

WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY 2017

Geographic Findings – Update

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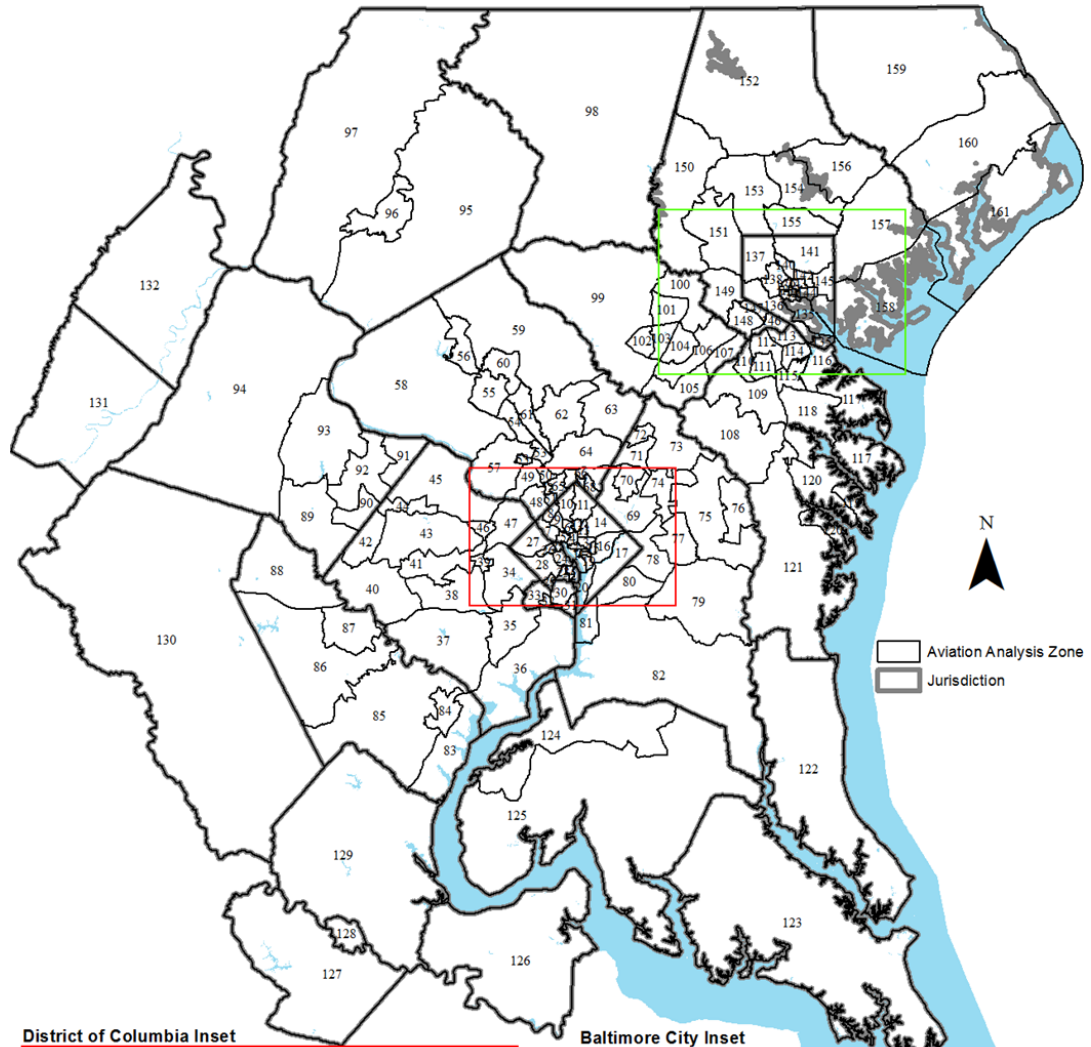
Geocoding Process

- 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 geocoding
- Use Google Earth as a base to identify TAZs for each originating air passenger trip record address

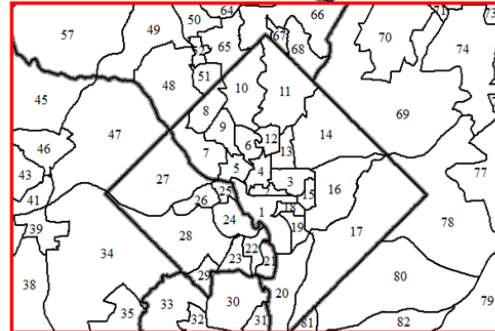
Model Region	TAZs	AAZs
MWCOG/TPB	3,669	132
BMC/BRTB	699	29
Total	4,368	161



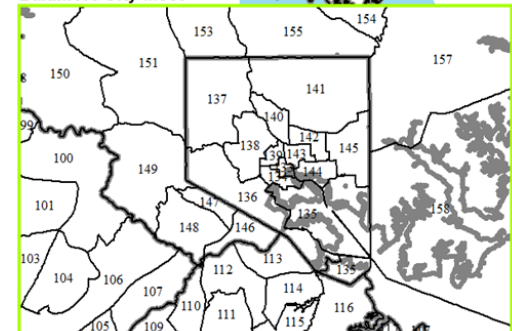
- The Air Systems Region is divided into 161 Aviation Analysis Zones (AAZs)



District of Columbia Inset



Baltimore City Inset



Air Passenger Survey Records (2017)

Geo-Coding		BWI	DCA	IAD	Total
Local origination	<i>Number</i>	6,000	5,709	5,024	16,733
- (Came by ground transportation)	<i>Percent</i>	69%	91%	68%	75%
Connected from another Flight	<i>Number</i>	2,714	578	2,340	5,632
- (Local and/or International)	<i>Percent</i>	31%	9%	32%	25%
Total	<i>Number</i>	8,714	6,287	7,364	22,365
	<i>Percent</i>	100%	100%	100%	100%



Local Originating Passenger Survey Records

Geo-Coding		BWI	DCA	IAD	Total
Hand-Coded	<i>Number</i>	4,278	4,240	3,316	11,834
	<i>Percent</i>	71%	74%	66%	71%
Partial-Address	<i>Number</i>	1,617	1,432	1,663	4,712
	<i>Percent</i>	27%	25%	33%	28%
Allocated	<i>Number</i>	105	37	45	187
	<i>Percent</i>	2%	1%	1%	1%
Total	<i>Number</i>	6,000	5,709	5,024	16,733
	<i>Percent</i>	100%	100%	100%	100%



Local Originating Passenger Survey Records

Geo-Coding		Internal	External	Total
Hand-Coded	<i>Number</i>	10,830	1,004	11,834
	<i>Percent</i>	73%	51%	71%
Partial-Address	<i>Number</i>	3,765	947	4,712
	<i>Percent</i>	26%	48%	28%
Allocated	<i>Number</i>	154	33	187
	<i>Percent</i>	1%	2%	1%
Total	<i>Number</i>	14,749	1,984	16,733
	<i>Percent</i>	100%	100%	100%

Internal = Locations within the Air System Region

External = Locations outside the Air System Region

Geographic Findings Report Topics

- Survey Geocoding
- Local Originations by Jurisdiction
- Geographic Pattern of Airport Use
- Air Passenger Destinations
- Departures by Time-of-Day
- Washington Core Area and Baltimore City



Annual Trip Originations by Airport (thousands)

Enplanement Type		BWI		Dulles		National		Region	
		2015	2017	2015	2017	2015	2017	2015	2017
Local origination	<i>Number</i>	8,500	8,911	6,592	7,245	10,371	10,499	25,464	26,655
- (Came by ground transportation)	<i>Percent</i>	71%	67%	62%	64%	90%	88%	75%	73%
Connected from another Flight	<i>Number</i>	3,449	4,305	4,120	4,062	1,127	1,458	8,697	9,826
- (Local and/or International)	<i>Percent</i>	29%	33%	38%	36%	10%	12%	25%	27%
Total Enplanements	<i>Number</i>	11,950	13,216	10,712	11,307	11,499	11,957	34,161	36,480
	<i>Percent</i>	100%	100%	100%	100%	100%	100%	100%	100%
<i>Percent of Region</i>		35%	36%	31%	31%	34%	33%	100%	100%

Source:- 2015 and 2017 Washington-Baltimore Regional Air Passenger Survey



Annual Internal/External Trip Originations by Airport (thousands)

Enplanement Type		BWI		Dulles		National		Region		
		2015	2017	2015	2017	2015	2017	2015	2017	
<i>Within Air System Planning Region</i> - (Internal)	<i>Number</i>	7,267	7,250	6,095	6,237	10,152	10,201	23,514	23,688	
	<i>Percent</i>	85%	81%	92%	86%	98%	97%	92%	89%	
<i>Outside Air System Planning Region</i> - (External)	<i>Number</i>	1,233	1,661	497	1,007	219	298	1,949	2,967	
	<i>Percent</i>	15%	19%	8%	14%	2%	3%	8%	11%	
Total Enplanements		<i>Number</i>	8,500	8,911	6,592	7,245	10,371	10,499	25,463	26,655
		<i>Percent</i>	100%	100%	100%	100%	100%	100%	100%	

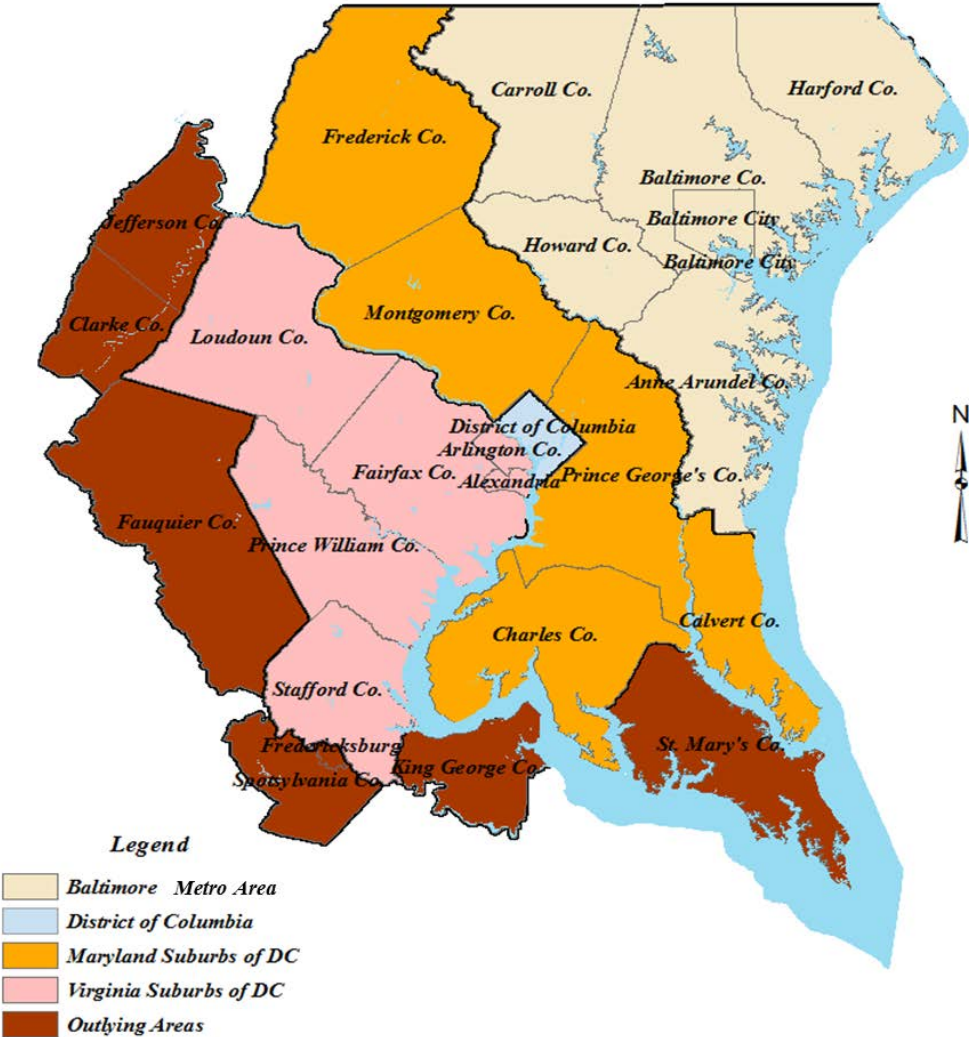
Internal originating trips are local originating trips within the Washington/Baltimore Air System Planning Area.

External originating trips are trips originating from PA, DE, WV (except for Jefferson County), NJ or external VA and MD

Source:- 2015 and 2017 Washington-Baltimore Regional Air Passenger Survey

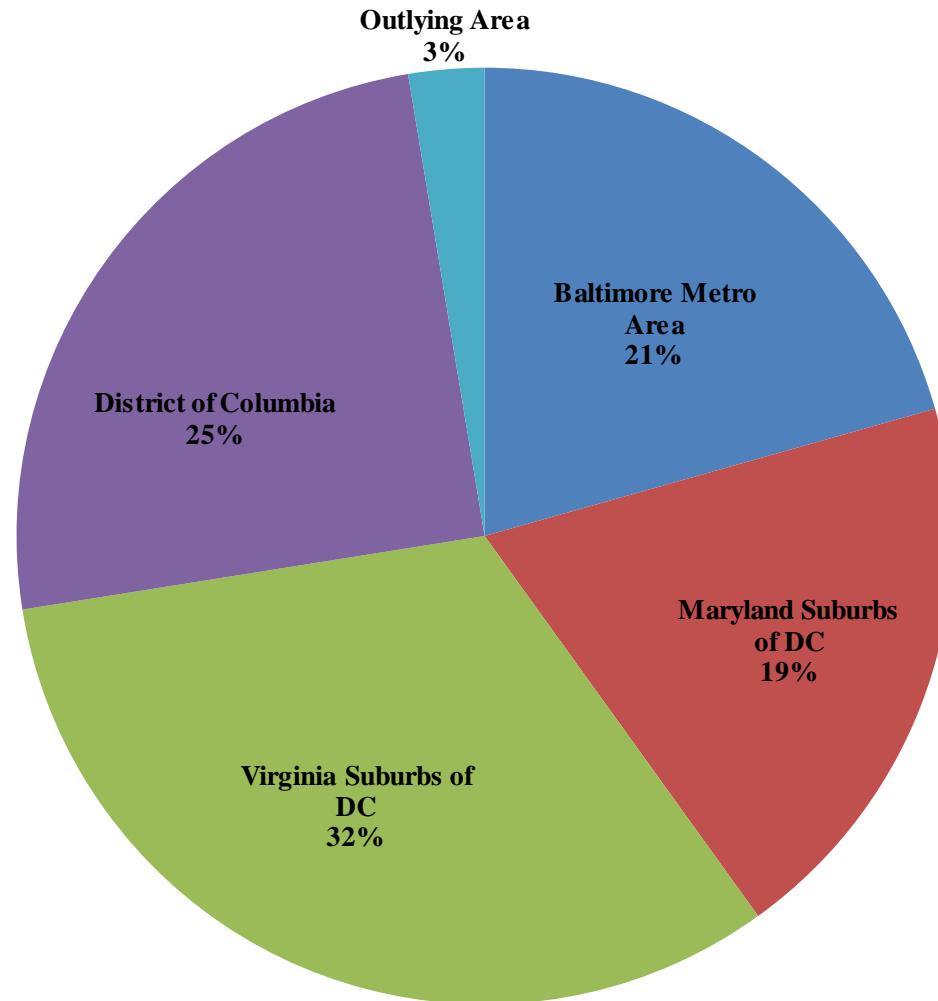


Air Systems Region – Super Districts



Local Air Passenger Originations

- Regionally, there were more than 23.7 million local air passenger originations in 2017

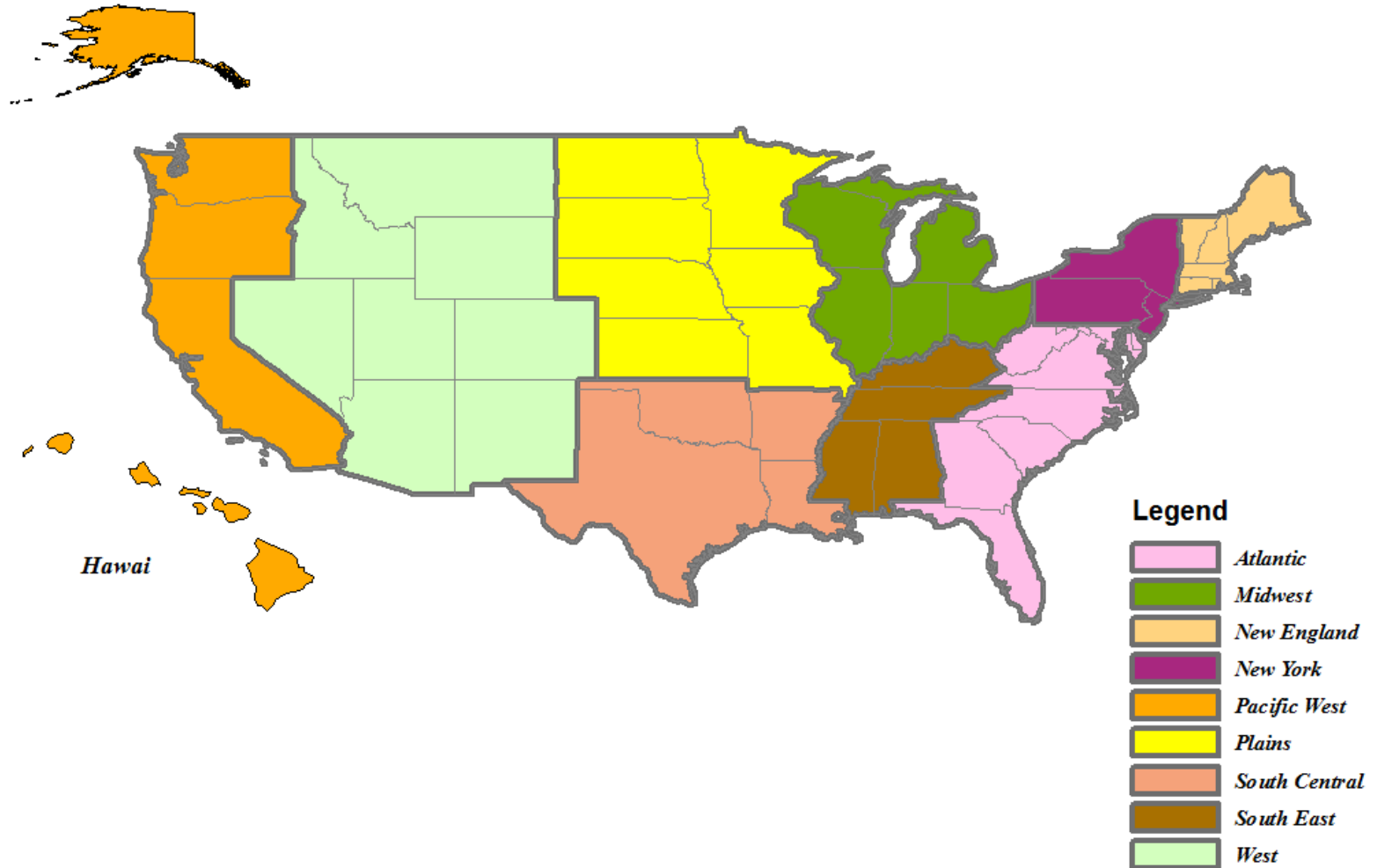


Originating Air Passengers by Jurisdiction

Jurisdiction	Airport			Total
	BWI	DCA	IAD	
District of Columbia	459,592	4,299,162	1,138,296	5,897,050
Montgomery County	709,301	748,197	707,817	2,165,315
Prince George's County	424,694	619,576	378,813	1,423,083
Arlington County	80,366	1,555,035	422,632	2,058,033
City of Alexandria	38,716	571,389	102,361	712,466
Fairfax County	155,096	1,354,804	1,700,175	3,210,075
Loudoun County	30,188	45,892	667,819	743,899
Prince William County	70,089	189,087	523,422	782,598
Frederick County	353,866	43,194	82,612	479,672
Howard County	714,353	32,348	70,893	817,594
Anne Arundel County	1,606,414	50,248	60,155	1,716,817
Charles County	54,486	347,451	55,793	457,730
Carroll County	300,112	19,901	23,988	344,001
Calvert County	50,995	20,550	9,164	80,709
St. Mary's County	57,478	55,526	15,971	128,975
King George County	0	872	0	872
City of Fredericksburg	6,080	35,417	15,111	56,608
Stafford County	3,847	127,003	41,717	172,567
Spotsylvania County	9,210	12,799	11,658	33,667
Fauquier County	211,908	33,975	93,502	339,385
Clarke County	0	0	18,493	18,493
Jefferson County	10,138	6,196	25,820	42,154
Baltimore City	1,038,718	26,693	36,119	1,101,530
Baltimore County	670,025	3,714	32,312	706,051
Harford County	194,167	1,409	2,804	198,380
Total	7,249,839	10,200,438	6,237,447	23,687,724



Passenger Regional Allocations Strata



Air Passenger Destination Results

- The Atlantic and Midwest regions combined received 41% of all departing passengers
- The 2017 distribution of travel is consistent with 2015 findings
- IAD remained dominant for international travel



Annual Departing Flights by Destination Region and Airport (thousands)

Destination Region	BWI		DCA		IAD		TOTAL		Airport Share of Trips to Destination Region		
	No.	% of BWI Originations	No.	% of DCA Originations	No.	% of IAD Originations	No.	% of Total Originations	BWI	DCA	IAD
Atlantic	2,842	32%	3,037	29%	1,167	16%	7,046	26%	40%	43%	17%
Midwest	1,483	17%	2,057	20%	544	8%	4,084	15%	36%	50%	13%
New England	422	5%	930	9%	421	6%	1,774	7%	24%	52%	24%
New York	896	10%	1,077	10%	263	4%	2,236	8%	40%	48%	12%
Pacific West	778	9%	486	5%	1,009	14%	2,274	9%	34%	21%	44%
Plains	284	3%	552	5%	202	3%	1,037	4%	27%	53%	19%
South Central	834	9%	1,349	13%	419	6%	2,601	10%	32%	52%	16%
Southeast	232	3%	236	2%	93	1%	561	2%	41%	42%	17%
West	706	8%	548	5%	655	9%	1,909	7%	37%	29%	34%
Domestic Subtotal	8,477	95%	10,271	98%	4,774	66%	23,522	88%	36%	44%	20%
International	434	5%	227	2%	2,471	34%	3,133	12%	14%	7%	79%
Total	8,911	100%	10,499	100%	7,245	100%	26,655	100%	33%	39%	27%

Source:- 2017 Washington-Baltimore Regional Air Passenger Survey

Note:- Destinations refer to scheduled flight destinations and do not refer to final destination of passengers



Washington Core Area and Baltimore City

- Washington Core Area: All of District of Columbia, plus Arlington County and City of Alexandria
- Washington Core Area generated 8.7 million air passengers in 2017; 74% of those air passengers used DCA
- Baltimore City originations: 4% of the regional total, nearly 57% of all passengers from the Baltimore region, which consists of Baltimore City, Baltimore County, and Harford County



Airport Usage from Major Downtown Activity Centers (thousands)

Airport Used	Baltimore City		Washington Core		All Other		Region	
	No.	%	No.	%	No.	%	No.	%
BWI	1,039	94%	579	7%	7,294	43%	8,911	33%
DCA	27	2%	6,426	74%	4,046	24%	10,499	39%
IAD	36	3%	1,663	19%	5,545	33%	7,245	27%
Total	1,102	100%	8,668	100%	16,886	100%	26,655	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:- 2017 Washington-Baltimore Regional Air Passenger Survey



Next Steps

- Finalize Geographic Findings Report (30 days review – Dec. 2018)
- Origin/Destination Forecast
- Ground Access Forecast



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