

2011 Air Passenger Survey Geographic Findings



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Geocoding 2011 Survey

- Merge BMC/BRTB TAZ system with MWCOG/TPB to create Washington/Baltimore Air System Region TAZ boundaries
- Convert Washington/Baltimore Air System Region TAZ boundaries into "kml" file for Geo-coding
- Used Google Earth as a base to identify TAZ's for each originating air passenger trip record address.



Washington/Baltimore Air System Planning Region Aviation Analysis Zone System

Model Region	No. of TAZ's	No. of AAZ's
MWCOG/TPB	3,669	132
BMC/BRTB	699	29
Total	4,368	161



2011 Washington-Baltimore Regional Air Passenger Survey

***2011 Washington-Baltimore Regional Air Passenger Survey
Originating Passengers Survey Records Geo-Coding***

Geo-Coding		Internal	External	Total
Han-Coded	<i>Number</i>	11,360	975	12,335
	<i>Percent</i>	70%	85%	71%
Partial-Address	<i>Number</i>	2,598	0	2,598
	<i>Percent</i>	16%	0%	15%
Allocated	<i>Number</i>	2,338	169	2,507
	<i>Percent</i>	14%	15%	14%
Total	<i>Number</i>	16,296	1,144	17,440
	<i>Percent</i>	100%	100%	100%

Internal = Locations within the Air System Region

External = Locations outside the Air System Region



2011 Washington-Baltimore Regional Air Passenger Survey

**2011 Washington-Baltimore Air Passenger Survey
No. of Survey Questionnaires by Airport**

Enplanement Type		BWI	DCA	IAD	Total
Local origination	<i>Number</i>	6,538	5,861	5,041	17,440
- (Came by ground transportation)	<i>Percent</i>	79%	90%	65%	77%
Connected from another Flight	<i>Number</i>	1,766	638	2,675	5,079
- (Local and/or International)	<i>Percent</i>	21%	10%	35%	23%
Total Questionnaires					
	<i>Number</i>	8,304	6,499	7,716	22,519
	<i>Percent</i>	100%	100%	100%	100%



Geo-Findings Report

- Subjects will include
 - Geographic Pattern of Airport Use
 - Satisfaction of Airport
 - Trip Purpose
 - Trip Origin Activities
 - Mode of Access
 - Household Income
 - Air Passengers Destinations
 - Departures by Time-of-Day
 - Washington and Baltimore City Centers



2011 Washington-Baltimore Regional Air Passenger Survey

2011 Washington-Baltimore Regional Air Passenger Survey Annual Internal/External Trip Originations by Airport (in Thousands)

Enplanement Type		BWI		Dulles		National		Region	
		2009	2011	2009	2011	2009	2011	2009	2011
Within Air System Planning Region - (Internal)	Number	7,624	7,705	6,095	7,109	7,816	8,094	21,535	22,908
	Percent	86%	88%	88%	95%	97%	99%	90%	94%
Outside Air System Planning Region - (External)	Number	1,272	1,054	800	383	233	121	2,305	1,558
	Percent	14%	12%	12%	5%	3%	1%	10%	6%
Total Enplanements	Number	8,896	8,758	6,895	7,493	8,049	8,215	23,840	24,466
	Percent	100%	100%	100%	100%	100%	100%	100%	100%

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 and 2011 Washington-Baltimore Regional Air Passenger Survey



Airport Use

- 24.5 million air passengers originated in the Washington-Baltimore region in 2011, an increase of 2.6 percent over the 23.8 million originations in 2009
- The total number of air passengers (including connecting passengers) increased 4 percent between 2009 and 2011
- Air passenger originations in Northern Virginia increased by 15 percent, while the Maryland suburbs of the District of Columbia and the Baltimore Metropolitan Region increased by 9 percent when compared with 2009
- Air passenger originations decreased by 11 percent from the District of Columbia, and air passengers from the outlying areas within the air system region also declined by 24 percent



Airport Preference

- Across the region, 81 percent of passengers are satisfied with their airport choice
- The jurisdictions with 90 percent or more of satisfied passengers are mainly in the Baltimore region

Trip Purpose and Origin Activity

- In 2011, the percentage of locally originating passengers traveling for business increased to 43 percent, when compared with 38 percent in 2009
- 21 percent of locally originating passengers indicated vacation as their trip purpose and 27 percent indicated personal or family affairs as their purpose



Trip Purpose and Origin Activity

- While 43 percent of air passengers originating in the Washington-Baltimore region are traveling on business, only 10 percent of the total number of passengers leave a place of business and travel directly to the airport, same as in 2009
- While over half of all air passengers leave for the airport from a private residence, a significant amount (26 percent of the total) leave from a hotel or motel

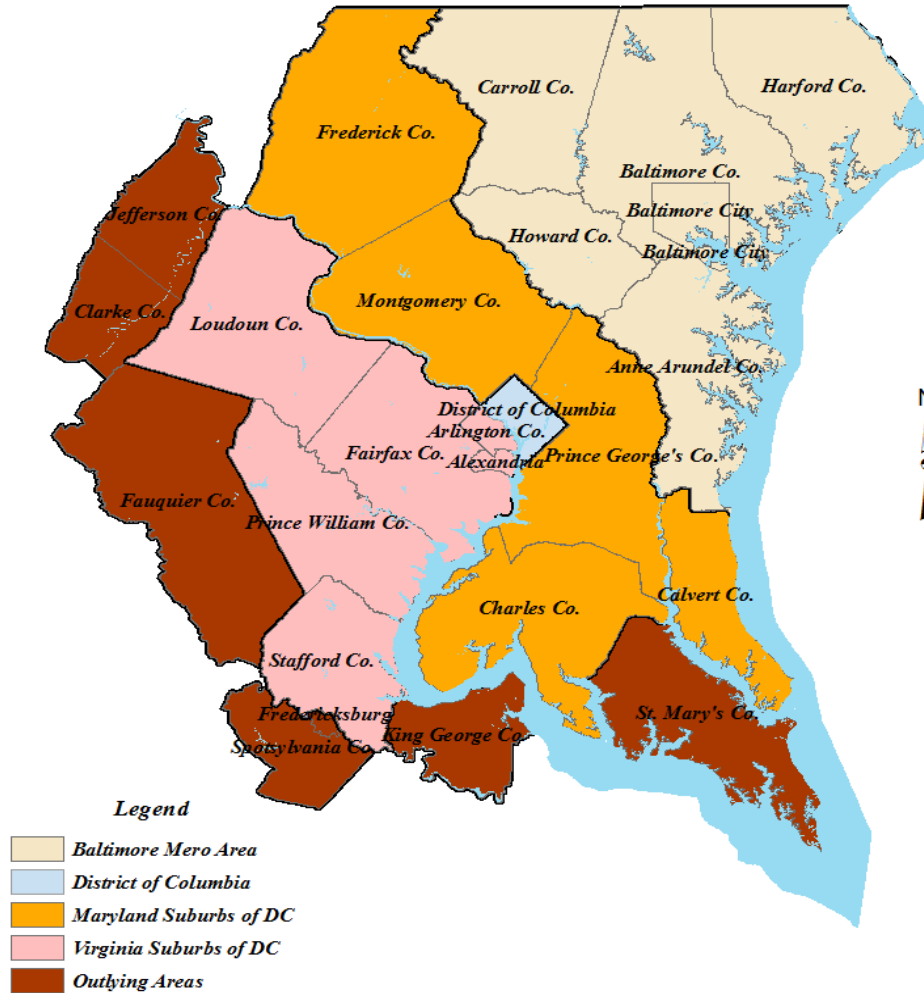


Mode of Access

- The most common mode of access to the airports in 2011 was the automobile (private autos or rental cars), accounting for 61 percent of originating air passengers
- Taxicabs were used by the second highest percentage of local air passengers (17 percent)
- Public transportation, such as the Metrorail to Reagan National, or light rail or Amtrak/MARC services to BWI Marshall, was 8 percent
- Usage of public transportation within the Washington Downtown Center (includes the District of Columbia, Arlington County and City of Alexandria) was double than the regional average and about two- and-a-half times that of the Baltimore Downtown center (City of Baltimore)



Figure 5
 Washington / Baltimore Air System Planning Region
 Jurisdictions Subdivision



Note: - Outlying areas also include adjacent jurisdictions outside the air system planning region.



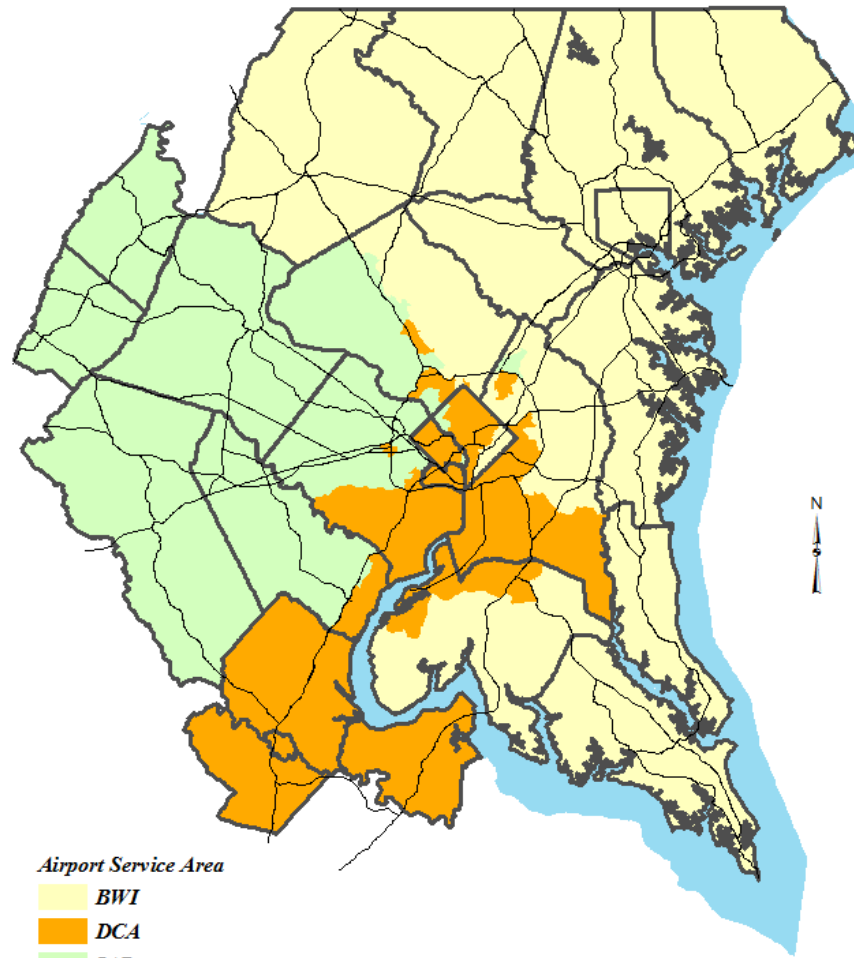
**Washington Baltimore Air System Planning Region Change In Originating Air Passengers By Jurisdiction
2009 - 2011
(in Thousands)**

ORIGIN COUNTY	BWI AIRPORT				NATIONAL AIRPORT				DULLES AIRPORT				REGION			
	2009	2011	09-11	% Change	2009	2011	09-11	% Change	2009	2011	09-11	% Change	2009	2011	09-11	% Change
<i>Anne Arundel Co.</i>	1,336	1,394	58	4%	45	42	-3	-8%	79	97	18	23%	1,460	1,533	73	5%
<i>Baltimore City</i>	1,069	1,234	165	15%	33	21	-12	-35%	51	48	-3	-5%	1,153	1,304	151	13%
<i>Baltimore Co.</i>	871	878	7	1%	6	27	21	342%	14	49	35	247%	891	953	62	7%
<i>Carroll Co.</i>	130	135	5	4%	1	3	2	205%	10	22	12	121%	141	160	19	13%
<i>Harford Co.</i>	251	266	15	6%	1	2	1	100%	11	5	-6	-51%	263	274	11	4%
<i>Howard Co.</i>	527	591	64	12%	10	15	5	47%	40	55	15	39%	577	661	84	15%
SUBTOTAL BALTIMORE METRO AREA	4,184	4,497	313	7%	96	109	13	14%	205	277	72	35%	4,485	4,884	399	9%
<i>Calvert Co.</i>	68	54	-14	-20%	37	4	-33	-90%	0	15	15	0%	105	73	-32	-30%
<i>Charles Co.</i>	44	77	33	76%	48	58	10	20%	25	17	-8	-31%	117	152	35	30%
<i>Frederick Co.</i>	172	230	58	34%	31	36	5	17%	68	66	-2	-3%	271	332	61	23%
<i>Montgomery Co.</i>	815	892	77	9%	831	876	45	5%	727	749	22	3%	2,373	2,517	144	6%
<i>Prince Georges Co.</i>	568	519	-49	-9%	305	402	97	32%	96	174	78	81%	969	1,095	126	13%
SUBTOTAL MARYLAND SUBURBS OF DC	1,667	1,773	106	6%	1,252	1,375	123	10%	916	1,021	105	11%	3,835	4,170	335	9%
<i>Alexandria</i>	77	81	4	6%	495	539	44	9%	119	170	51	43%	691	791	100	14%
<i>Arlington Co.</i>	177	153	-24	-14%	1,243	1,468	225	18%	370	499	129	35%	1,790	2,120	330	18%
<i>Fairfax Co.</i>	358	287	-71	-20%	1,003	1,219	216	22%	1,999	2,252	253	13%	3,360	3,758	398	12%
<i>Loudoun Co.</i>	82	54	-28	-34%	46	75	29	64%	704	913	209	30%	832	1,043	211	25%
<i>Prince William Co.</i>	66	42	-24	-36%	173	204	31	18%	416	445	29	7%	655	691	36	6%
<i>Stafford Co.</i>	21	6	-15	-71%	43	65	22	51%	41	64	23	56%	105	135	30	29%
SUBTOTAL VIRGINIA SUBURBS OF DC	781	624	-157	-20%	3,003	3,571	568	19%	3,649	4,343	694	19%	7,433	8,538	1,105	15%
<i>District of Columbia</i>	887	676	-211	-24%	3,336	2,900	-436	-13%	1,210	1,280	70	6%	5,433	4,857	-576	-11%
<i>Outlying Areas</i>	1,375	1,187	-188	-14%	363	260	-103	-29%	916	570	-346	-38%	2,654	2,017	-637	-24%
Total	8,894	8,758	-136	-2%	8,050	8,215	165	2%	6,896	7,493	597	9%	23,840	24,466	626	3%


Data for the Cities of Fairfax and Falls Church are included in the Fairfax County totals, and data for the Cities of Manassas and Manassas Park are included in the Prince William County totals. Outlying Areas include Clarke, Fauquire, King George, and Spotsylvania Counties in VA, the City of Fredericksburg VA, St. Mary's County in MD, and Jefferson County WV, and jurisdictions outside the air system planning region.

Source:- 2009 and 2011 Washington-Baltimore Regional Air Passenger Surveys


Figure 7
Washington / Baltimore Air System Planning Region
Airport Service Area by AAZ - 2011




Airport Service Area

 *BWI*

 *DCA*

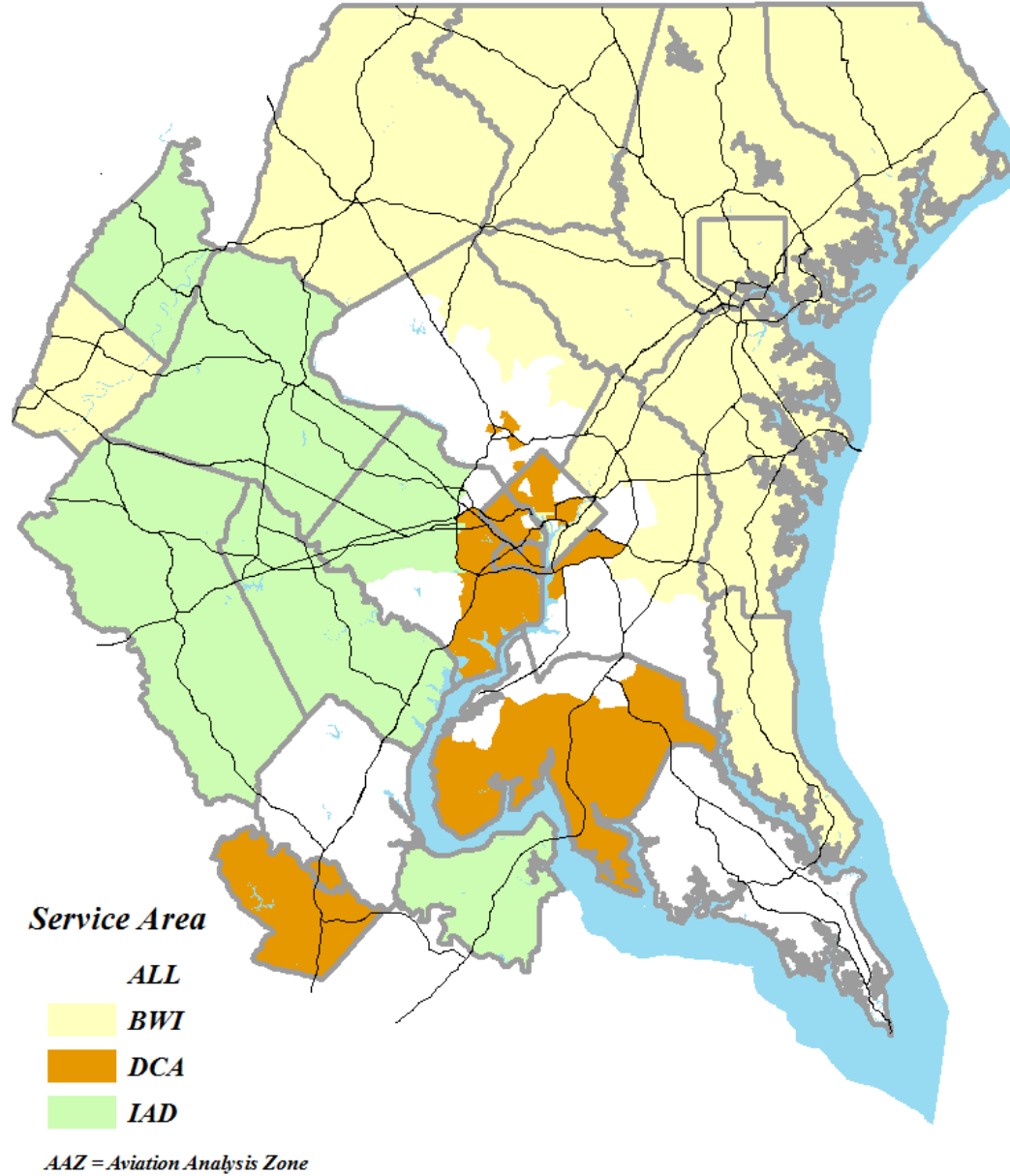
 *IAD*

 *Jurisdiction*

AAZ = Aviation Analysis Zone



Figure 5
Washington / Baltimore Air System Planning Region
Airport Service Area by AAZ - 2009



Washington and Baltimore City Centers

- Although the number of air passengers from the Baltimore downtown center account for only five percent of the regional total, it is nearly 27 percent of all passengers from the Baltimore metropolitan area
- The Washington D.C. and surrounding downtown activity centers of Arlington County and City of Alexandria, generated 7.7 million air passengers in 2011 and 63 percent of them used Reagan National Airport
- Both Washington and its surrounding downtown activity centers of Arlington County and City of Alexandria and Baltimore City had a significant percent of passengers traveling to the airport from a hotel or motel, 48 percent from the Washington activity center and 41 percent in the Baltimore activity center
- Places of employment or other business locations generated 14 percent of the passengers from the Washington downtown activity center and 9 percent from the Baltimore city respectively



2011 Washington-Baltimore Regional Air Passenger Survey

Washington-Baltimore Air System Region Airport Usage From Major Downtown Activity Centers (in thousands)

Airport Used	Baltimore Downtown Center		Washington Downtown Center		All Other		Region	
	No.	%	No.	%	No.	%	No.	%
BWI	1,234	95%	910	12%	6,614	43%	8,758	36%
DCA	21	2%	4,908	63%	3,286	21%	8,215	34%
IAD	48	4%	1,950	25%	5,495	36%	7,493	31%
Total	1,304	100%	7,768	100%	15,395	100%	24,466	100%

Note: The Washington downtown center includes the District of Columbia, Arlington County and City of Alexandria.

The Baltimore downtown center includes the City of Baltimore.

All Other includes externals outside the Washington-Baltimore Air System Planning Region.

Source: 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

Washington-Baltimore Air System Region Trip Purpose from Major Downtown Activity Centers (in thousands)

Trip Purpose	Baltimore Downtown Center		Washington Downtown Center		All Other		Region	
	No.	%	No.	%	No.	%	No.	%
Business (Feds)	189	15%	1,659	21%	2,453	16%	4,301	18%
Business (St./Local)	31	2%	253	3%	239	2%	523	2%
Business (Non-Govt)	393	30%	2,080	27%	3,276	21%	5,749	23%
Vacation	209	16%	1,350	17%	3,514	23%	5,072	21%
Personal	343	26%	1,632	21%	4,653	30%	6,628	27%
Student	51	4%	262	3%	352	2%	666	3%
Other	87	7%	532	7%	908	6%	1,527	6%
Total	1,304	100%	7,768	100%	15,395	100%	24,466	100%

Note: The Washington downtown center includes the District of Columbia, Arlington County and City of Alexandria.

The Baltimore downtown center includes the City of Baltimore.

All Other includes externals outside the Washington-Baltimore Air System Planning Region.

Source: 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

Washington-Baltimore Air System Region Trip Origin Activity from Major Downtown Activity Centers (in thousands)

Origin Activity	Baltimore		Washington		All		Region	
	Downtown Center		Downtown Center		Other		No.	%
	No.	%	No.	%	No.	%	No.	%
Private Residence	576	44%	2,929	38%	10,936	71%	14,441	59%
Hotel/Motel	530	41%	3,409	44%	2,466	16%	6,405	26%
Regular Employment	44	3%	538	7%	628	4%	1,210	5%
Other Business	80	6%	532	7%	690	4%	1,302	5%
Other	74	6%	359	5%	676	4%	1,109	5%
Total	1,304	100%	7,768	100%	15,395	100%	24,466	100%

Note: The Washington downtown center includes the District of Columbia, Arlington County and City of Alexandria.

The Baltimore downtown center includes the City of Baltimore.

All Other includes externals outside the Washington-Baltimore Air System Planning Region.

Source: 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

Washington-Baltimore Air System Region Mode of Access from Major Downtown Activity Centers (in thousands)

Mode of Access	Baltimore Downtown Center		Washington Downtown Center		All Other		Region	
	No.	%	No.	%	No.	%	No.	%
Private Auto	538	41%	1,877	24%	9,767	63%	12,181	50%
Rental Auto	173	13%	482	6%	2,140	14%	2,795	11%
Taxicab	283	22%	2,744	35%	1,184	8%	4,211	17%
Public Transportation	90	7%	1,304	17%	489	3%	1,883	8%
Airport Bus or Limousine	175	13%	1,058	14%	1,205	8%	2,438	10%
Other	44	3%	303	4%	610	4%	958	4%
Total	1,304	100%	7,768	100%	15,395	100%	24,466	100%

Note: The Washington downtown center includes the District of Columbia, Arlington County and City of Alexandria.

The Baltimore downtown center includes the City of Baltimore.

All Other includes externals outside the Washington-Baltimore Air System Planning Region.

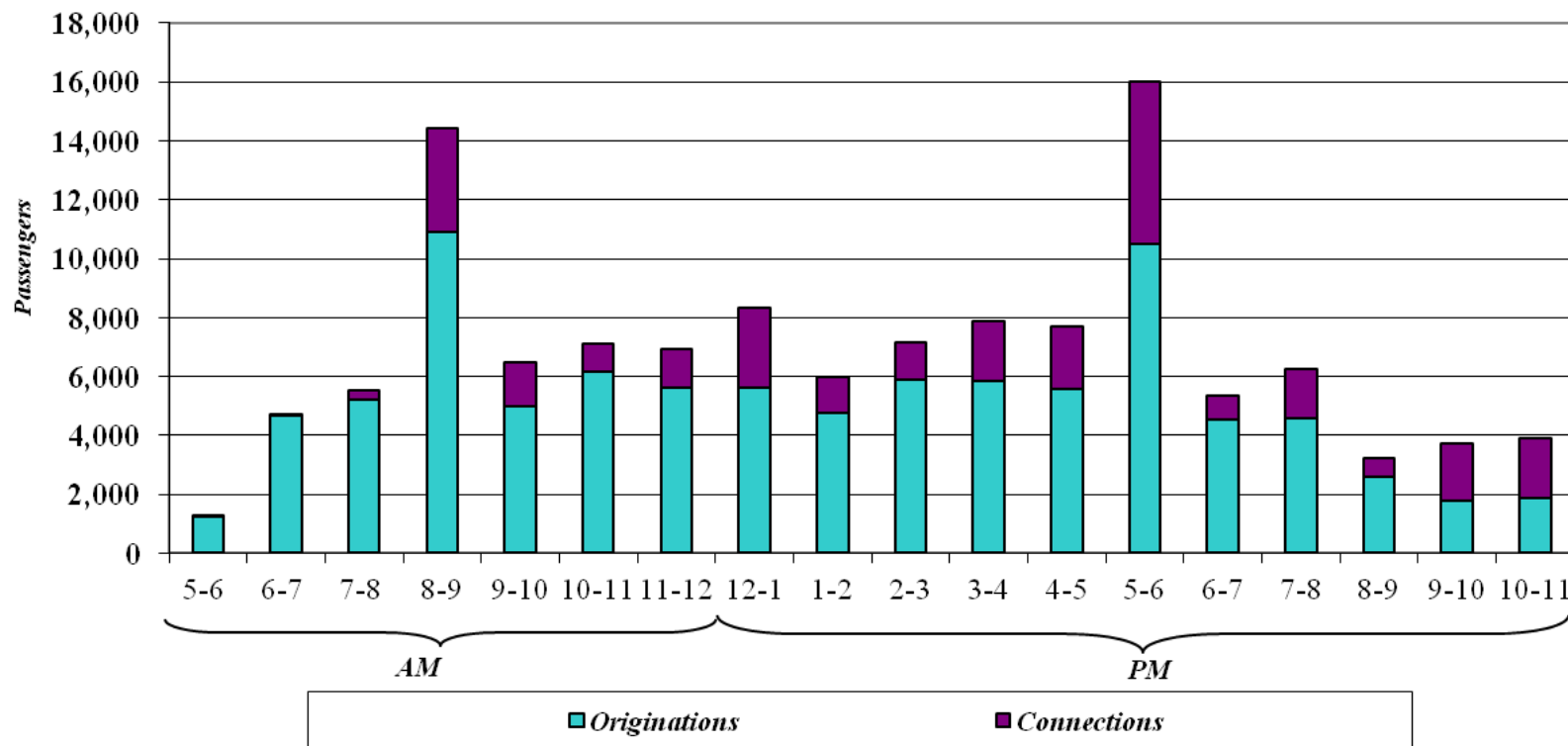
Source: 2011 Washington-Baltimore Regional Air Passenger Survey



DIURNAL DISTRIBUTION

2011 Washington-Baltimore Regional Air Passenger Survey

*Diurnal Passenger Distribution at Regional Airports
2011*

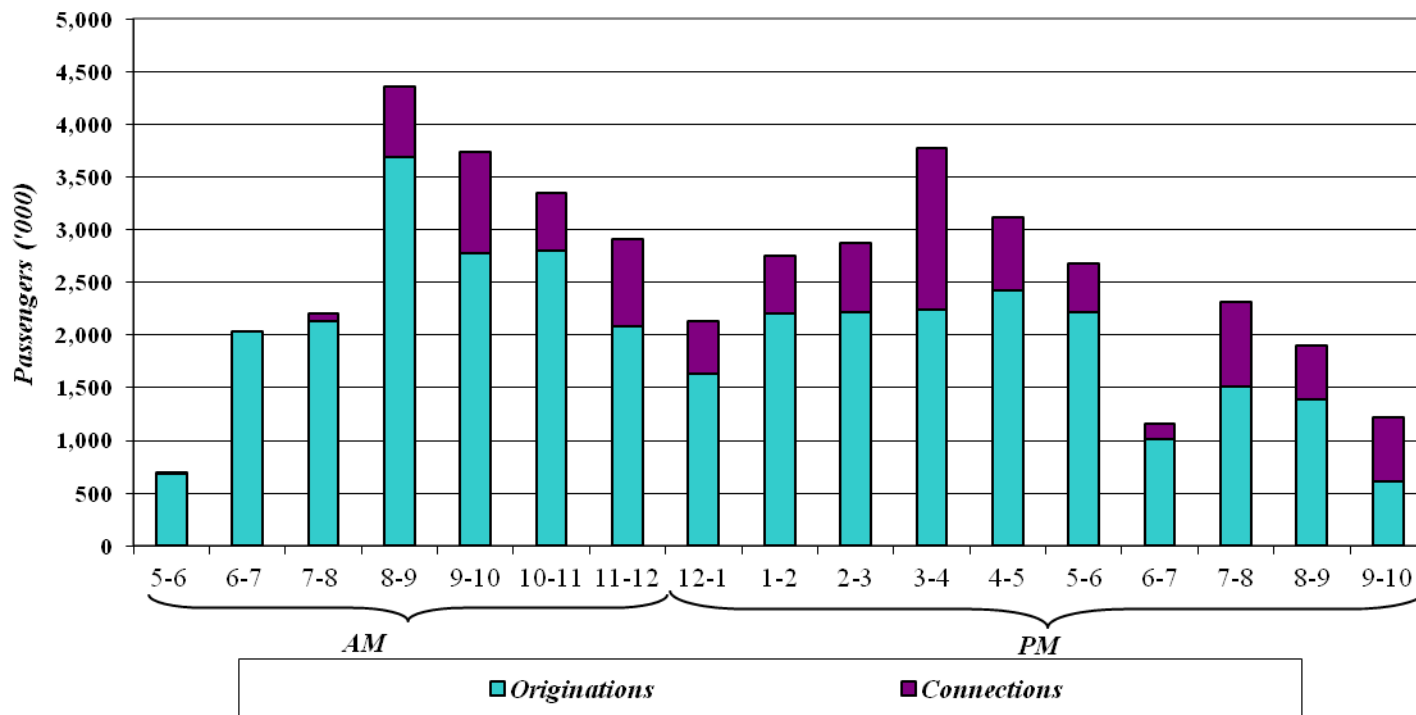


Source:- 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

*Diurnal Passenger Distribution at BWT Marshall Airport
2011*

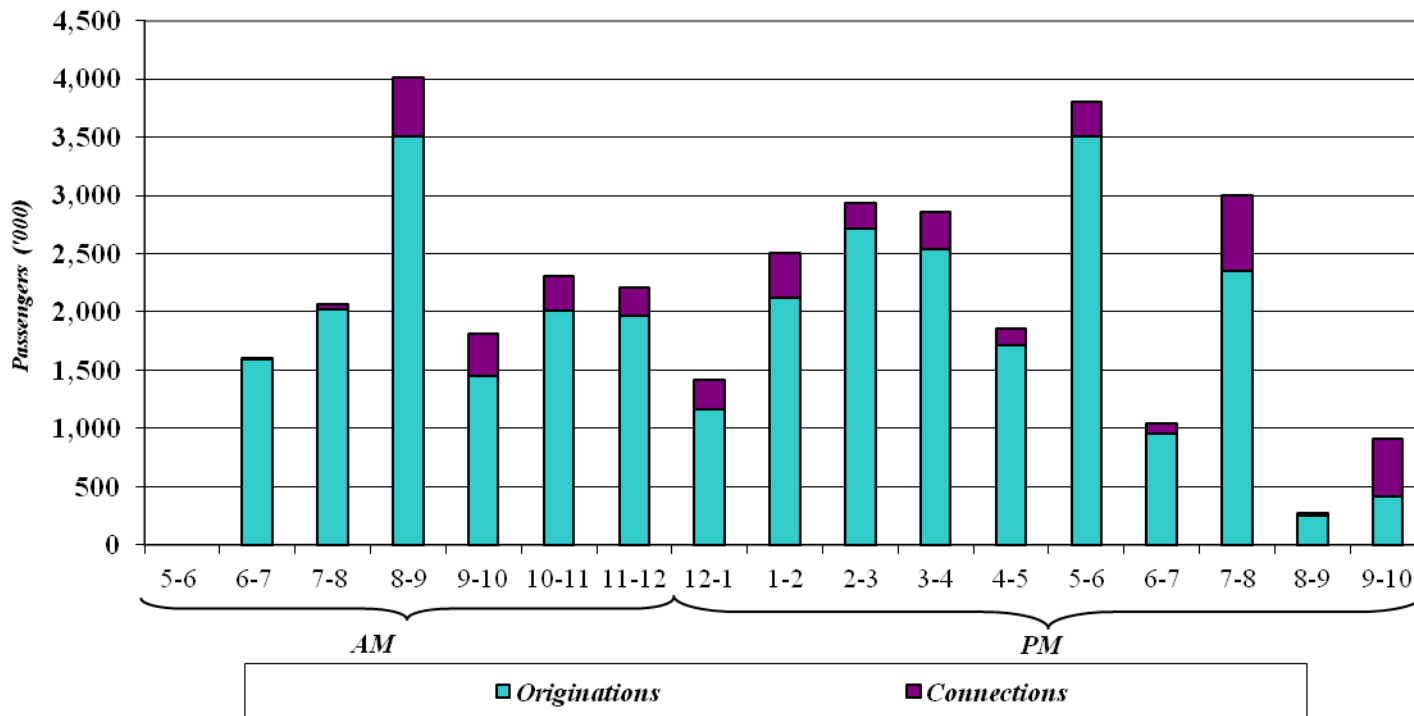


Source:- 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

*Diurnal Passenger Distribution at Reagan National Airport
2011*

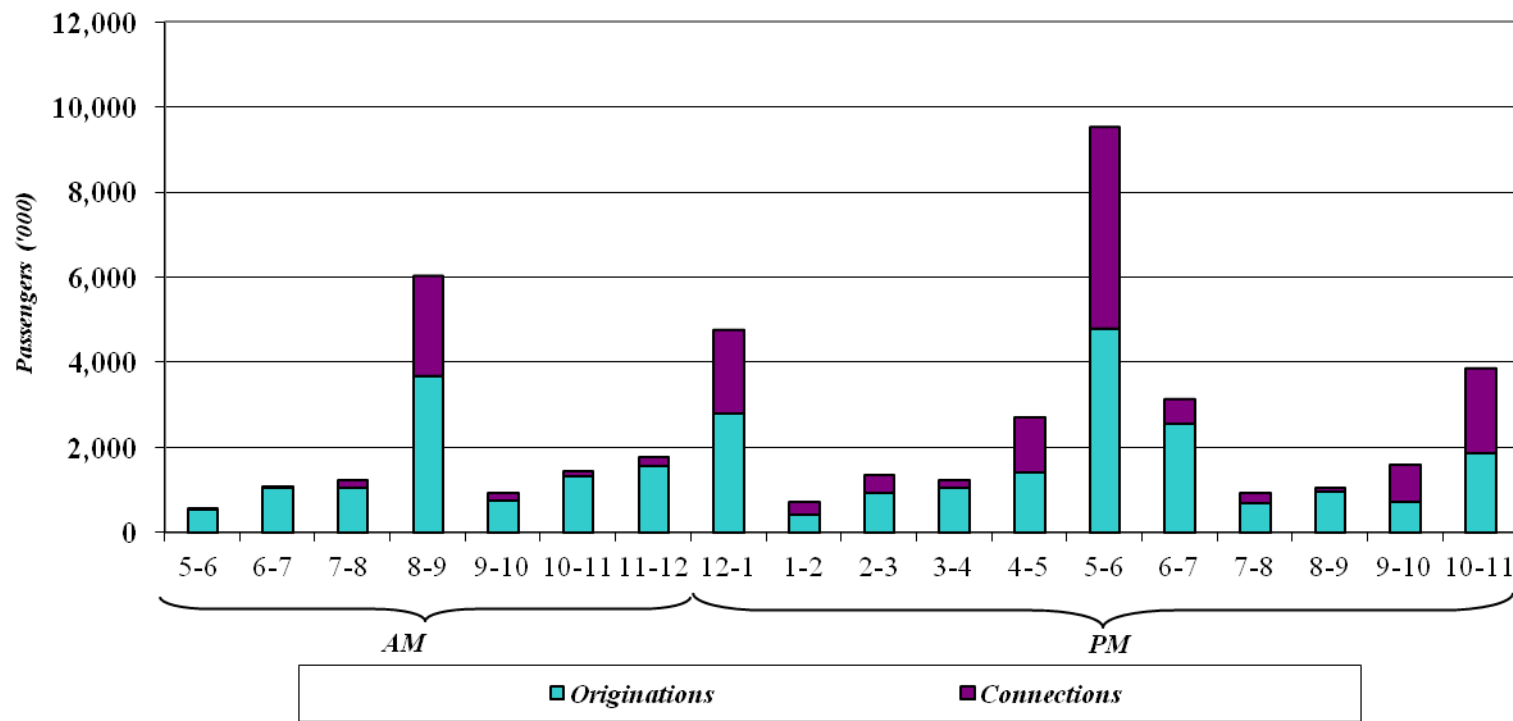


Source:- 2011 Washington-Baltimore Regional Air Passenger Survey



2011 Washington-Baltimore Regional Air Passenger Survey

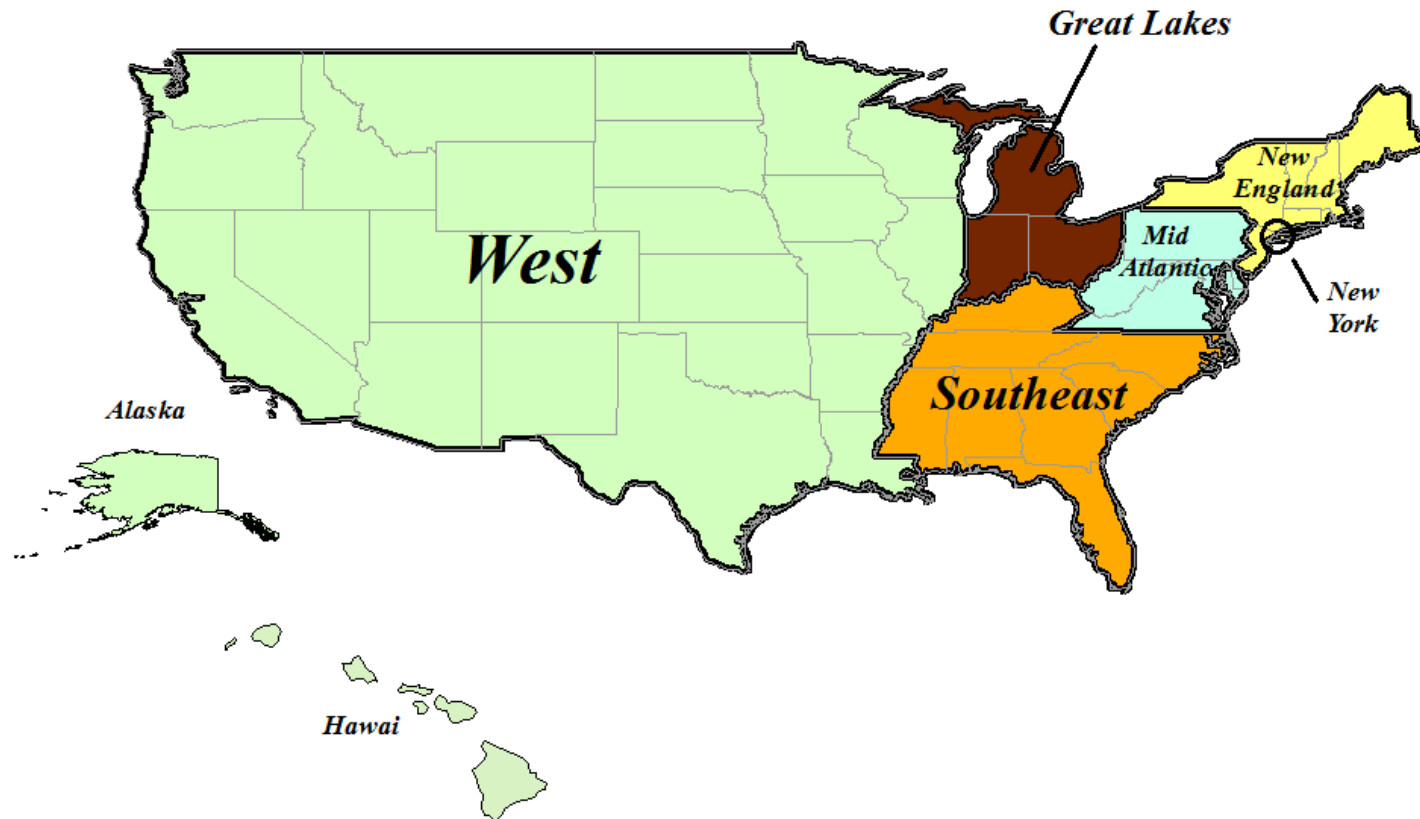
*Diurnal Passenger Distribution at Dulles Airport
2011*



Source: - 2011 Washington-Baltimore Regional Air Passenger Survey



Figure 22
Washington - Baltimore Air System Planning Region
Air Passenger Regional Allocations Strata



Air Passenger Destinations

- Domestically, the Western part of the United States received the greatest number of passengers, followed by southeast, together accounting for 66 percent of all passengers
- The distribution of travel to each of the destination regions, within the United States, remains almost the same when compared with 2009 findings
- Dulles International Airport remained dominant for international travel



2011 Washington-Baltimore Regional Air Passenger Survey

Washington-Baltimore Air System Region Departing Air Passengers Destinations by Region (in thousands)

Destination Region	Baltimore Suburbs		Maryland Suburbs		Virginia Suburbs		Washington D.C.		Outlying Region		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Mid-Atlantic	299	33	172	19	256	29	161	18	5	1	894	4
New York	116	13	147	17	335	38	269	31	7	1	875	4
New England	446	22	378	19	664	33	485	24	45	2	2,018	9
Great Lakes	467	30	270	18	438	29	333	22	28	2	1,536	7
South-East	1,751	25	1,349	19	2,645	37	1,263	18	123	2	7,132	31
West	1,527	19	1,375	17	3,199	39	1,828	22	217	3	8,146	36
Sub-Total	4,245	21	3,467	17	6,635	32	4,985	24	2,413	12	20,601	90
International	277	12	481	21	1,000	43	515	22	33	1	2,306	10
Total	4,483	20	3,835	17	7,434	32	5,434	24	2,656	12	22,907	100

Source: 2011 Washington-Baltimore Regional Air Passenger Survey

Totals do not include passengers originating outside the air system planning region



Thank You