained from MWCOG and BMC. The MWCOG data were the Round 8.0 Cooperative Forecast and BMC data were the Round 7.2 land activity forecast. These TAZ-level data were aggregated to the internal AAZs previously shown in Figure 2. Home and non-home local originating trips were also aggregated to internal AAZs within the Washington-Baltimore Air System Planning region by airport.

Once originating trips and land activity data had been summarized, trip generation rates were calculated for each airport/AAZ/trip origin using the following formulae:

**Equation 1: Home Based Trip Origin Rate for Airport<sub>(A)</sub> from AAZ<sub>(X)</sub>**

$$\text{for Airport}_{(A)} \text{ from AAZ}_{(X)} = \frac{\text{AAZ}_{(X)} \text{ Origin Home Trips}_{(2010)}}{\text{AAZ}_{(X)} \text{ Households}_{(2010)}}$$

**Equation 2: Non-Home Based Trip Origin Rate for Airport<sub>(A)</sub> from AAZ<sub>(X)</sub>**

$$\text{for Airport}_{(A)} \text{ from AAZ}_{(X)} = \frac{\text{AAZ}_{(X)} \text{ Origin Non - Home Trips}_{(2010)}}{\text{AAZ}_{(X)} \text{ Employment}_{(2010)}}$$

Table 19 below shows the resulting average trip rate for household and employment for each of the airports.

**Table 19: Average Household and Employment Trip Rates by Airport**

Airport	Trip Rates	
	Household	Employment
BWI	1.63	0.56
DCA	1.26	0.78
IAD	1.28	0.43

### 8. Base and Forecast Year Enplanements Forecast

Once the trip rates were developed, the next step was to use these rates to distribute total forecasted enplanements by AAZ, for the 2010 base year and forecast years 2015, 2020, 2025, 2030, 2035 and 2040. This distribution was obtained by multiplying base year and forecast year household and employment data by the appropriate trip rate factors for each AAZ and adjusting the resultant product to be consistent with local air passenger originations estimated for each airport. For each airport-AAZ combination, home based air passenger originating trips were calculated by multiplying AAZ households by the AAZ home-based trip rate for each airport, and non-home based air passenger originating trips were calculated by multiplying AAZ employment by the AAZ non-home based trip rate for each airport. These computations were performed for both base year and each forecast year.

Home and non-home originating trips were calculated for each airport/AAZ trip origin using the following formulae:

**Equation 3: Home Based Trips for Airport<sub>(A)</sub> from AAZ<sub>(X)</sub>**

$$for\ Airport_{(A)}\ from\ AAZ_{(X)} = \{Equation\ 1\} \times AAZ_{(X)}\ Households\ for\ Year_{(Y)}$$

**Equation 4: Non-Home Based Trips for Airport<sub>(A)</sub> from AAZ<sub>(X)</sub>**

$$for\ Airport_{(A)}\ from\ AAZ_{(X)} = \{Equation\ 2\} \times AAZ_{(X)}\ Employment\ for\ Year_{(Y)}$$

Table 20 shows total originating air passenger trips by AAZ for the base year of 2010. For the forecast years of 2015, 2020, 2025, 2030, 2035, and 2040, originating air passenger trips are presented in Appendix A.



**Table 20: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2010**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	26,594	9,020	2,762	38,376	42	2,131	0	83,205	85,336
2	10,079	106,609	31,656	148,344	43	32,889	78,394	349,003	460,286
3	231,845	1,276,208	463,884	1,971,937	44	21,393	11,835	333,769	366,997
4	185,510	721,044	284,576	1,191,130	45	17,203	33,265	188,971	239,439
5	38,158	87,807	49,105	175,070	46	51,182	125,522	213,386	390,090
6	79,726	251,157	105,105	435,988	47	61,880	63,834	72,762	198,476
7	13,234	44,474	12,261	69,969	48	30,346	28,773	28,203	87,322
8	17,084	55,345	26,416	98,845	49	27,430	41,396	51,793	120,619
9	47,159	69,476	31,816	148,451	50	22,840	38,053	10,441	71,334
10	31,154	90,603	28,592	150,349	51	15,525	35,817	8,507	59,849
11	35,668	56,229	11,737	103,634	52	28,627	52,605	34,145	115,377
12	17,360	78,832	25,106	121,298	53	39,491	75,856	27,656	143,003
13	20,032	68,379	24,638	113,049	54	28,710	53,146	58,422	140,278
14	39,825	50,889	30,153	120,867	55	46,034	53,098	48,469	147,601
15	33,781	97,276	22,013	153,070	56	25,654	15,173	38,358	79,185
16	49,384	128,914	39,921	218,219	57	50,542	33,095	66,943	150,580
17	13,315	10,296	0	23,611	58	67,537	96,567	106,743	270,847
18	17,247	165,931	27,983	211,161	59	69,368	19,456	29,664	118,488
19	10,908	30,929	23,435	65,272	60	37,137	22,764	19,242	79,143
20	12,740	9,985	0	22,725	61	31,483	29,379	46,666	107,528
21	5,239	0	2,425	7,664	62	89,203	27,076	64,942	181,221
22	55,886	500,632	81,427	637,945	63	58,657	27,996	7,721	94,374
23	11,327	72,763	25,709	109,799	64	78,454	78,519	22,341	179,314
24	3,808	27,094	28,162	59,064	65	28,077	43,961	21,887	93,925
25	20,439	138,840	46,285	205,564	66	16,332	31,737	23,107	71,176
26	20,108	230,047	39,397	289,552	67	34,834	34,709	9,714	79,257
27	25,185	111,618	55,588	192,391	68	26,090	10,535	20,254	56,879
28	36,401	162,105	81,845	280,351	69	80,764	26,965	14,142	121,871
29	6,889	27,500	13,435	47,824	70	55,011	17,074	13,742	85,827
30	7,842	106,093	17,696	131,631	71	22,498	1,286	2,712	26,496
31	41,019	262,468	56,138	359,625	72	16,224	0	0	16,224
32	7,315	23,685	15,103	46,103	73	53,870	11,502	7,021	72,393
33	24,870	113,740	33,347	171,957	74	62,140	11,229	5,174	78,543
34	29,319	139,619	96,631	265,569	75	70,835	14,726	747	86,308
35	19,515	123,250	36,206	178,971	76	56,685	0	1,223	57,908
36	39,013	176,409	65,702	281,124	77	19,220	18,827	0	38,047
37	27,483	119,404	131,570	278,457	78	17,543	13,673	4,306	35,522
38	13,132	55,691	122,446	191,269	79	40,417	22,737	4,826	67,980
39	3,626	17,234	25,094	45,954	80	14,331	25,862	8,028	48,221
40	14,533	12,028	166,146	192,707	81	24,336	85,907	12,651	122,894
41	41,954	68,090	165,143	275,187	82	66,044	61,857	22,222	150,123

**Table 20: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2010 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	15,287	44,941	90,837	151,065	124	28,877	29,134	23,095	81,106
84	3,969	17,509	28,977	50,455	125	17,752	19,677	2,095	39,524
85	7,121	61,422	85,056	153,599	126	8,907	1,742	20,930	31,579
86	9,518	25,138	108,076	142,732	127	5,751	29,728	9,549	45,028
87	21,245	21,791	58,692	101,728	128	7,873	22,280	5,935	36,088
88	12,072	6,247	55,227	73,546	129	22,299	44,364	41,916	108,579
89	4,740	6,141	92,403	103,284	130	12,348	11,591	45,697	69,636
90	13,049	5,185	12,894	31,128	131	7,250	1,349	4,886	13,485
91	15,288	2,593	96,861	114,742	132	9,990	0	21,285	31,275
92	5,424	20,732	188,969	215,125	133	340,141	7,252	10,983	358,376
93	37,302	10,030	195,995	243,327	134	56,308	5,680	0	61,988
94	10,768	2,646	132,526	145,940	135	51,555	0	0	51,555
95	75,283	15,677	45,637	136,597	136	25,997	1,136	4,089	31,222
96	34,303	8,000	4,897	47,200	137	59,651	4,588	5,618	69,857
97	70,983	8,182	19,079	98,244	138	35,634	4,250	0	39,884
98	136,866	638	10,659	148,163	139	65,032	5,239	4,243	74,514
99	90,555	2,858	27,964	121,377	140	104,310	0	1,862	106,172
100	90,467	0	10,679	101,146	141	124,860	2,252	13,926	141,038
101	20,795	0	0	20,795	142	5,476	0	0	5,476
102	34,630	0	0	34,630	143	48,237	3,441	3,478	55,156
103	66,938	6,344	0	73,282	144	189,381	0	5,537	194,918
104	70,660	0	1,884	72,544	145	15,710	0	0	15,710
105	60,477	0	0	60,477	146	4,712	0	0	4,712
106	78,332	701	0	79,033	147	5,691	0	0	5,691
107	39,981	0	0	39,981	148	21,395	0	0	21,395
108	156,671	8,340	12,806	177,817	149	71,154	0	0	71,154
109	102,856	4,600	2,965	110,421	150	53,072	0	0	53,072
110	16,096	0	0	16,096	151	130,914	0	7,786	138,700
111	19,770	0	0	19,770	152	70,377	0	0	70,377
112	434,413	10,497	14,306	459,216	153	80,919	4,330	1,821	87,070
113	13,034	0	0	13,034	154	130,889	0	2,712	133,601
114	15,263	0	5,722	20,985	155	130,429	0	0	130,429
115	42,188	0	0	42,188	156	28,856	0	0	28,856
116	6,649	0	0	6,649	157	143,203	1,382	2,051	146,636
117	107,806	6,768	3,406	117,980	158	42,513	0	0	42,513
118	128,617	0	1,558	130,175	159	82,820	0	0	82,820
119	151,639	6,460	16,500	174,599	160	153,976	0	11,408	165,384
120	131,511	7,479	16,064	155,054	161	26,312	0	0	26,312
121	75,976	0	7,829	83,805					
122	71,790	37,477	0	109,267					
123	56,566	63,069	10,448	130,083					
<b>Total</b>	<b>8,002,142</b>	<b>7,982,799</b>	<b>6,239,580</b>	<b>22,224,521</b>					

Note:- Numbers may not add to total due to rounding

## **9. Conclusion**

This report documents the procedures used for forecasting enplanements at the three major airports in the Washington-Baltimore Air System Planning region. The purpose of the enplanements forecast are to provide control totals to be used as a base for distributing air passengers' origins/destinations for future years.

The air passenger origin/destination update develops a technique to distribute air passenger characteristics based on trip origin. Characteristics such as arrival mode to the airports, travel time to the airports by trip origin, airport choice, and others were not analyzed. However, these characteristics in combination with resident status and trip purpose can also be tested. The results documented in this report are based on the 2009 air passenger survey data, the Round 8.0 Cooperative forecast for the MWCOG region and the BMC 7.2 land use data.

Local air passenger originations within the study area increased from 22.2 million trips in 2010, more than doubling to over 51.8 million by 2040 (see Table 18). It should be noted that trip rates for both households and employment were kept at a constant using the 2010 value. Total air passenger originating trips by AAZ for the forecast years 2015 through 2040 are documented in Appendix A in Tables A-1 through A-6.<sup>3</sup>

Although the increase in households and employment between 2010 and 2040 is evident in all the jurisdictions, a greater increase is observed in the outer suburban counties, such as Loudoun, Prince William, Spotsylvania, King George, Stafford, and Fauquier Counties in Virginia, Frederick County in Maryland and Jefferson County in West Virginia. These increases in household and employment result in the more than doubling of originating air passenger trips. Tables A-7 through A-9, show originating air passenger trips summary by jurisdiction to the three commercial airports.

The combined inner jurisdictions of the District of Columbia, Montgomery and Prince George's counties in Maryland, and Fairfax and Arlington counties and the City of Alexandria in Virginia accounted for almost 67 percent of the total originating trips in 2005, and almost 34 percent of them come from the District of Columbia. Though the outer suburban counties show a higher increase in originating air passenger trips between 2005 and 2030, the inner jurisdictions will continue to represent the majority of the region's air passenger trips, 60 percent by 2030.

Analysis by trip origin (home or non-home) of air passengers indicates that almost 60 percent of the total resident air passenger trips from home based originations and 62 percent of these are from the inner jurisdictions. A similar pattern is also true for non-home air passenger originations, in 2009. By 2030, home based originations from the inner jurisdictions will only account a little over half of the total, while non-home based originations will remain the same.

This report outlined the techniques used to forecast and distribute air passenger originating trips using the 2009 Washington-Baltimore Regional Air Passenger survey data and land-use forecast. Household and employment trip rates were set constant at the 2009 level for this study.

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<sup>3</sup> The forecasts reflect demand, not airport supply (runway and terminal capacity).

**Appendix A**

**Table A-1: Washington-Baltimore Air System Planning Region, Air Passenger Originating Trips by AAZ, Year 2015**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	29,308	9,423	3,250	41,981	42	2,521	0	133,386	135,907
2	15,172	123,991	43,813	182,976	43	36,664	82,844	415,451	534,959
3	274,368	1,421,484	584,284	2,280,136	44	25,999	13,425	423,346	462,770
4	207,449	763,906	339,672	1,311,027	45	19,132	35,102	224,404	278,638
5	42,409	92,291	58,218	192,918	46	64,669	150,153	287,100	501,922
6	88,321	263,727	124,360	476,408	47	68,967	67,425	86,572	222,964
7	15,065	48,114	14,766	77,945	48	33,487	29,522	33,224	96,233
8	19,061	58,836	31,591	109,488	49	30,300	43,332	61,074	134,706
9	52,845	73,952	38,249	165,046	50	26,718	42,207	12,607	81,532
10	34,352	94,676	33,656	162,684	51	18,848	41,692	11,064	71,604
11	39,761	59,379	13,952	113,092	52	35,034	61,029	46,049	142,112
12	19,759	85,261	30,462	135,482	53	47,195	85,943	35,386	168,524
13	24,779	79,430	32,905	137,114	54	35,703	62,550	77,537	175,790
14	48,017	58,723	38,278	145,018	55	54,066	58,685	60,487	173,238
15	40,643	108,490	25,962	175,095	56	30,350	16,972	48,453	95,775
16	65,966	163,498	57,042	286,506	57	57,359	35,619	80,833	173,811
17	15,621	11,446	0	27,067	58	75,867	102,772	127,919	306,558
18	19,533	178,723	32,903	231,159	59	79,823	21,221	36,446	137,490
19	16,078	43,077	36,012	95,167	60	41,260	24,027	23,044	88,331
20	14,040	10,431	0	24,471	61	35,984	31,791	57,491	125,266
21	5,421	0	2,679	8,100	62	99,725	28,579	77,386	205,690
22	72,881	617,361	113,546	803,788	63	65,330	29,551	9,181	104,062
23	12,331	75,471	30,310	118,112	64	88,220	85,070	26,973	200,263
24	4,033	26,844	32,726	63,603	65	31,800	47,274	25,949	105,023
25	25,517	162,751	61,397	249,665	66	18,164	33,455	26,494	78,113
26	23,701	256,476	49,543	329,720	67	45,875	42,979	14,743	103,597
27	28,428	119,295	66,994	214,717	68	28,812	11,021	23,867	63,700
28	43,246	182,532	103,812	329,590	69	92,775	29,347	17,333	139,455
29	7,512	29,093	16,171	52,776	70	68,235	21,232	19,399	108,866
30	8,799	112,816	21,199	142,814	71	25,026	1,357	3,223	29,606
31	48,717	289,515	69,953	408,185	72	23,619	0	0	23,619
32	8,545	25,794	18,795	53,134	73	61,039	12,388	8,526	81,953
33	29,539	128,443	42,340	200,322	74	69,990	11,774	6,208	87,972
34	33,467	150,787	117,723	301,977	75	80,264	15,696	904	96,864
35	23,274	138,003	44,965	206,242	76	63,884	0	1,453	65,337
36	45,980	195,396	81,463	322,839	77	21,849	20,279	0	42,128
37	30,554	126,142	156,185	312,881	78	19,678	14,626	5,201	39,505
38	14,552	58,774	145,609	218,935	79	48,709	26,166	6,350	81,225
39	4,146	21,501	38,607	64,254	80	15,997	27,311	9,569	52,877
40	16,476	12,816	200,117	229,409	81	33,690	112,477	18,561	164,728
41	48,327	75,047	204,574	327,948	82	75,888	66,984	26,959	169,831

Regional Air Passenger Origin / Destination Forecast Update

**Table A-1: Washington-Baltimore Air System Planning Region, Air Passenger Originating Trips by AAZ, Year 2015 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	19,894	54,737	121,374	196,005	124	35,577	34,034	30,348	99,959
84	5,705	21,272	39,112	66,089	125	22,302	23,429	2,810	48,541
85	8,016	65,623	102,222	175,861	126	11,800	2,076	28,091	41,967
86	12,934	30,975	151,274	195,183	127	7,509	36,770	13,315	57,594
87	26,504	25,704	77,692	129,900	128	9,774	26,242	7,877	43,893
88	17,944	8,585	76,022	102,551	129	29,456	55,496	58,982	143,934
89	6,775	8,319	141,011	156,105	130	15,297	13,633	61,646	90,576
90	15,524	5,847	16,379	37,750	131	8,457	1,491	6,096	16,044
91	16,905	2,713	114,505	134,123	132	12,490	0	28,362	40,852
92	6,848	24,647	253,917	285,412	133	391,782	8,879	14,125	414,786
93	46,734	11,820	257,798	316,352	134	65,142	6,200	0	71,342
94	12,861	2,938	169,332	185,131	135	58,643	0	0	58,643
95	90,981	17,957	58,883	167,821	136	29,371	1,222	4,955	35,548
96	41,121	9,149	6,276	56,546	137	65,967	4,808	6,633	77,408
97	84,564	8,992	24,484	118,040	138	41,020	4,634	0	45,654
98	159,736	710	13,371	173,817	139	79,696	6,526	5,956	92,178
99	115,452	3,457	37,705	156,614	140	117,253	0	2,243	119,496
100	105,523	0	13,368	118,891	141	138,498	2,367	16,496	157,361
101	24,044	0	0	24,044	142	6,119	0	0	6,119
102	39,016	0	0	39,016	143	56,093	3,804	4,331	64,228
103	77,920	6,934	0	84,854	144	221,270	0	6,908	228,178
104	78,188	0	2,229	80,417	145	18,788	0	0	18,788
105	73,541	0	0	73,541	146	5,257	0	0	5,257
106	92,326	796	0	93,122	147	6,394	0	0	6,394
107	56,272	0	0	56,272	148	23,889	0	0	23,889
108	187,667	9,408	16,274	213,349	149	79,957	0	0	79,957
109	123,422	5,156	3,743	132,321	150	61,589	0	0	61,589
110	19,860	0	0	19,860	151	149,476	0	9,498	158,974
111	22,562	0	0	22,562	152	79,256	0	0	79,256
112	505,963	11,599	17,865	535,427	153	90,868	4,609	2,184	97,661
113	15,208	0	0	15,208	154	146,362	0	3,246	149,608
114	17,275	0	6,915	24,190	155	149,400	0	0	149,400
115	47,645	0	0	47,645	156	32,535	0	0	32,535
116	8,048	0	0	8,048	157	166,277	1,490	2,492	170,259
117	122,090	7,266	4,120	133,476	158	48,043	0	0	48,043
118	145,127	0	1,877	147,004	159	97,811	0	0	97,811
119	169,134	6,816	19,672	195,622	160	184,011	0	14,572	198,583
120	149,100	8,018	19,395	176,513	161	33,465	0	0	33,465
121	85,677	0	9,426	95,103					
122	85,821	42,670	0	128,491					
123	69,654	72,753	13,651	156,058					
<b>Total</b>	<b>9,322,983</b>	<b>8,910,163</b>	<b>7,889,293</b>	<b>26,122,439</b>					

Note:- Numbers may not add to total due to rounding

**Table A-2: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2020**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	31,862	9,179	3,687	44,728	42	3,088	0	176,309	179,397
2	16,865	122,293	50,478	189,636	43	40,606	82,277	480,605	603,488
3	337,324	1,564,626	749,459	2,651,409	44	34,664	15,440	556,681	606,785
4	226,136	746,063	386,420	1,358,619	45	21,101	34,797	258,416	314,314
5	46,199	90,159	66,214	202,572	46	81,445	169,472	377,431	628,348
6	96,016	256,936	141,115	494,067	47	76,655	67,138	100,371	244,164
7	16,341	46,675	16,841	79,857	48	36,877	29,517	38,191	104,585
8	20,783	57,369	35,894	114,046	49	33,041	42,345	69,515	144,901
9	57,452	72,047	43,404	172,903	50	29,994	42,467	14,501	86,962
10	37,343	92,233	38,191	167,767	51	20,767	41,857	12,784	75,408
11	45,645	61,002	16,648	123,295	52	41,530	64,828	58,180	164,538
12	21,679	83,801	34,882	140,362	53	58,976	96,330	46,711	202,017
13	28,510	81,628	39,667	149,805	54	43,027	67,464	97,505	207,996
14	54,885	60,406	45,381	160,672	55	65,213	61,864	74,875	201,952
15	47,313	113,410	31,807	192,530	56	38,569	19,927	64,202	122,698
16	77,634	167,322	67,877	312,833	57	63,118	35,126	92,805	191,049
17	17,382	11,414	0	28,796	58	84,300	102,337	148,379	335,016
18	21,271	174,433	37,347	233,051	59	91,571	21,815	43,640	157,026
19	17,443	41,860	40,670	99,973	60	44,922	23,506	26,506	94,934
20	11,444	6,776	0	18,220	61	45,204	35,889	73,389	154,482
21	5,916	0	3,052	8,968	62	110,398	28,192	89,191	227,781
22	104,542	791,149	170,311	1,066,002	63	71,893	29,144	10,547	111,584
23	13,436	73,685	34,459	121,580	64	99,018	85,479	31,588	216,085
24	4,403	26,296	37,191	67,890	65	34,991	46,632	29,626	111,249
25	29,540	173,411	75,215	278,166	66	19,802	32,681	30,229	82,712
26	27,545	267,963	60,169	355,677	67	54,868	45,947	18,827	119,642
27	31,487	118,329	77,456	227,272	68	31,349	10,744	27,099	69,192
28	48,937	185,208	122,759	356,904	69	104,457	29,559	20,319	154,335
29	8,503	29,226	18,847	56,576	70	84,278	24,488	26,201	134,967
30	10,164	117,014	25,560	152,738	71	27,269	1,323	3,661	32,253
31	57,119	300,516	84,714	442,349	72	36,872	0	0	36,872
32	9,584	26,352	22,050	57,986	73	67,230	12,212	9,786	89,228
33	34,213	133,262	51,177	218,652	74	80,820	11,870	7,460	100,150
34	38,162	154,562	140,214	332,938	75	90,102	15,553	1,063	106,718
35	26,775	142,066	53,782	222,623	76	70,980	0	1,673	72,653
36	53,287	203,229	98,799	355,315	77	24,344	20,214	0	44,558
37	33,906	125,479	180,909	340,294	78	21,515	14,335	5,937	41,787
38	16,004	58,506	168,922	243,432	79	59,633	28,720	8,125	96,478
39	4,794	23,303	49,952	78,049	80	17,380	26,679	10,850	54,909
40	19,036	13,104	239,549	271,689	81	39,023	116,645	22,370	178,038
41	55,560	77,228	245,259	378,047	82	86,074	67,704	31,571	185,349

Regional Air Passenger Origin / Destination Forecast Update

**Table A-2: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2020 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	24,954	61,409	157,962	244,325	124	42,410	36,387	37,646	116,443
84	7,454	24,382	52,072	83,908	125	27,439	25,831	3,608	56,878
85	8,816	64,842	117,349	191,007	126	14,678	2,286	36,023	52,987
86	15,713	33,466	190,649	239,828	127	9,180	40,275	16,985	66,440
87	31,679	27,477	96,460	155,616	128	11,532	27,703	9,683	48,918
88	22,726	9,663	95,380	127,769	129	36,285	61,246	75,803	173,334
89	10,028	11,034	217,840	238,902	130	19,430	15,502	80,904	115,836
90	20,701	6,987	22,796	50,484	131	9,621	1,520	7,271	18,412
91	18,477	2,655	130,784	151,916	132	15,188	0	35,941	51,129
92	9,287	29,315	355,614	394,216	133	432,329	8,939	16,390	457,658
93	58,957	13,182	329,241	401,380	134	71,980	6,136	0	78,116
94	15,405	3,139	211,798	230,342	135	68,093	0	0	68,093
95	108,149	19,129	73,061	200,339	136	32,434	1,212	5,722	39,368
96	48,746	9,819	7,780	66,345	137	71,802	4,691	7,536	84,029
97	97,815	9,080	29,804	136,699	138	45,885	4,635	0	50,520
98	182,786	734	16,092	199,612	139	95,449	7,387	7,851	110,687
99	137,109	3,688	45,650	186,447	140	127,598	0	2,539	130,137
100	122,006	0	16,129	138,135	141	150,780	2,314	18,732	171,826
101	27,332	0	0	27,332	142	6,669	0	0	6,669
102	42,414	0	0	42,414	143	63,971	3,941	5,226	73,138
103	89,317	7,339	0	96,656	144	251,657	0	8,161	259,818
104	85,264	0	2,529	87,793	145	20,936	0	0	20,936
105	85,090	0	0	85,090	146	5,824	0	0	5,824
106	106,566	817	0	107,383	147	7,067	0	0	7,067
107	72,364	0	0	72,364	148	26,445	0	0	26,445
108	213,526	9,478	19,095	242,099	149	89,069	0	0	89,069
109	145,324	5,389	4,557	155,270	150	68,565	0	0	68,565
110	25,837	0	0	25,837	151	166,994	0	11,000	177,994
111	26,518	0	0	26,518	152	88,343	0	0	88,343
112	565,721	11,621	20,838	598,180	153	100,672	4,576	2,525	107,773
113	16,906	0	0	16,906	154	162,838	0	3,783	166,621
114	19,287	0	8,061	27,348	155	166,258	0	0	166,258
115	53,246	0	0	53,246	156	36,194	0	0	36,194
116	9,706	0	0	9,706	157	185,024	1,486	2,895	189,405
117	136,512	7,279	4,808	148,599	158	53,388	0	0	53,388
118	161,840	0	2,186	164,026	159	111,491	0	0	111,491
119	184,857	6,680	22,433	213,970	160	212,783	0	17,588	230,371
120	165,908	8,005	22,555	196,468	161	37,385	0	0	37,385
121	95,468	0	10,963	106,431					
122	98,491	43,956	0	142,447					
123	82,187	75,998	16,702	174,887					
<b>Total</b>	<b>10,643,579</b>	<b>9,364,667</b>	<b>9,718,447</b>	<b>29,726,693</b>					

Note:- Numbers may not add to total due to rounding



**Table A-3: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2025**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	34,888	9,221	4,267	48,376	42	3,627	0	227,319	230,946
2	18,712	123,471	58,838	201,021	43	45,191	84,003	565,192	694,386
3	387,638	1,636,979	906,862	2,931,479	44	43,849	17,357	709,051	770,257
4	247,624	749,478	447,095	1,444,197	45	23,410	35,451	302,961	361,822
5	50,717	90,987	76,882	218,586	46	97,894	186,851	479,163	763,908
6	105,139	258,113	163,273	526,525	47	85,616	68,771	118,385	272,772
7	17,894	46,890	19,486	84,270	48	40,497	29,742	44,316	114,555
8	22,757	57,628	41,531	121,916	49	36,244	42,605	80,559	159,408
9	62,910	72,376	50,218	185,504	50	32,893	42,733	16,818	92,444
10	40,890	92,656	44,188	177,734	51	23,039	43,273	15,057	81,369
11	49,986	61,283	19,262	130,531	52	47,554	68,107	70,826	186,487
12	23,737	84,186	40,359	148,282	53	68,804	103,062	57,268	229,134
13	31,221	82,003	45,895	159,119	54	49,336	71,051	118,169	238,556
14	66,188	66,559	58,183	190,930	55	79,254	68,920	96,097	244,271
15	53,062	117,756	39,048	209,866	56	52,228	25,447	91,777	169,452
16	88,432	178,348	83,425	350,205	57	69,259	35,363	107,586	212,208
17	20,029	12,067	0	32,096	58	95,401	106,233	177,377	379,011
18	24,106	181,240	44,969	250,315	59	107,302	23,452	54,033	184,787
19	22,523	50,140	60,200	132,863	60	49,233	23,701	31,067	104,001
20	13,570	7,480	0	21,050	61	59,000	43,216	95,957	198,173
21	6,494	0	3,540	10,034	62	121,653	28,479	103,817	253,949
22	125,925	875,184	216,625	1,217,734	63	79,662	29,628	12,349	121,639
23	15,152	76,075	40,836	132,063	64	111,159	88,118	37,481	236,758
24	4,837	26,506	43,172	74,515	65	40,131	49,215	34,649	123,995
25	35,634	191,070	95,653	322,357	66	22,346	33,835	37,011	93,192
26	31,101	278,021	71,830	380,952	67	62,467	48,016	22,533	133,016
27	34,908	121,049	90,729	246,686	68	34,362	10,799	31,375	76,536
28	54,739	190,654	146,035	391,428	69	117,809	30,499	24,111	172,419
29	9,320	29,379	21,818	60,517	70	100,931	27,557	34,059	162,547
30	11,872	125,777	31,546	169,195	71	29,891	1,329	4,238	35,458
31	65,702	312,123	101,566	479,391	72	64,193	0	0	64,193
32	12,671	31,867	30,793	75,331	73	74,418	12,375	11,416	98,209
33	40,674	145,532	64,320	250,526	74	90,490	12,232	8,829	111,551
34	43,626	162,195	169,396	375,217	75	101,303	15,838	1,265	118,406
35	30,592	148,940	64,960	244,492	76	78,925	0	1,949	80,874
36	61,324	215,233	120,784	397,341	77	27,672	20,996	0	48,668
37	37,765	128,200	212,902	378,867	78	23,722	14,474	6,900	45,096
38	17,724	59,734	198,690	276,148	79	73,458	32,119	10,249	115,826
39	5,456	25,403	64,141	95,000	80	18,963	26,791	12,510	58,264
40	21,862	13,738	289,844	325,444	81	45,748	125,299	27,594	198,641
41	63,567	80,972	296,253	440,792	82	96,399	69,372	37,153	202,924

**Table A-3: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2025 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	30,540	68,921	204,032	303,493	124	50,036	39,413	46,819	136,268
84	9,351	27,886	68,541	105,778	125	33,809	29,200	4,698	67,707
85	9,747	65,917	137,084	212,748	126	18,027	2,553	46,349	66,929
86	18,791	36,418	239,330	294,539	127	11,148	44,871	21,797	77,816
87	37,627	29,864	120,274	187,765	128	13,605	29,939	12,048	55,592
88	28,264	10,944	119,567	158,775	129	44,335	68,649	97,824	210,808
89	13,661	13,790	313,568	341,019	130	23,666	17,366	107,077	148,109
90	25,439	7,877	29,598	62,914	131	11,140	1,615	8,890	21,645
91	20,365	2,681	152,471	175,517	132	18,860	0	46,891	65,751
92	12,313	34,499	490,232	537,044	133	478,046	9,092	19,170	506,308
93	70,426	14,334	408,274	493,034	134	79,002	6,171	0	85,173
94	19,152	3,609	278,039	300,800	135	75,874	0	0	75,874
95	128,257	20,812	91,552	240,621	136	35,768	1,227	6,671	43,666
96	58,718	11,012	9,931	79,661	137	79,142	4,734	8,779	92,655
97	113,344	9,508	36,661	159,513	138	51,878	4,803	0	56,681
98	209,504	777	19,635	229,916	139	113,272	8,344	10,215	131,831
99	157,034	3,867	56,444	217,345	140	140,565	0	2,963	143,528
100	137,033	0	19,046	156,079	141	165,275	2,324	21,705	189,304
101	30,531	0	0	30,531	142	7,350	0	0	7,350
102	46,442	0	0	46,442	143	71,596	4,020	6,140	81,756
103	102,528	7,849	0	110,377	144	286,192	0	9,750	295,942
104	94,239	0	2,926	97,165	145	23,339	0	0	23,339
105	103,159	0	0	103,159	146	6,445	0	0	6,445
106	120,432	851	0	121,283	147	7,811	0	0	7,811
107	87,210	0	0	87,210	148	29,291	0	0	29,291
108	241,574	9,769	22,670	274,013	149	99,181	0	0	99,181
109	166,173	5,677	5,529	177,379	150	76,123	0	0	76,123
110	33,006	0	0	33,006	151	185,139	0	12,880	198,019
111	31,040	0	0	31,040	152	98,144	0	0	98,144
112	682,749	12,897	26,831	722,477	153	111,547	4,650	2,956	119,153
113	18,993	0	0	18,993	154	180,842	0	4,442	185,284
114	21,662	0	9,558	31,220	155	184,034	0	0	184,034
115	59,804	0	0	59,804	156	40,119	0	0	40,119
116	11,819	0	0	11,819	157	205,479	1,513	3,394	210,386
117	153,136	7,492	5,700	166,328	158	59,134	0	0	59,134
118	180,794	0	2,581	183,375	159	124,672	0	0	124,672
119	203,539	6,753	26,087	236,379	160	243,039	0	21,209	264,248
120	185,616	8,227	26,703	220,546	161	41,422	0	0	41,422
121	107,023	0	12,986	120,009					
122	111,935	45,841	0	157,776					
123	96,535	81,047	20,615	198,197					
<b>Total</b>	<b>12,152,153</b>	<b>9,842,425</b>	<b>11,977,012</b>	<b>33,971,590</b>					

Note:- Numbers may not add to total due to rounding

**Table A-4: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2030**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	38,616	9,410	5,029	53,055	42	4,236	0	290,286	294,522
2	21,266	127,295	70,404	218,965	43	50,614	86,757	674,288	811,659
3	437,332	1,699,893	1,088,745	3,225,970	44	53,472	19,173	896,349	968,994
4	274,544	766,282	527,991	1,568,817	45	26,216	36,622	361,324	424,162
5	56,958	94,905	92,264	244,127	46	116,169	204,385	605,351	925,905
6	116,664	264,170	193,284	574,118	47	96,283	71,279	141,698	309,260
7	19,936	48,143	23,137	91,216	48	44,882	30,399	52,300	127,581
8	25,776	60,318	50,178	136,272	49	40,163	43,518	95,052	178,733
9	71,578	75,718	60,502	207,798	50	36,445	43,643	19,848	99,936
10	45,778	95,658	52,697	194,133	51	25,912	45,694	18,131	89,737
11	55,919	63,263	23,010	142,192	52	54,348	71,755	86,414	212,517
12	26,460	86,528	47,908	160,896	53	84,648	116,961	75,647	277,256
13	35,345	85,659	55,277	176,281	54	58,097	76,910	148,068	283,075
14	82,313	74,751	79,334	236,398	55	98,839	80,521	129,010	308,370
15	59,134	121,036	46,424	226,594	56	68,354	31,893	127,747	227,994
16	101,254	187,204	101,120	389,578	57	76,758	36,131	126,959	239,848
17	23,048	12,801	0	35,849	58	108,562	111,435	214,913	434,910
18	26,735	185,321	53,057	265,113	59	123,270	24,837	66,105	214,212
19	25,393	52,090	72,028	149,511	60	54,546	24,291	37,177	116,014
20	15,021	7,633	0	22,654	61	72,873	49,290	124,118	246,281
21	7,194	0	4,176	11,370	62	135,023	29,147	122,724	286,894
22	143,371	917,348	262,868	1,323,587	63	88,536	30,356	14,615	133,507
23	16,779	77,694	48,198	142,671	64	126,595	92,705	45,490	264,790
24	5,346	26,967	50,967	83,280	65	46,488	52,706	41,206	140,400
25	41,357	203,184	117,850	362,391	66	25,244	35,240	45,276	105,760
26	34,977	288,262	86,031	409,270	67	72,835	51,612	27,990	152,437
27	38,901	124,733	107,668	271,302	68	38,056	11,021	36,982	86,059
28	63,252	203,096	179,676	446,024	69	134,369	31,923	29,084	195,376
29	10,315	29,979	25,722	66,016	70	118,428	29,884	42,678	190,990
30	13,811	134,903	39,079	187,793	71	33,132	1,359	5,002	39,493
31	75,975	332,801	125,099	533,875	72	112,641	0	0	112,641
32	14,056	32,625	36,379	83,060	73	83,595	12,787	13,618	110,000
33	48,122	158,746	81,043	287,911	74	102,689	12,833	10,673	126,195
34	49,753	170,664	205,773	426,190	75	114,426	16,364	1,524	132,314
35	34,962	156,917	79,052	270,931	76	89,085	0	2,305	91,390
36	70,417	228,251	148,175	446,843	77	31,178	21,774	0	52,952
37	42,360	132,582	254,334	429,276	78	26,531	14,865	8,175	49,571
38	19,767	61,682	237,066	318,515	79	89,784	36,380	13,551	139,715
39	6,223	27,540	81,533	115,296	80	21,053	27,557	14,791	63,401
40	25,089	14,477	353,423	392,989	81	51,196	129,261	32,877	213,334
41	72,692	85,286	360,540	518,518	82	109,749	72,599	44,789	227,137

Regional Air Passenger Origin / Destination Forecast Update

**Table A-4: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2030 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	36,966	77,030	264,311	378,307	124	58,869	42,774	58,559	160,202
84	11,441	31,859	90,598	133,898	125	40,091	31,919	5,933	77,943
85	10,874	67,964	162,860	241,698	126	22,035	2,881	60,405	85,321
86	22,456	39,509	300,833	362,798	127	13,477	49,976	28,061	91,514
87	44,861	32,678	151,008	228,547	128	16,012	32,473	15,093	63,578
88	35,298	12,498	150,525	198,321	129	54,078	77,150	126,904	258,132
89	16,130	15,011	394,287	425,428	130	29,149	19,769	144,426	193,344
90	30,996	8,848	38,409	78,253	131	12,989	1,736	11,042	25,767
91	22,864	2,775	182,342	207,981	132	23,340	0	61,514	84,854
92	15,252	38,701	641,125	695,078	133	530,179	9,331	22,677	562,187
93	82,588	15,384	501,345	599,317	134	87,486	6,294	0	93,780
94	23,585	4,140	364,222	391,947	135	84,585	0	0	84,585
95	150,746	22,550	114,587	287,883	136	39,752	1,257	7,898	48,907
96	79,119	14,152	14,347	107,618	137	88,032	4,848	10,401	103,281
97	132,303	10,172	45,652	188,127	138	58,404	4,986	0	63,390
98	239,404	822	23,997	264,223	139	130,977	9,046	12,792	152,815
99	180,526	4,098	69,021	253,645	140	156,392	0	3,519	159,911
100	152,266	0	22,451	174,717	141	182,979	2,371	25,592	210,942
101	33,800	0	0	33,800	142	8,145	0	0	8,145
102	51,409	0	0	51,409	143	78,227	4,146	7,315	89,688
103	117,422	8,554	0	125,976	144	320,367	0	11,614	331,981
104	104,377	0	3,449	107,826	145	26,483	0	0	26,483
105	121,314	0	0	121,314	146	7,170	0	0	7,170
106	135,124	909	0	136,033	147	8,701	0	0	8,701
107	102,892	0	0	102,892	148	32,632	0	0	32,632
108	278,451	10,330	27,688	316,469	149	110,807	0	0	110,807
109	192,920	6,110	6,873	205,903	150	84,883	0	0	84,883
110	37,998	0	0	37,998	151	206,299	0	15,275	221,574
111	35,410	0	0	35,410	152	109,596	0	0	109,596
112	781,284	13,610	32,743	827,637	153	124,100	4,768	3,501	132,369
113	21,539	0	0	21,539	154	201,708	0	5,266	206,974
114	24,570	0	11,528	36,098	155	204,936	0	0	204,936
115	67,147	0	0	67,147	156	44,707	0	0	44,707
116	13,857	0	0	13,857	157	229,481	1,556	4,033	235,070
117	172,362	7,773	6,832	186,967	158	65,774	0	0	65,774
118	203,200	0	3,088	206,288	159	139,559	0	0	139,559
119	228,963	6,990	31,290	267,243	160	277,192	0	25,751	302,943
120	208,927	8,530	31,981	249,438	161	46,253	0	0	46,253
121	119,752	0	15,474	135,226					
122	126,989	47,928	0	174,917					
123	113,025	86,570	25,562	225,157					
<b>Total</b>	<b>13,875,362</b>	<b>10,344,458</b>	<b>14,767,175</b>	<b>38,986,995</b>					

Note:- Numbers may not add to total due to rounding

**Table A-5: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2035**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	42,629	9,564	5,928	58,121	42	4,886	0	364,924	369,810
2	23,796	130,072	83,651	237,519	43	56,425	89,029	802,663	948,117
3	491,990	1,757,696	1,307,016	3,556,702	44	63,632	20,724	1,115,663	1,200,019
4	303,581	780,247	623,576	1,707,404	45	29,223	37,595	430,131	496,949
5	63,603	98,050	110,268	271,921	46	135,509	219,460	753,884	1,108,853
6	129,106	269,285	228,830	627,221	47	107,615	73,327	169,055	349,997
7	22,149	49,231	27,475	98,855	48	51,857	32,271	64,528	148,656
8	29,101	62,831	60,596	152,528	49	45,968	45,947	116,417	208,332
9	81,169	78,845	72,870	232,884	50	40,239	44,360	23,402	108,001
10	51,105	98,338	62,839	212,282	51	29,391	47,688	21,958	99,037
11	62,386	65,030	27,488	154,904	52	60,415	73,430	102,399	236,244
12	29,415	88,572	56,868	174,855	53	99,678	126,852	95,676	322,206
13	39,888	89,065	66,555	195,508	54	66,710	81,249	181,531	329,490
14	100,857	82,910	106,195	289,962	55	118,889	89,186	165,744	373,819
15	65,712	123,875	55,180	244,767	56	82,831	36,112	165,219	284,162
16	115,503	195,541	122,488	433,532	57	84,751	36,725	149,683	271,159
17	26,414	13,504	0	39,918	58	121,760	115,059	257,402	494,221
18	29,569	188,724	62,605	280,898	59	137,297	25,466	78,625	241,388
19	28,548	53,883	86,170	168,601	60	60,417	24,801	44,238	129,456
20	16,601	7,765	0	24,366	61	86,680	54,065	154,962	295,707
21	7,947	0	4,926	12,873	62	149,916	29,758	145,428	325,102
22	172,201	1,024,750	335,037	1,531,988	63	98,278	31,020	17,324	146,622
23	18,539	79,037	56,919	154,495	64	142,048	95,800	54,514	292,362
24	5,911	27,458	60,115	93,484	65	52,906	55,169	50,664	158,739
25	46,374	210,604	141,416	398,394	66	28,174	36,205	53,929	118,308
26	39,120	296,782	102,750	438,652	67	81,751	53,346	33,454	168,551
27	43,292	127,713	127,960	298,965	68	45,129	12,116	47,164	104,409
28	70,909	209,666	215,249	495,824	69	153,518	32,982	34,530	221,030
29	11,394	30,489	30,344	72,227	70	139,604	31,680	52,329	223,613
30	16,098	144,969	48,646	209,713	71	36,776	1,389	5,934	44,099
31	88,052	354,455	154,594	597,101	72	171,291	0	0	171,291
32	16,872	35,165	46,478	98,515	73	93,169	13,082	16,147	122,398
33	56,823	172,698	102,223	331,744	74	115,199	13,561	12,821	141,581
34	56,337	177,620	248,711	482,668	75	127,981	16,793	1,821	146,595
35	39,634	163,774	95,716	299,124	76	101,027	0	2,746	103,773
36	80,108	239,413	180,492	500,013	77	35,297	22,642	0	57,939
37	47,247	136,126	302,897	486,270	78	29,503	15,184	9,678	54,365
38	21,979	63,384	282,653	368,016	79	108,256	39,940	16,871	165,067
39	7,040	29,395	102,121	138,556	80	23,309	28,254	17,488	69,051
40	28,464	15,106	427,965	471,535	81	56,794	132,017	38,959	227,770
41	82,748	89,250	437,815	609,813	82	124,747	75,771	54,087	254,605

**Table A-5: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2035 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	43,854	84,392	338,151	466,397	124	68,845	46,070	73,015	187,930
84	13,588	35,693	118,119	167,400	125	47,215	34,606	7,462	89,283
85	12,085	69,717	193,270	275,072	126	26,502	3,196	77,744	107,442
86	26,459	42,097	373,170	441,726	127	16,111	54,971	35,821	106,903
87	52,966	35,322	187,766	276,054	128	18,699	34,899	18,814	72,412
88	43,549	14,081	187,302	244,932	129	65,130	85,490	163,030	313,650
89	18,189	15,582	474,803	508,574	130	35,819	22,421	194,878	253,118
90	35,519	9,334	46,998	91,851	131	15,102	1,858	13,717	30,677
91	25,249	2,820	215,078	243,147	132	28,811	0	80,724	109,535
92	17,906	41,878	804,248	864,032	133	585,578	9,506	26,767	621,851
93	94,934	16,209	609,370	720,513	134	96,646	6,400	0	103,046
94	27,898	4,530	459,828	492,256	135	93,384	0	0	93,384
95	181,379	24,979	147,237	353,595	136	43,941	1,280	9,327	54,548
96	97,758	16,316	18,983	133,057	137	97,197	4,927	12,264	114,388
97	155,597	10,535	58,089	224,221	138	64,940	5,108	0	70,048
98	272,230	864	29,251	302,345	139	147,631	9,473	15,540	172,644
99	204,489	4,280	82,133	290,902	140	173,109	0	4,165	177,274
100	168,086	0	26,465	194,551	141	201,962	2,410	30,163	234,535
101	37,315	0	0	37,315	142	8,996	0	0	8,996
102	56,749	0	0	56,749	143	86,596	4,249	8,697	99,542
103	131,063	9,109	0	140,172	144	353,714	0	13,694	367,408
104	115,226	0	4,066	119,292	145	29,278	0	0	29,278
105	140,998	0	0	140,998	146	7,955	0	0	7,955
106	149,167	924	0	150,091	147	9,659	0	0	9,659
107	117,294	0	0	117,294	148	36,221	0	0	36,221
108	315,259	10,736	33,382	359,377	149	123,062	0	0	123,062
109	221,716	6,481	8,457	236,654	150	94,207	0	0	94,207
110	45,120	0	0	45,120	151	228,998	0	18,096	247,094
111	40,668	0	0	40,668	152	121,629	0	0	121,629
112	909,895	14,605	40,878	965,378	153	137,709	4,870	4,148	146,727
113	24,370	0	0	24,370	154	224,139	0	6,239	230,378
114	27,795	0	13,907	41,702	155	227,538	0	0	227,538
115	75,379	0	0	75,379	156	49,590	0	0	49,590
116	16,196	0	0	16,196	157	254,893	1,590	4,779	261,262
117	193,735	8,043	8,198	209,976	158	72,989	0	0	72,989
118	228,119	0	3,702	231,821	159	155,519	0	0	155,519
119	256,242	7,194	37,423	300,859	160	312,998	0	31,083	344,081
120	234,141	8,792	38,234	281,167	161	51,336	0	0	51,336
121	133,631	0	18,440	152,071					
122	143,599	49,875	0	193,474					
123	131,613	91,938	31,628	255,179					
<b>Total</b>	<b>15,759,730</b>	<b>10,850,587</b>	<b>18,054,360</b>	<b>44,664,677</b>					

Note:- Numbers may not add to total due to rounding

**Table A-6: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2040**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
1	49,227	10,048	7,195	66,470	42	5,691	0	456,985	462,676
2	27,475	136,610	103,350	267,435	43	63,600	91,230	967,563	1,122,393
3	569,380	1,848,108	1,617,578	4,035,066	44	74,546	22,022	1,392,730	1,489,298
4	351,308	821,726	772,403	1,945,437	45	32,959	38,604	519,044	590,607
5	73,908	104,098	137,380	315,386	46	158,865	233,985	945,698	1,338,548
6	149,273	283,356	283,747	716,376	47	121,559	75,323	204,286	401,168
7	25,834	52,210	34,320	112,364	48	59,465	33,623	79,166	172,254
8	33,902	66,902	75,804	176,608	49	52,554	47,826	142,554	242,934
9	94,662	83,521	90,683	268,866	50	45,862	45,973	28,843	120,678
10	59,484	104,125	78,264	241,873	51	33,071	48,994	26,465	108,530
11	72,759	68,945	34,260	175,964	52	68,659	75,887	124,896	269,442
12	34,329	94,086	70,963	199,378	53	118,205	136,877	122,219	377,301
13	46,528	94,341	83,198	224,067	54	78,059	86,352	227,183	391,594
14	116,889	87,587	131,273	335,749	55	139,781	95,545	208,758	444,084
15	76,343	130,646	68,129	275,118	56	96,437	38,898	205,662	340,997
16	133,868	206,891	152,502	493,261	57	95,670	37,701	180,795	314,166
17	30,890	14,363	0	45,253	58	136,671	117,433	309,005	563,109
18	34,262	198,924	77,407	310,593	59	154,311	26,029	94,542	274,882
19	33,294	57,128	107,218	197,640	60	67,744	25,324	53,347	146,415
20	19,508	8,365	0	27,873	61	101,778	57,768	193,405	352,951
21	8,889	0	5,895	14,784	62	168,466	30,409	174,837	373,712
22	201,531	1,089,716	419,717	1,710,964	63	110,195	31,630	20,783	162,608
23	20,942	81,610	69,714	172,266	64	162,243	99,377	66,587	328,207
24	6,642	28,082	72,172	106,896	65	60,854	57,666	62,949	181,469
25	51,959	214,510	169,483	435,952	66	31,891	37,268	65,258	134,417
26	43,923	302,907	123,409	470,239	67	92,895	55,123	40,702	188,720
27	48,819	130,901	154,377	334,097	68	50,617	12,354	56,579	119,550
28	80,213	215,639	260,400	556,252	69	176,631	34,083	41,698	252,412
29	12,768	31,090	36,411	80,269	70	165,543	33,435	64,797	263,775
30	19,315	157,952	62,440	239,707	71	41,412	1,424	7,156	49,992
31	101,625	367,695	188,979	658,299	72	234,775	0	0	234,775
32	19,715	36,921	58,017	114,653	73	105,511	13,429	19,478	138,418
33	67,588	187,067	130,160	384,815	74	130,375	14,083	15,541	159,999
34	64,075	183,724	302,654	550,453	75	144,612	17,260	2,201	164,073
35	45,294	170,065	116,792	332,151	76	117,686	0	3,310	120,996
36	91,609	248,897	220,699	561,205	77	43,167	24,961	0	68,128
37	53,271	139,600	365,391	558,262	78	33,539	15,616	11,688	60,843
38	24,768	65,226	342,262	432,256	79	128,078	43,418	22,039	193,535
39	8,077	30,943	126,987	166,007	80	26,275	29,688	21,089	77,052
40	32,637	15,646	522,918	571,201	81	69,941	147,579	51,006	268,526
41	95,277	92,932	537,045	725,254	82	143,027	79,184	66,646	288,857

Regional Air Passenger Origin / Destination Forecast Update

**Table A-6: Washington-Baltimore Air System Planning Region Air Passenger Originating Trips by AAZ, Year 2040 (continued)**

AAZ	BWI	DCA	IAD	Total	AAZ	BWI	DCA	IAD	Total
83	52,180	91,709	436,240	580,129	124	81,515	49,628	92,362	223,505
84	16,070	39,717	155,282	211,069	125	56,255	37,498	9,512	103,265
85	13,627	71,697	233,171	318,495	126	32,274	3,545	101,429	137,248
86	31,416	44,511	466,166	542,093	127	19,471	60,393	46,320	126,184
87	63,185	38,078	235,741	337,004	128	22,144	37,567	23,825	83,536
88	54,228	15,818	235,101	305,147	129	79,219	94,530	211,963	385,712
89	20,625	16,069	576,012	612,706	130	44,725	25,526	267,653	337,904
90	40,929	9,781	57,942	108,652	131	17,840	1,996	17,344	37,180
91	28,547	2,901	260,084	291,532	132	36,123	0	107,817	143,940
92	20,831	45,134	1,009,969	1,075,934	133	656,948	9,717	32,155	698,820
93	109,977	17,022	749,636	876,635	134	108,450	6,530	0	114,980
94	32,913	4,872	580,259	618,044	135	104,743	0	0	104,743
95	222,667	27,885	193,376	443,928	136	49,333	1,308	11,209	61,850
96	123,812	19,052	25,793	168,657	137	109,033	5,026	14,719	128,778
97	184,839	11,048	74,443	270,330	138	73,356	5,252	0	78,608
98	314,590	912	36,301	351,803	139	169,141	9,962	19,224	198,327
99	229,358	4,365	98,881	332,604	140	194,664	0	5,018	199,682
100	188,467	0	31,749	220,216	141	226,465	2,457	36,186	265,108
101	41,839	0	0	41,839	142	10,092	0	0	10,092
102	63,632	0	0	63,632	143	97,387	4,372	10,526	112,285
103	148,564	9,711	0	158,275	144	396,659	0	16,433	413,092
104	129,198	0	4,877	134,075	145	32,892	0	0	32,892
105	158,146	0	0	158,146	146	8,962	0	0	8,962
106	167,260	942	0	168,202	147	10,892	0	0	10,892
107	134,509	0	0	134,509	148	40,839	0	0	40,839
108	353,494	10,947	40,046	404,487	149	138,814	0	0	138,814
109	248,602	6,609	10,146	265,357	150	106,195	0	0	106,195
110	50,592	0	0	50,592	151	258,191	0	21,817	280,008
111	45,598	0	0	45,598	152	137,110	0	0	137,110
112	1,020,244	14,893	49,038	1,084,175	153	155,226	4,990	5,001	165,217
113	27,326	0	0	27,326	154	252,968	0	7,522	260,490
114	31,165	0	16,683	47,848	155	256,609	0	0	256,609
115	84,518	0	0	84,518	156	55,863	0	0	55,863
116	18,161	0	0	18,161	157	287,572	1,629	5,762	294,963
117	217,229	8,202	9,836	235,267	158	82,265	0	0	82,265
118	255,780	0	4,441	260,221	159	177,005	0	0	177,005
119	287,322	7,335	44,894	339,551	160	360,640	0	38,368	399,008
120	262,539	8,965	45,866	317,370	161	58,356	0	0	58,356
121	149,829	0	22,120	171,949					
122	164,859	52,054	0	216,913					
123	155,279	97,827	39,749	292,855					
<b>Total</b>	<b>18,045,462</b>	<b>11,416,466</b>	<b>22,355,093</b>	<b>51,817,021</b>					

Note:- Numbers may not add to total due to rounding



**Table A-7: Washington-Baltimore Air System Planning Region, Total Originating Passengers by Jurisdiction**

Jurisdiction	Total Originating Passengers						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	5,581,365	6,370,780	6,935,141	7,564,865	8,319,537	9,162,748	10,430,777
Montgomery County	2,447,300	2,831,418	3,181,809	3,632,941	4,226,311	4,855,971	5,608,020
Prince George's County	1,008,357	1,183,966	1,328,295	1,513,076	1,744,509	2,003,177	2,341,381
Arlington County	1,830,154	2,170,071	2,539,035	2,836,286	3,115,911	3,496,902	3,881,719
City of Alexandria	709,316	804,455	871,725	974,443	1,092,639	1,237,073	1,397,474
Fairfax County	3,449,862	4,121,645	4,798,883	5,627,392	6,653,060	7,829,740	9,301,479
Loudoun County	853,546	1,114,873	1,467,240	1,910,328	2,398,004	2,920,373	3,583,503
Prince William County	673,125	865,589	1,042,453	1,263,098	1,543,569	1,871,581	2,293,937
Frederick County	282,041	342,407	403,383	479,795	583,628	710,873	882,915
Howard County	603,265	726,771	843,614	969,591	1,107,612	1,247,364	1,411,498
Anne Arundel County	1,527,789	1,766,328	1,984,604	2,286,388	2,607,220	2,980,738	3,352,420
Charles County	120,630	148,500	173,321	203,975	238,145	277,213	326,770
Carroll County	148,163	173,817	199,612	229,916	264,223	302,345	351,803
Calvert County	109,267	128,491	142,447	157,776	174,917	193,474	216,913
St. Mary's County	130,083	156,058	174,887	198,197	225,157	255,179	292,855
King George County	31,579	41,967	52,987	66,929	85,321	107,442	137,248
City of Fredericksburg	36,088	43,893	48,918	55,592	63,578	72,412	83,536
Stafford County	108,579	143,934	173,334	210,808	258,132	313,650	385,712
Spotsylvania County	45,028	57,594	66,440	77,816	91,514	106,903	126,184
Fauquier County	69,636	90,576	115,836	148,109	193,344	253,118	337,904
Clarke County	13,485	16,044	18,412	21,645	25,767	30,677	37,180
Jefferson County	31,275	40,852	51,129	65,751	84,854	109,535	143,940
Baltimore City	1,205,866	1,389,729	1,550,995	1,733,407	1,936,095	2,146,942	2,419,257
Baltimore County	934,206	1,062,822	1,182,946	1,313,124	1,465,193	1,628,311	1,838,227
Harford County	274,516	329,859	379,247	430,342	488,755	550,936	634,369
<b>Total</b>	<b>22,224,521</b>	<b>26,122,439</b>	<b>29,726,693</b>	<b>33,971,590</b>	<b>38,986,995</b>	<b>44,664,677</b>	<b>51,817,021</b>

Note:- Numbers may not add to total due to rounding

**Table A-8: Washington-Baltimore Air System Planning Region, Home Based Originating Passengers by Jurisdiction**

Jurisdiction	Home Based Originating Passengers						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	1,994,174	2,360,383	2,540,322	2,813,859	3,118,599	3,458,540	3,969,729
Montgomery County	1,929,929	2,225,168	2,495,788	2,839,608	3,293,370	3,788,288	4,380,461
Prince George's County	647,389	747,395	840,584	945,940	1,072,125	1,203,257	1,362,181
Arlington County	905,290	1,064,416	1,179,269	1,304,119	1,459,340	1,608,612	1,807,899
City of Alexandria	415,187	466,420	512,400	575,166	645,269	725,120	821,068
Fairfax County	2,426,229	2,876,645	3,290,444	3,832,256	4,502,542	5,273,451	6,213,934
Loudoun County	600,901	781,383	1,018,869	1,332,535	1,669,635	2,026,377	2,470,744
Prince William County	497,586	639,243	761,163	912,614	1,100,439	1,314,073	1,583,074
Frederick County	248,713	304,155	361,226	432,651	530,188	651,446	815,444
Howard County	487,167	583,394	674,498	768,733	870,569	977,317	1,098,942
Anne Arundel County	927,097	1,062,949	1,190,322	1,338,111	1,519,261	1,716,146	1,931,211
Charles County	102,158	125,974	148,061	175,333	205,197	239,296	282,412
Carroll County	121,789	143,885	166,511	193,253	223,178	256,524	299,853
Calvert County	90,969	105,457	116,467	129,096	143,456	159,034	178,713
St. Mary's County	59,654	74,086	86,407	101,117	118,414	137,861	162,175
King George County	26,954	35,551	44,924	56,956	73,142	92,819	119,459
City of Fredericksburg	21,603	26,652	29,170	32,638	37,141	42,094	48,384
Stafford County	99,714	132,491	159,538	194,011	237,776	289,127	355,680
Spotsylvania County	43,795	56,091	64,795	75,987	89,504	104,719	123,809
Fauquier County	43,289	58,034	75,076	99,121	133,396	179,673	246,361
Clarke County	12,023	14,211	16,204	18,950	22,416	26,509	31,905
Jefferson County	26,425	34,513	43,208	55,848	72,335	93,705	123,568
Baltimore City	550,300	647,689	727,339	815,167	916,000	1,020,203	1,155,060
Baltimore County	734,980	834,609	928,542	1,030,541	1,149,128	1,276,433	1,440,342
Harford County	211,044	251,323	288,501	326,030	369,250	417,168	482,227
<b>Total</b>	<b>13,224,359</b>	<b>15,652,117</b>	<b>17,759,628</b>	<b>20,399,640</b>	<b>23,571,670</b>	<b>27,077,792</b>	<b>31,504,635</b>

Note:- Numbers may not add to total due to rounding

**Table A-9: Washington-Baltimore Air System Planning Region, Non-Home Based Originating Passengers by Jurisdiction**

Jurisdiction	Non-Home Based Originating Passengers						
	2010	2015	2020	2025	2030	2035	2040
District of Columbia	3,587,191	4,010,397	4,394,819	4,751,006	5,200,938	5,704,208	6,461,048
Montgomery County	517,371	606,250	686,021	793,333	932,941	1,067,683	1,227,559
Prince George's County	360,968	436,571	487,711	567,136	672,384	799,920	979,200
Arlington County	924,864	1,105,655	1,359,766	1,532,167	1,656,571	1,888,290	2,073,820
City of Alexandria	294,129	338,035	359,325	399,277	447,370	511,953	576,406
Fairfax County	1,023,633	1,245,000	1,508,439	1,795,136	2,150,518	2,556,289	3,087,545
Loudoun County	252,645	333,490	448,371	577,793	728,369	893,996	1,112,759
Prince William County	175,539	226,346	281,290	350,484	443,130	557,508	710,863
Frederick County	33,328	38,252	42,157	47,144	53,440	59,427	67,471
Howard County	116,098	143,377	169,116	200,858	237,043	270,047	312,556
Anne Arundel County	600,692	703,379	794,282	948,277	1,087,959	1,264,592	1,421,209
Charles County	18,472	22,526	25,260	28,642	32,948	37,917	44,358
Carroll County	26,374	29,932	33,101	36,663	41,045	45,821	51,950
Calvert County	18,298	23,034	25,980	28,680	31,461	34,440	38,200
St. Mary's County	70,429	81,972	88,480	97,080	106,743	117,318	130,680
King George County	4,625	6,416	8,063	9,973	12,179	14,623	17,789
City of Fredericksburg	14,485	17,241	19,748	22,954	26,437	30,318	35,152
Stafford County	8,865	11,443	13,796	16,797	20,356	24,523	30,032
Spotsylvania County	1,233	1,503	1,645	1,829	2,010	2,184	2,375
Fauquier County	26,347	32,542	40,760	48,988	59,948	73,445	91,543
Clarke County	1,462	1,833	2,208	2,695	3,351	4,168	5,275
Jefferson County	4,850	6,339	7,921	9,903	12,519	15,830	20,372
Baltimore City	655,566	742,040	823,656	918,240	1,020,095	1,126,739	1,264,197
Baltimore County	199,226	228,213	254,404	282,583	316,065	351,878	397,885
Harford County	63,472	78,536	90,746	104,312	119,505	133,768	152,142
<b>Total</b>	<b>9,000,162</b>	<b>10,470,322</b>	<b>11,967,065</b>	<b>13,571,950</b>	<b>15,415,325</b>	<b>17,586,885</b>	<b>20,312,386</b>

Note:- Numbers may not add to total due to rounding

**Table A-10: Washington-Baltimore Air System Planning Region, Aviation Analysis Zone System Place Names**

AAZ	Jurisdiction	Place Name
1	District of Columbia	The Mall
2	District of Columbia	The White House, Federal Triangle, Foggy Bottom
3	District of Columbia	Franklin Square, Mt. Vernon, Gallery Place
4	District of Columbia	Dupont Circle, Adams Morgan
5	District of Columbia	Georgetown
6	District of Columbia	Cleveland Park
7	District of Columbia	Foxhall, Sutton Place, Cathedral Heights, Senate Heights, Glover Park, Foxhall Village, Canal View
8	District of Columbia	Tenleytown, American University
9	District of Columbia	Westover Place, Embassy Park, Wesley Heights, McLean Gardens
10	District of Columbia	Chevy Chase, Friendship Heights, Western Rock Creek Park
11	District of Columbia	Colonial Village, Rock Creek Gardens, Shepherd Park, Walter Reed, Takoma, Petworth, Hampshire Knolls, Crestwood, Eastern Rock Creek Park
12	District of Columbia	Mount Pleasant, North Adams Morgan
13	District of Columbia	Shaw, Howard University
14	District of Columbia	Riggs Park, Michigan Park, Catholic University, Brookland, Fort Lincoln, Langdon, Brentwood, Edgewood, Eckington, Washington Hospital Center
15	District of Columbia	The Capitol
16	District of Columbia	National Arboretum, Gallaudet University, Trinidad, Lincoln Park, Eastern Market, Capitol South, Navy Yard, Stadium Armory
17	District of Columbia	Anacostia, Benning, Fort Dupont, Capitol View, Deanwood, Capitol Heights
18	District of Columbia	L'Enfant Plaza, Federal Center SW, Waterfront
19	District of Columbia	Buzzard Point
20	District of Columbia	Bolling Air Force Base
21	Arlington County, VA	Ronald Reagan National Airport
22	Arlington County, VA	Pentagon City, Crystal City
23	Arlington County, VA	The Ridge, Forest Hills Commons, Avalon Bay
24	Arlington County, VA	Arlington National Cemetery, The Pentagon
25	Arlington County, VA	Rosslyn
26	Arlington County, VA	Clarendon, Colonial Village
27	Arlington County, VA	East Falls Church, North Arlington
28	Arlington County, VA	Ballston, Buckingham, Glencarlyn, Barcroft
29	Arlington County, VA	Shirlington
30	City of Alexandria, VA	Beverly Hills, Potomac Yards, Braddock Hgts, Timber Branch Park, Rosemont, Quaker Hill, Ivy Hill
31	City of Alexandria, VA	Old Town, Alexandria
32	City of Alexandria, VA	Cameron Park, Eisenhower Avenue
33	City of Alexandria, VA	Landmar
34	Fairfax County, VA	Falls Church, Fairview Park, Annandale, Lincoln
35	Fairfax County, VA	Shirley/Edsal Industrial Park, Springfield, Franconia, Kingstowne, Fort Belvoir Proving Ground, Newington
36	Fairfax County, VA	Huntington, Rose Hill, Hybla Valley, Fort Hunt, Mount Vernon, Woodlawn, Fort Belvoir, Lorton, Mason Neck

**Table A-10: Washington-Baltimore Air System Planning Region, AAZ System Place Names (continued)**

<b>AAZ</b>	<b>Jurisdiction</b>	<b>Place Name</b>
37	Fairfax County, VA	Lorton
38	Fairfax County, VA	Ravensworth, Burke, Fairfax Station, Burke Center, George Mason University
39	Fairfax County, VA	Merrifield
40	Fairfax County, VA	Centerville, Sully Station, Clifton
41	Fairfax County, VA	Fair Oaks, Fairfax City
42	Fairfax County, VA	Chantilly
43	Fairfax County, VA	Reston, Franklin Farm, Vienna
44	Fairfax County, VA	Woodland Park, Dulles Technology Center
45	Fairfax County, VA	Herndon, Great Falls
46	Fairfax County, VA	Tysons Corner
47	Fairfax County, VA	McLean
48	Montgomery County, MD	Glen Echo
49	Montgomery County, MD	Cabin John, Oakmont
50	Montgomery County, MD	Medical Center
51	Montgomery County, MD	Chevy Chase
52	Montgomery County, MD	Bethesda
53	Montgomery County, MD	Rock Spring, White Flint
54	Montgomery County, MD	West I-270 Rockville
55	Montgomery County, MD	Gaithersburg, Washington Grove
56	Montgomery County, MD	Germantown
57	Montgomery County, MD	Potomac
58	Montgomery County, MD	Dickerson, Barsville, Poolesville, Dovsonville, Quince Orchard, Darnestown, North Potomac
59	Montgomery County, MD	Damascus, Cedar Grove, Woodfield, Clarksburg, Laytonsville, Brookeville
60	Montgomery County, MD	Montgomery Village
61	Montgomery County, MD	East I-270 Rockville
62	Montgomery County, MD	Aspen Hill, Layhill, Norbeck, Olney
63	Montgomery County, MD	Cloverly, Colesville, Spencerville, Burtonsville, Fairland
64	Montgomery County, MD	Glenmont, White Oak, Wheaton, Four Corners, Hillandale, Forest Glen
65	Montgomery County, MD	North Chevy Chase
66	Montgomery County, MD	Forest Glen Park, North Silver Spring
67	Montgomery County, MD	Downtown Silver Spring
68	Montgomery County, MD	Takoma Park
69	Prince George's County, MD	Langley Park, Adelphi, Chillum, Hyattsville, Mount Rainer, Brentwood, Cottage City, Bladensburg, Edmonton, Berwyn Heights, Cheverly
70	Prince George's County, MD	College Park, University Park, University of Maryland
71	Prince George's County, MD	Beltsville
72	Prince George's County, MD	Calverton
73	Prince George's County, MD	Laurel, Montpelier
74	Prince George's County, MD	Greenbelt, Goddard Space Center, New Carrollton
75	Prince George's County, MD	North Bowie, Woodmore, Kettering
76	Prince George's County, MD	Bowie
77	Prince George's County, MD	Glenarden, Kentland

**Table A-10: Washington-Baltimore Air System Planning Region, AAZ System Place Names (continued)**

AAZ	Jurisdiction	Place Name
78	Prince George's County, MD	Seat Pleasant, Fairmount Heights, Capitol Heights, District Heights, Forestville
79	Prince George's County, MD	Andrews Air Force Base, Melwood, Woodyard, Upper Marlboro, Croom, Marilton
80	Prince George's County, MD	Hillcrest Heights, Morningside, Suitland, Temple Hills, Forest Heights
81	Prince George's County, MD	National Harbor
82	Prince George's County, MD	Friendly, Camp Springs, Clinton, Tantallon, Piscataway, Brandywine, Accokeek, Cedarville, Baden, Westwood, Eagle Harbor, Nottingham
83	Prince William County, VA	Woodbridge, Dumfries
84	Prince William County, VA	Woodbridge, Potomac Mills
85	Prince William County, VA	Dale City, Occoquan, Lake Ridge, Quantico Marine Corps Base
86	Prince William County, VA	Nokesville, Lake Jackson, Gainsville, Haymarket
87	Prince William County, VA	Manassas, Manassas Park
88	Prince William County, VA	Sudley, Manassas Battle Field, Haymarket
89	Loudoun County, VA	South Riding, Arcola
90	Loudoun County, VA	Washington Dulles International Airport
91	Loudoun County, VA	Cascades, Sugarland Run, Lowes Island
92	Loudoun County, VA	Sterling Park, Sterling, Dulles, Ashburn
93	Loudoun County, VA	Leesburg, Ashburn
94	Loudoun County, VA	Lovettsville, Hillsboro, Round Hill, Purcellville, Hamilton, Lucketts Bluement, Philomont, Saint Louis, Western Loudoun
95	Frederick County, MD	Woodsboro, Libertytown, Oldfield, New Market, Urbana, Point of Rock, Walkesville, Mount Airy
96	Frederick County, MD	City of Frederick
97	Frederick County, MD	Thurmont, Emmitsburg, Myersville, Middletown, Burkittsville, Brunswick
98	Carroll County, MD	Carroll County, MD
99	Howard County, MD	Lisbon, Cooksville, Glenwood, Glenelg, West Friendship, Dayton, Highland, Clarksville
100	Howard County, MD	North Ellicott City
101	Howard County, MD	South Ellicott City
102	Howard County, MD	Village of River Hill (Columbia)
103	Howard County, MD	Village of Harpers Choice, Village of Hickory Ridge, Simpsonville, Village of Wilde Lake, Village of Dorseys Search
104	Howard County, MD	Village of Oakland Mills, Village of Owen Brown, Village of Kings Contrivance, Village of Long Reach
105	Howard County, MD	Scaggsville, Dickinson, Laurel, Savage
106	Howard County, MD	Village of Kings Contrivance, Columbia Gateway
107	Howard County, MD	Elkridge, Dorsey
108	Anne Arundel County, MD	Laurel, Odenton, Piney Orchard, Woodwardville, Gambrills, Crofton, Jessup
109	Anne Arundel County, MD	Jessup, Severn, Arundel Mills
110	Anne Arundel County, MD	Dorsey
111	Anne Arundel County, MD	Baltimore/Washington International Thurgood Marshall Airport
112	Anne Arundel County, MD	Linthicum
113	Anne Arundel County, MD	North Linthicum
114	Anne Arundel County, MD	Glen Burnie

**Table A-10: Washington-Baltimore Air System Planning Region, AAZ System Place Names (continued)**

<b>AAZ</b>	<b>Jurisdiction</b>	<b>Place Name</b>
115	Anne Arundel County, MD	Glen Burnie, Harundale
116	Anne Arundel County, MD	Harundale
117	Anne Arundel County, MD	Lake Shore, Gibson Island, Arnold, Cape Saint Claire, US Naval Station
118	Anne Arundel County, MD	Severna Park
119	Anne Arundel County, MD	Annapolis
120	Anne Arundel County, MD	Heritage Harbor, Edgewater, Woodland Beach, Mayo, Highland Beach
121	Anne Arundel County, MD	Crofton, Davidsonville, Harwood, Lothian, Bayard, Owensville, Gallesville, Shady Side, Tracys Landing, Deale Churchton, Friendship
122	Calvert County, MD	Calvert County
123	St. Mary's County, MD	St. Mary's County
124	Charles County, MD	Pinefield, Waldorf, Cedarville, Indian Head, Glaymont, Marbury, Bryans Road, St. Charles
125	Charles County, MD	White Plains, Pomfret, La Plata, Doncaster, Pisgah, Ironsides, Port Tobacco, Bryantown, Hughesville, Benedict, Nanjemoy, Welcome, Bel Alton, Faulkner, Charlotte Hall, Mechanicsville, Newburg
126	King George County, VA	King George County
127	Spotsylvania County, VA	Northern Spotsylvania County
128	Fredericksburg, VA	City of Fredericksburg
129	Stafford County, VA	Stafford County
130	Fauquier County, VA	Fauquier County
131	Clarke County, VA	Clarke County
132	Jefferson County, WV	Jefferson County
133	Baltimore City, MD	Downtown Inner Harbor
134	Baltimore City, MD	Locust Point, Oriols Park
135	Baltimore City, MD	Canton Waterfront
136	Baltimore City, MD	Brooklyn, Cherry Hill, Loudon Park
137	Baltimore City, MD	Arlington, Pimlico, Gwynns Falls Park, Park Heights, North West Baltimore
138	Baltimore City, MD	Walbrook, Rosemont, Druid Hill Park
139	Baltimore City, MD	University of MD Baltimore-area
140	Baltimore City, MD	Hampden
141	Baltimore City, MD	Roland Park, Govans, Hamilton, Waverly, Herring Run Park, Belair-Edison
142	Baltimore City, MD	Collington Square
143	Baltimore City, MD	Mount Vernon
144	Baltimore City, MD	Lafayette Courts, Little Italy, Inner Harbor East, Fells Point, Washington Hill, Butchers Hill
145	Baltimore City, MD	East Baltimore
146	Baltimore County, MD	Halethorpe
147	Baltimore County, MD	North Arbutus
148	Baltimore County, MD	Arbutus
149	Baltimore County, MD	Catonsville, Westview Park, Woodlawn
150	Baltimore County, MD	Upperco, Boring, Reisterstown, Glyndon, Snowy
151	Baltimore County, MD	Garrison, Owings Mills, Pikesville, Randallstown, Woodlawn



**Table A-10: Washington-Baltimore Air System Planning Region, AAZ System Place Names (continued)**

<b>AAZ</b>	<b>Jurisdiction</b>	<b>Place Name</b>
152	Baltimore County, MD	Freeland, Maryland Line, Middletown, Gunpowder Falls, Butler, Belfast, Cooperstown, Dover
153	Baltimore County, MD	Stevenson, Brooklandville
154	Baltimore County, MD	Lutherville, Cockeysville, Timonium, Carney
155	Baltimore County, MD	Towson, Parkville
156	Baltimore County, MD	Long Green, Glen Park, Baldwin, Fork
157	Baltimore County, MD	Fullerton, Perry Hall, Bradshaw, Rosedale, Middle River, White Marsh
158	Baltimore County, MD	Essex, Dundalk, Sparrows Point, Edgemere, East Baltimore County
159	Harford County, MD	Norrisville, Whiteford, Cardiff, Pylesville, Broad Creek, Dublin, Jarrettsville, Forest Hill, Darlington
160	Harford County, MD	Bel Air, Churchville, Fountain Green, Creswell, Level, Aberdeen, Harve De Grace, Joppatowne
161	Harford County, MD	Aberdeen Proving Ground



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