

# WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY 2019

## Geographic Findings Draft Final Report

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TPB Aviation Technical Subcommittee  
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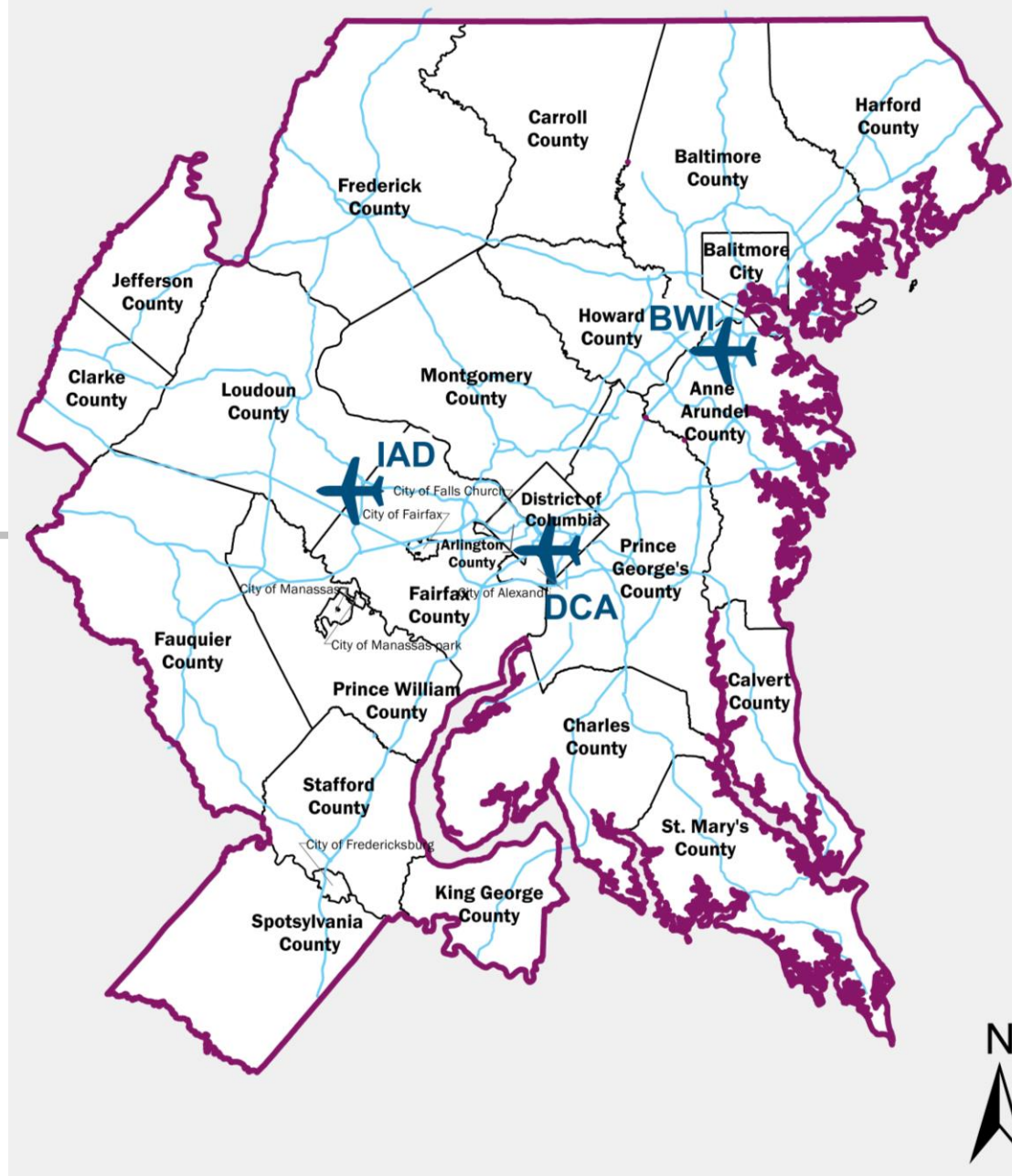
WASHINGTON-BALTIMORE REGIONAL  
AIR PASSENGER SURVEY – 2019  
GEOGRAPHIC FINDINGS **DRAFT**

January 2021



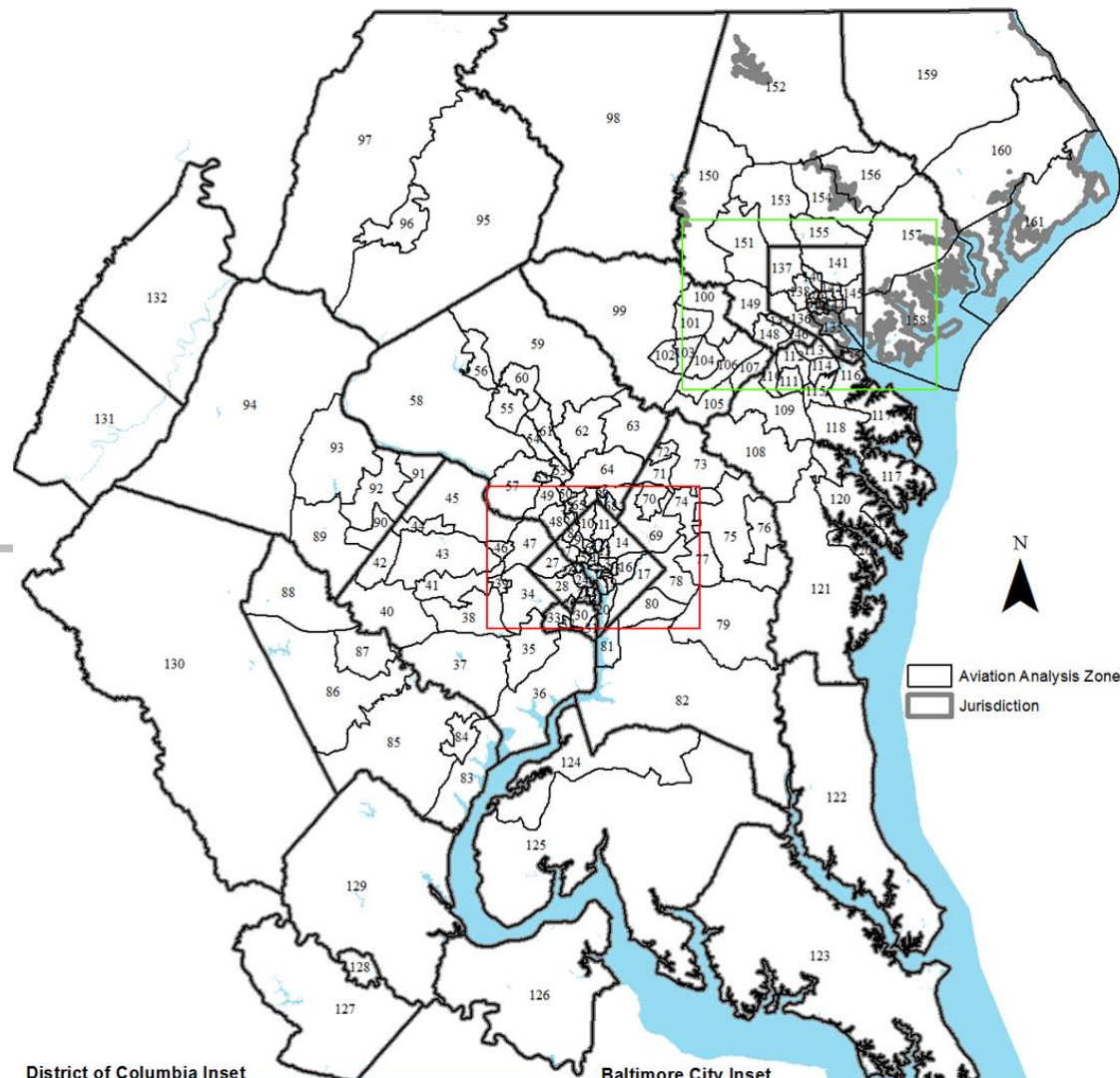
# Washington-Baltimore Air Systems Region at a Glance

The Washington-Baltimore Air System Planning Region (ASPR) stretches from Harford County, MD to the north, to Spotsylvania County, VA to the south and from the Chesapeake Bay in the east to the foothills of the Appalachian Mountains to the west.

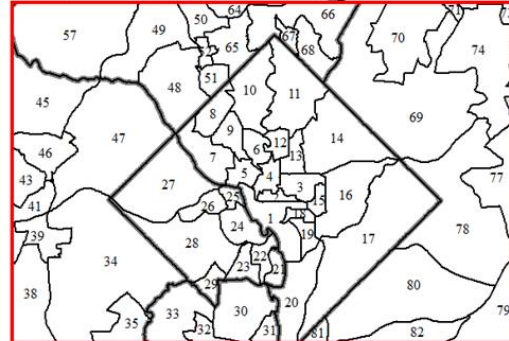


# The Region is Divided into 161 Aviation Analysis Zones (AAZs)

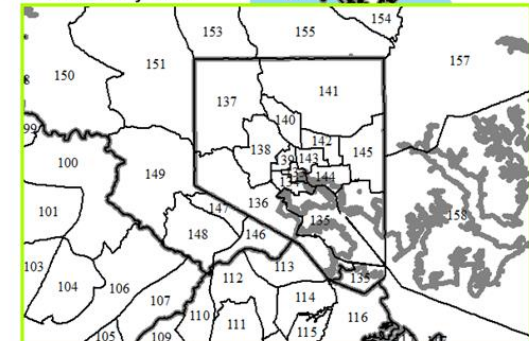
The ASPR consists of 25 jurisdictions, 161 Aviation Analysis Zones (AAZs) and 2,604 Transportation Analysis Zones (TAZs).



District of Columbia Inset



Baltimore City Inset



# Local Originating Passenger Survey Records

Geocoding		BWI	DCA	IAD	Total
Hand-Coded	<i>Number</i>	4,158	3,425	2,792	10,375
	<i>Percent</i>	61%	56%	57%	58%
Partial-Address	<i>Number</i>	643	1,982	776	3,401
	<i>Percent</i>	9%	32%	16%	19%
Allocated	<i>Number</i>	1,996	721	1,345	4,062
	<i>Percent</i>	29%	12%	27%	23%
<b>TOTAL</b>	<b><i>Number</i></b>	<b>6,797</b>	<b>6,128</b>	<b>4,913</b>	<b>17,838</b>
	<b><i>Percent</i></b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



# Key Findings

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## Airport Use

- 30 million passengers originated in the region; a 13% increase.
- District of Columbia originations declined by 3%.
- Baltimore metro area and Virginia suburbs both experienced a 17% increase.
- Outlying and external origins increased by 29% and 16% percent, respectively.

## Airport Preference

- 58% were satisfied with their airport choice, a 5% decrease.
- Those most satisfied came from the Baltimore region and the outlying areas.

## Trip Originations

- 7% left from work; private residence origins decreased from 60% to 58%.
- Short-term rental was added as an option, accounting for 2%.

## Mode Choice

- TNC use increased from 14% to 24% of overall mode share.

# AIRPORT SERVICE AREAS

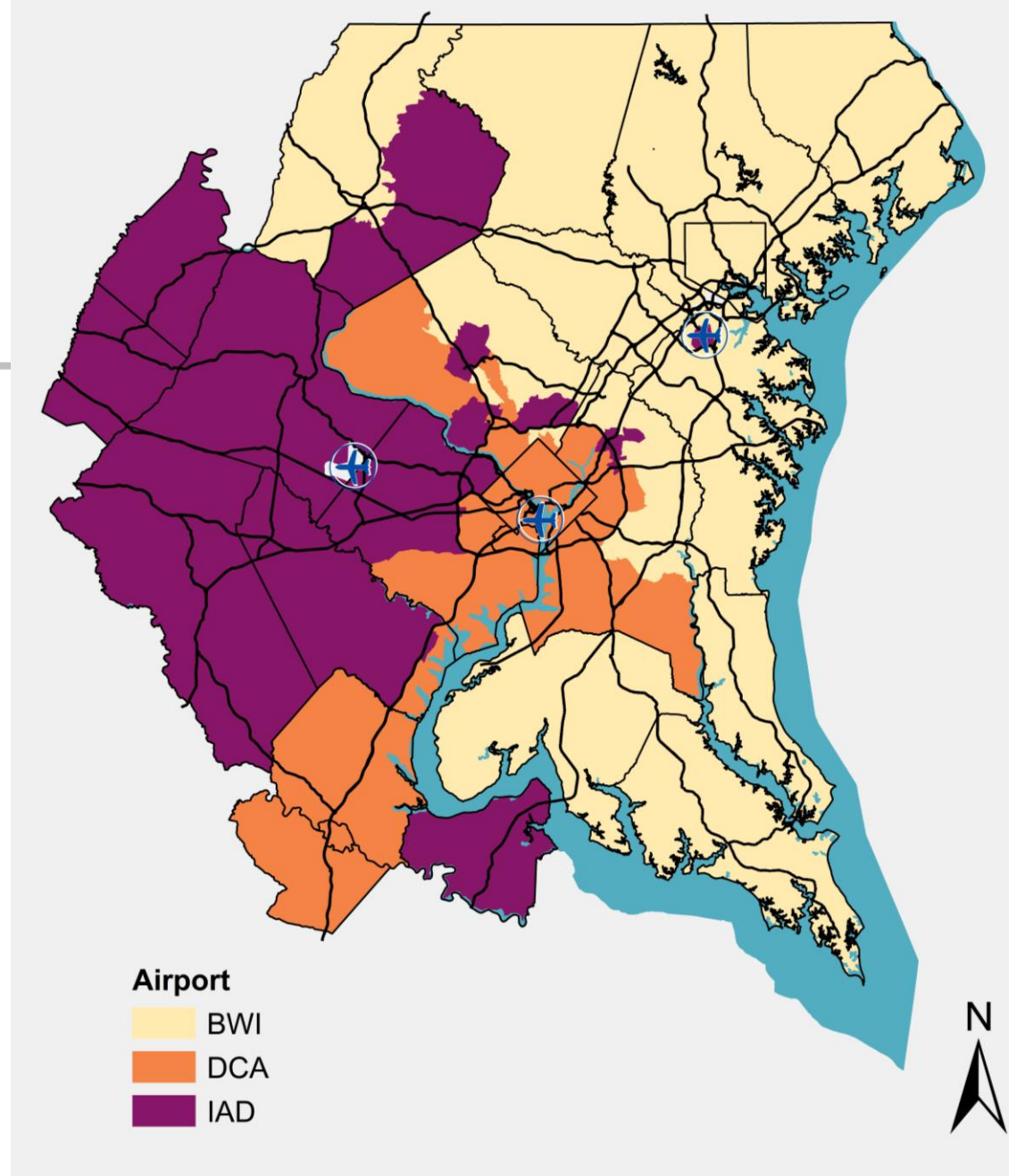
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# Airport Service Area by AAZ

This map is color-coded to show which airport predominantly serves each AAZ within the ASPR.



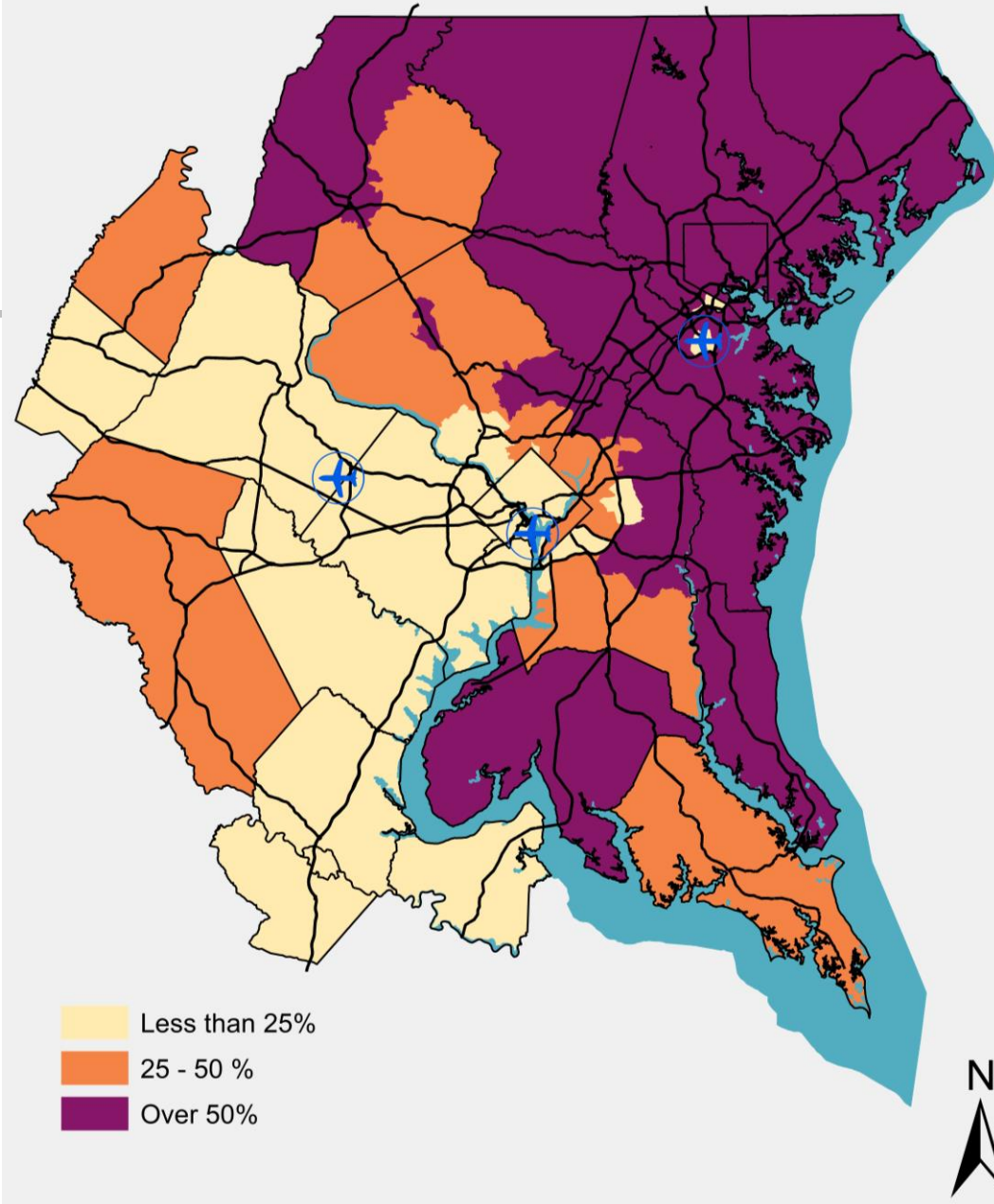
# Percentage of Passengers Using BWI

Local originations at BWI increased by 17%.

Passengers traveling to BWI from the Virginia suburbs increased by 15%, from the Maryland suburbs by 13%, and from DC by 39%.

Originations to BWI from the outlying jurisdictions increased by 29%.

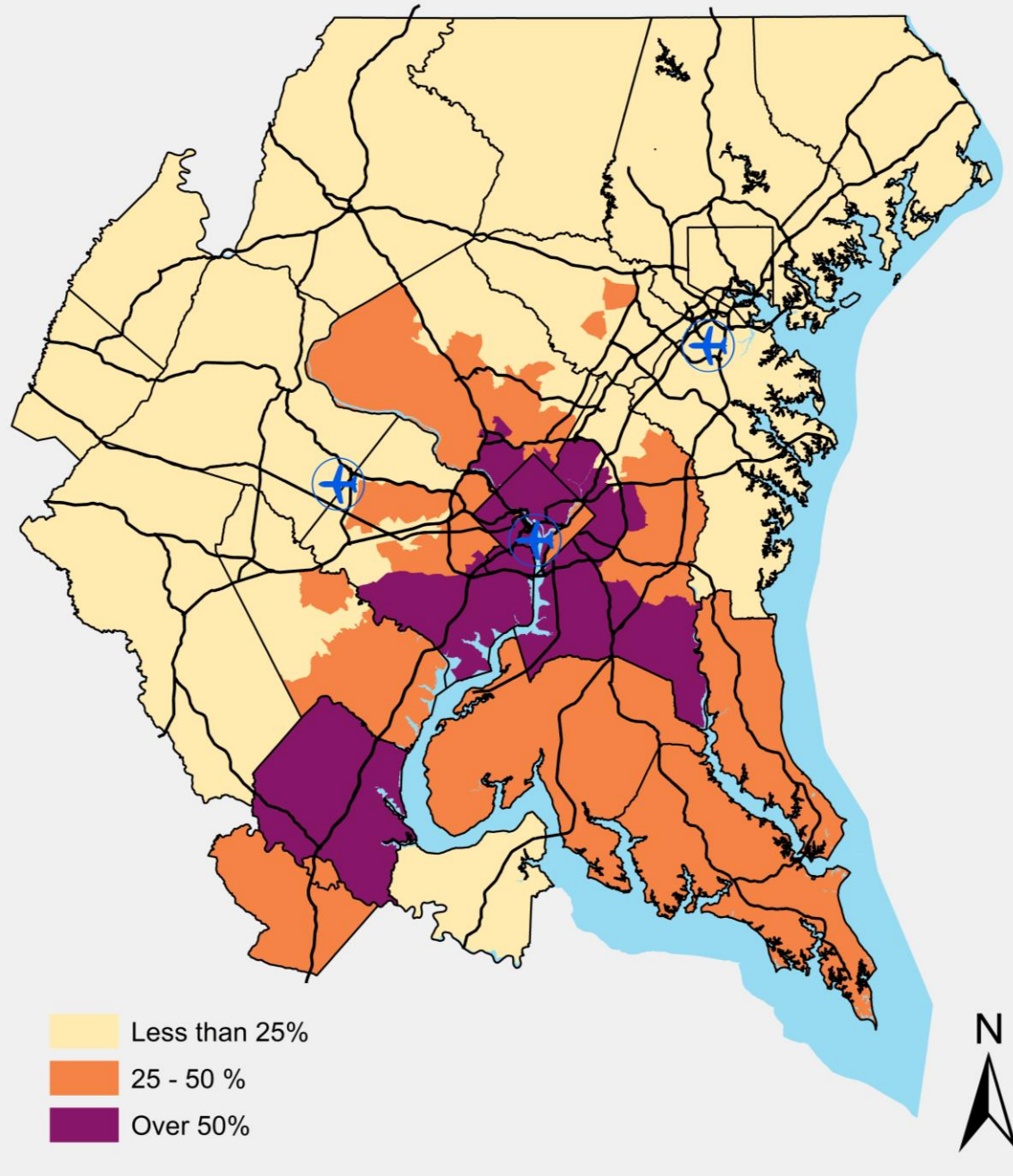
Note: Outlying Areas include Clarke, Fauquier, King George, and Spotsylvania Counties in VA, the City of Fredericksburg VA, St. Mary's County in MD, and Jefferson County, WV. Externals (not displayed here) include jurisdictions outside the air system planning region.





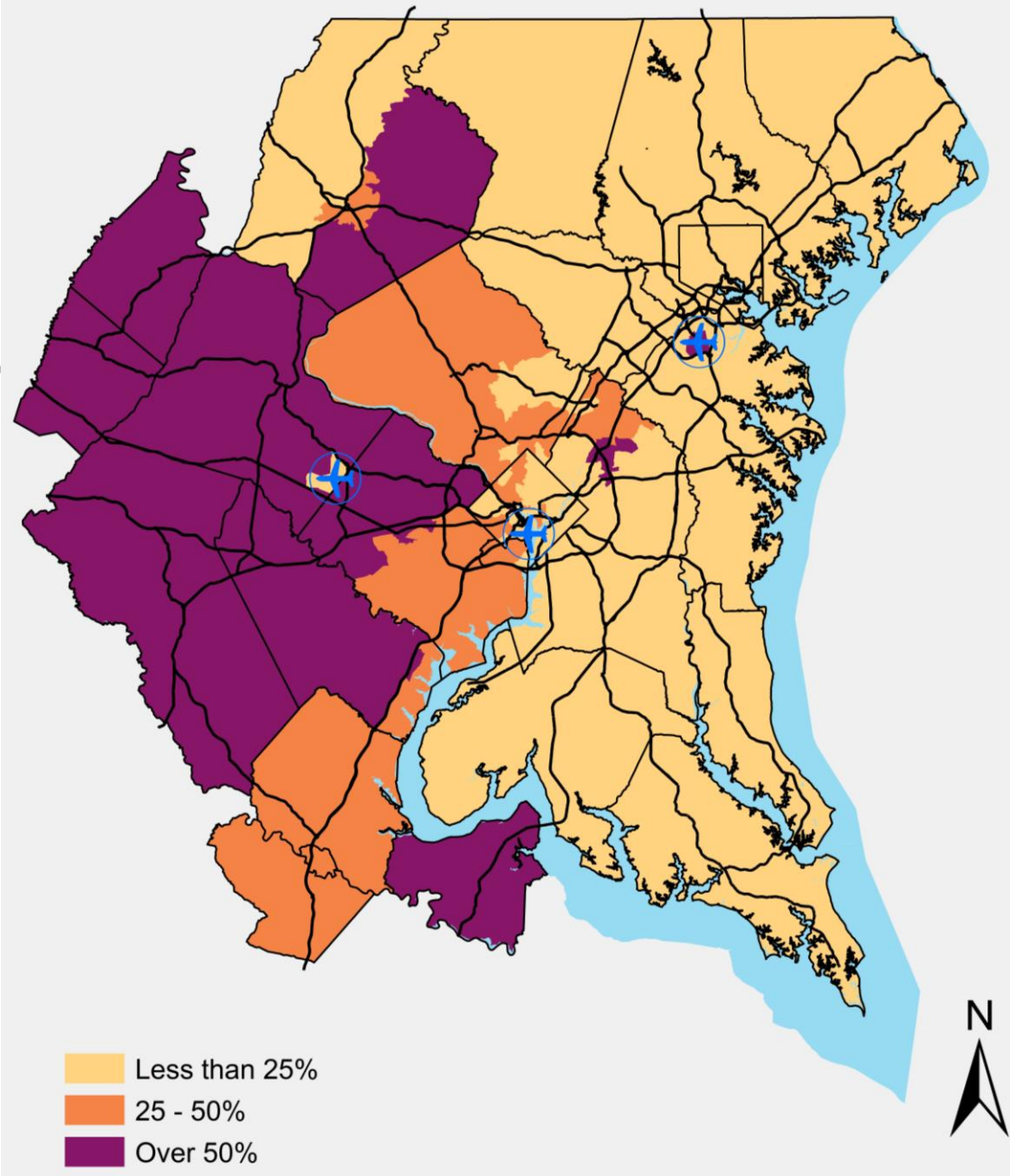
# Percentage of Passengers Using DCA

Local originations at DCA increased by 4%. 68% of the Washington Core flew out of DCA – a 3% decrease. 2019 saw a substantial increase in originations from Anne Arundel, Baltimore, Calvert, Arlington, and Loudoun Counties – and a decrease in Alexandria, Stafford County, and the external areas.



# Percentage of Passengers Using IAD

Local originations at IAD increased by 20%. Originations increased from all jurisdictions, with the most notable percentage-wise (not volume-wise) being Harford, Anne Arundel and Carroll Counties increases of 211%, 177%, and 157%, respectively. Altogether, originations increased by 57% from the Baltimore Metro Area.

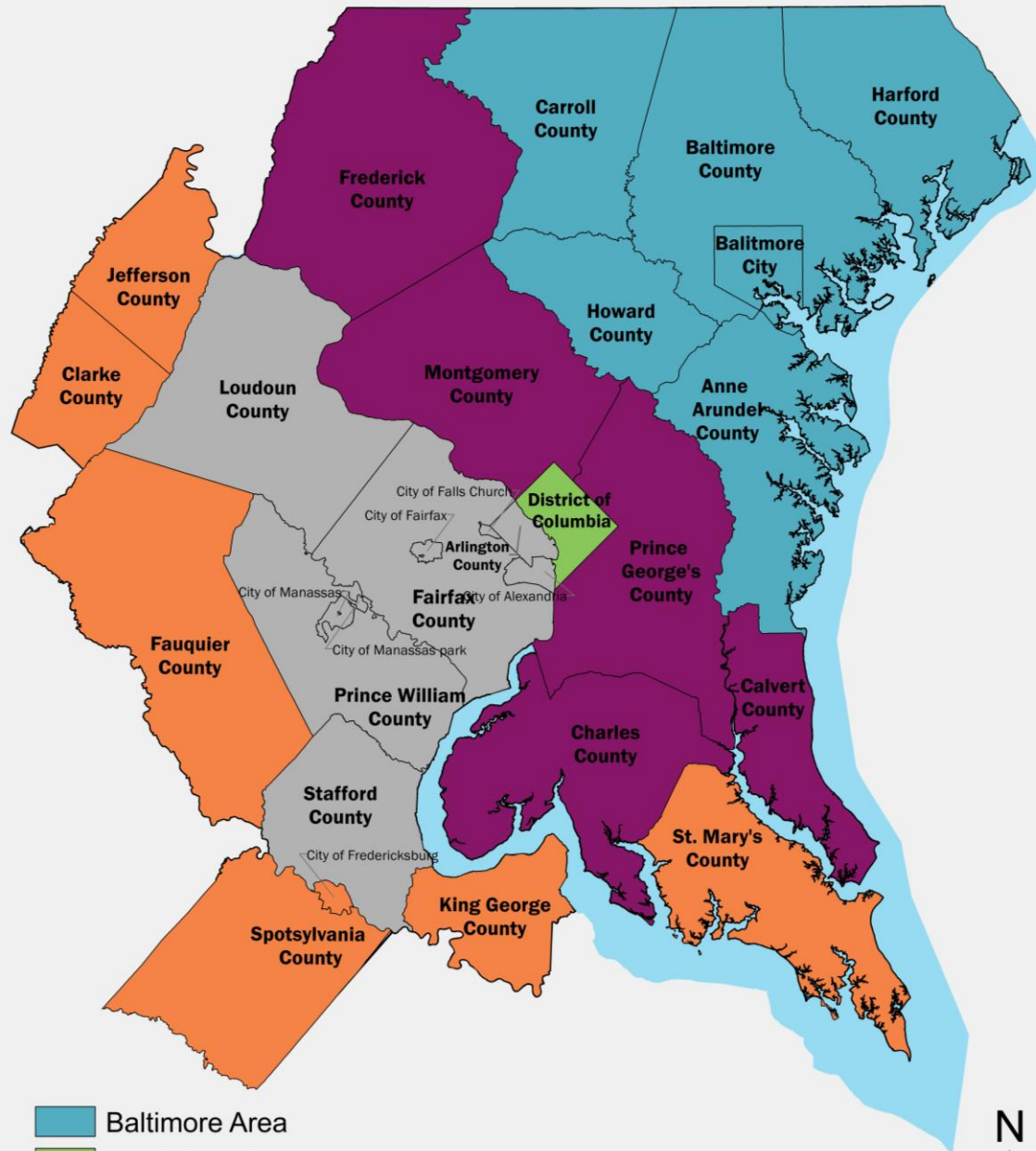





# Annual Trip Originations by Airport, 2017–2019 (thousands)

Enplanement Type		BWI		DCA		IAD		Region	
		2017	2019	2017	2019	2017	2019	2017	2019
Local origination (Came by ground transportation)	Number	8,911	10,426	10,499	10,918	7,245	8,726	26,655	30,070
	Percent	67%	77%	88%	91%	64%	71%	73%	80%
Connected from another Flight (Local and/or International)	Number	4,305	3,116	1,458	1,031	4,062	3,603	9,825	7,750
	Percent	33%	23%	12%	9%	36%	29%	27%	20%
<b>Total Enplanements</b>	<b>Number</b>	<b>13,216</b>	<b>13,542</b>	<b>11,957</b>	<b>11,949</b>	<b>11,307</b>	<b>12,329</b>	<b>36,480</b>	<b>37,820</b>
	<b>Percent</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Percent of Region</b>	<b>Percent</b>	<b>36%</b>	<b>36%</b>	<b>33%</b>	<b>32%</b>	<b>31%</b>	<b>33%</b>	<b>100%</b>	<b>100%</b>



# Air Systems Region Jurisdictional Subdivisions

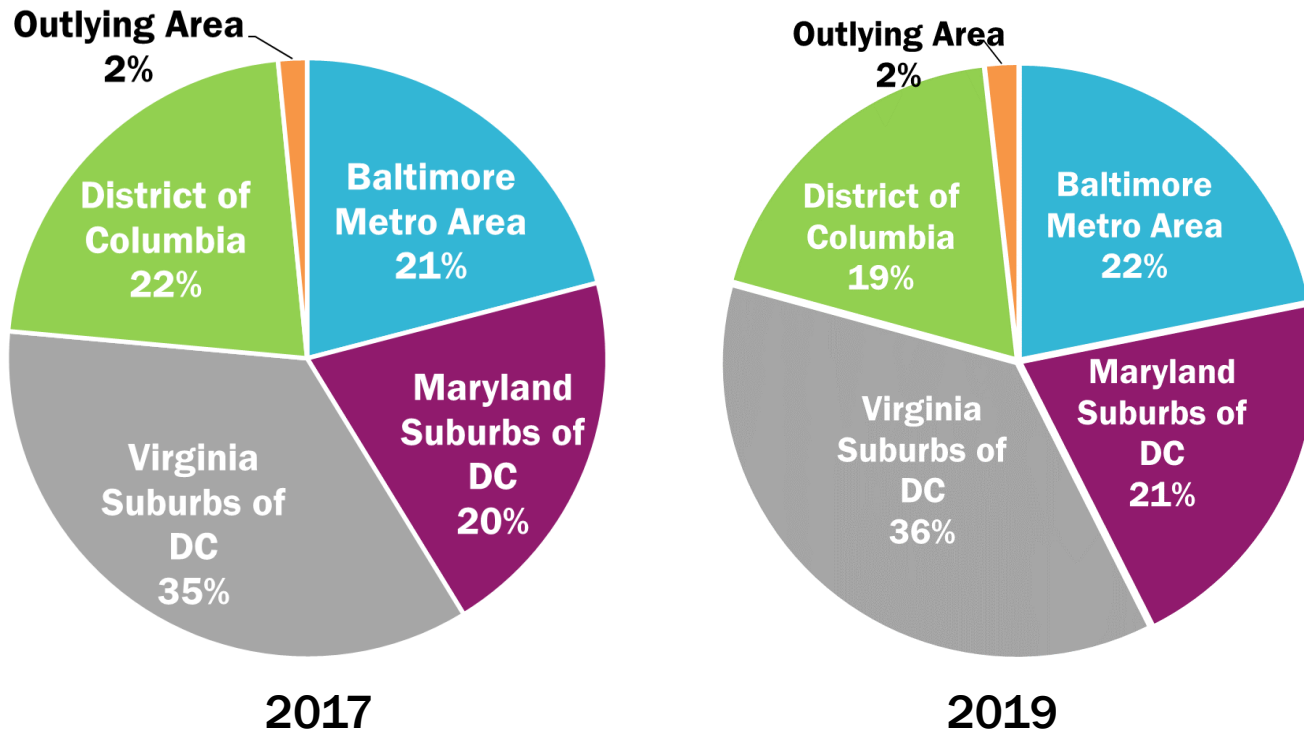


-  Baltimore Area
-  District of Columbia
-  Maryland Suburbs
-  Virginia Suburbs
-  Outling Areas





# Local Air Passenger Originations

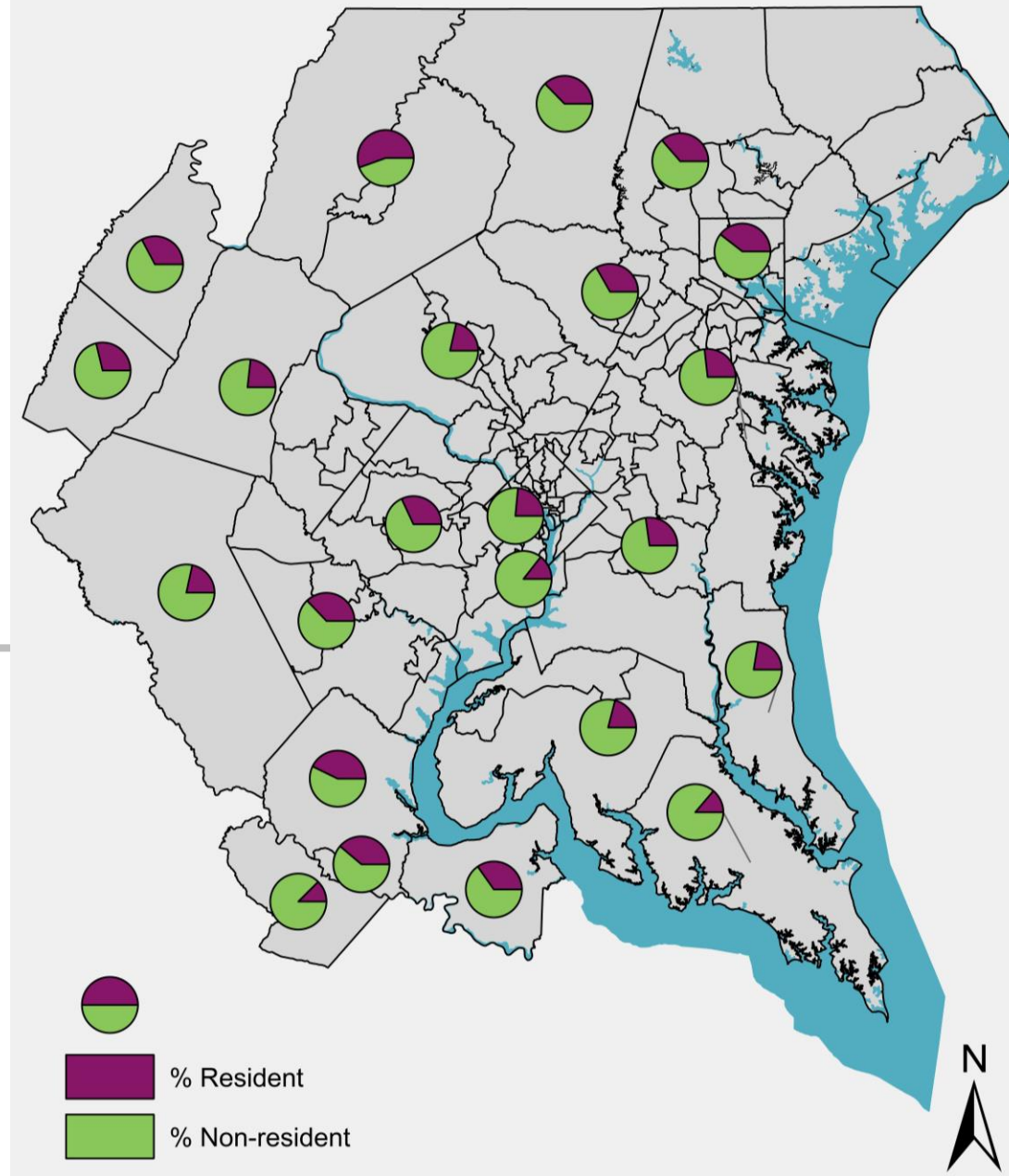


The Virginia Suburbs of DC continued to generate the highest concentration of passenger originations. The Baltimore Metro Area surpassed the District of Columbia.



# Percent Resident and Non-Resident Departing Passengers by Jurisdiction

Note: Non-residents are those who were either visiting the region or those whose originations began from somewhere outside the Air System Planning Region.



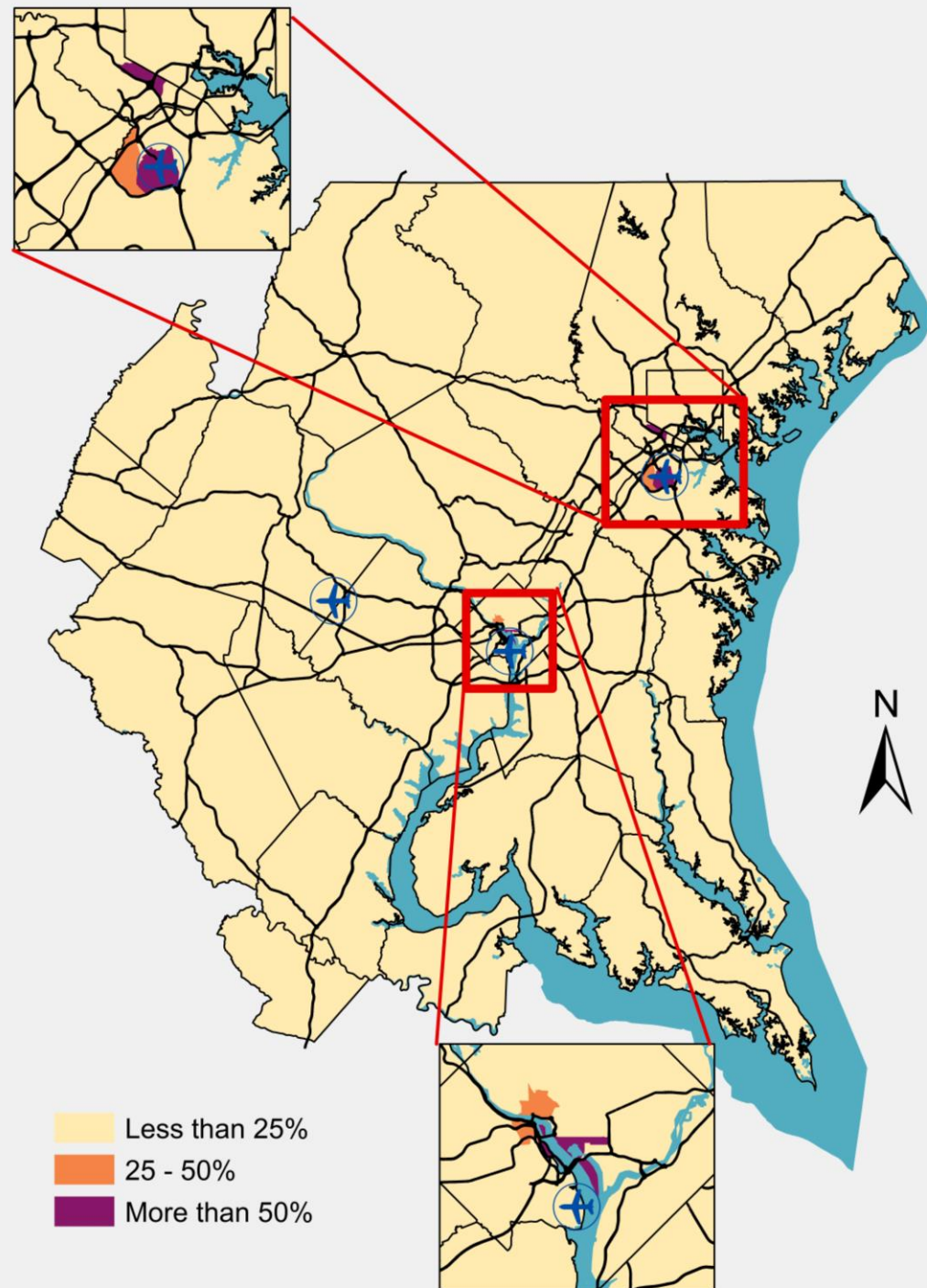
# MODE OF ACCESS

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# Percentage of Passengers Using Taxicabs

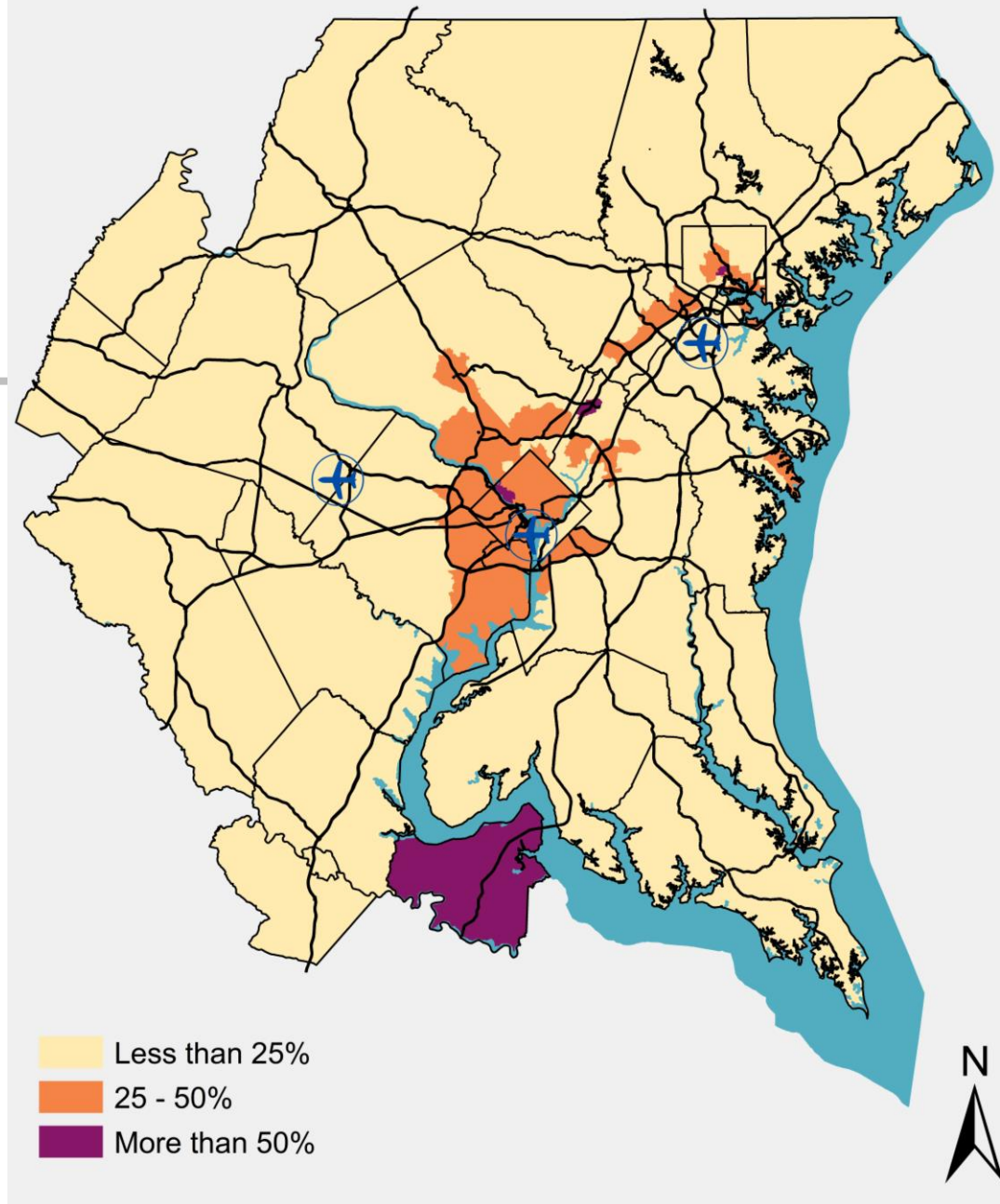
9% of the region's passengers traveled by taxicab – down from 11% in 2017. The areas with the highest concentrations of taxicab usage are located within the Washington Core (16%) and the Baltimore Core (7%).



# Percentage of Passengers Using TNCs

24% of the region's passengers traveled by TNC – up from 14% in 2017. 29% of the Baltimore Core and 36% Washington Core travel by TNC, respectively.

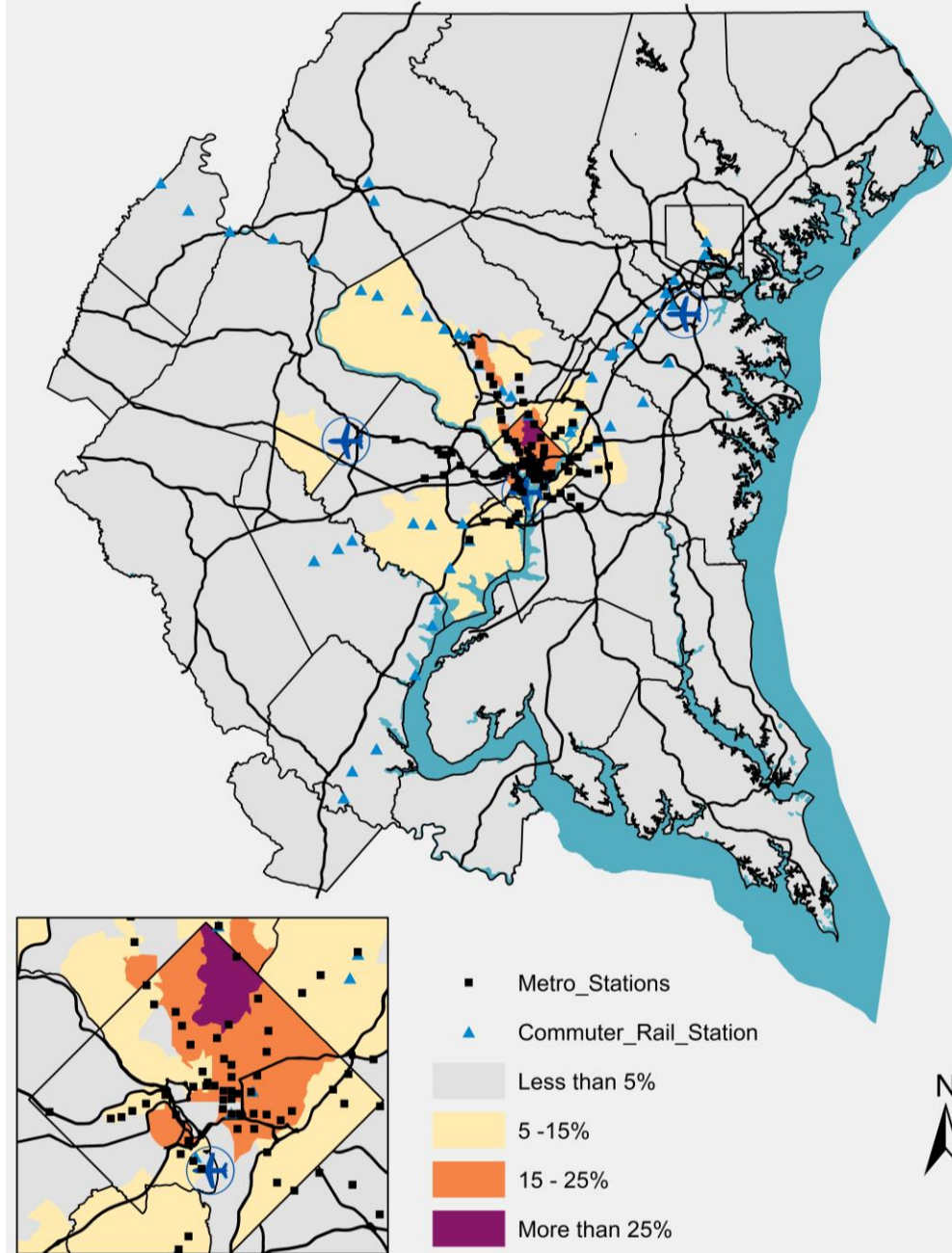
Note: Staff are currently investigating the accuracy of the numbers reported (in purple) for King George.





# Percentage of Passengers Using Metrorail, Commuter Rail, Metrobus, and/or Local Bus

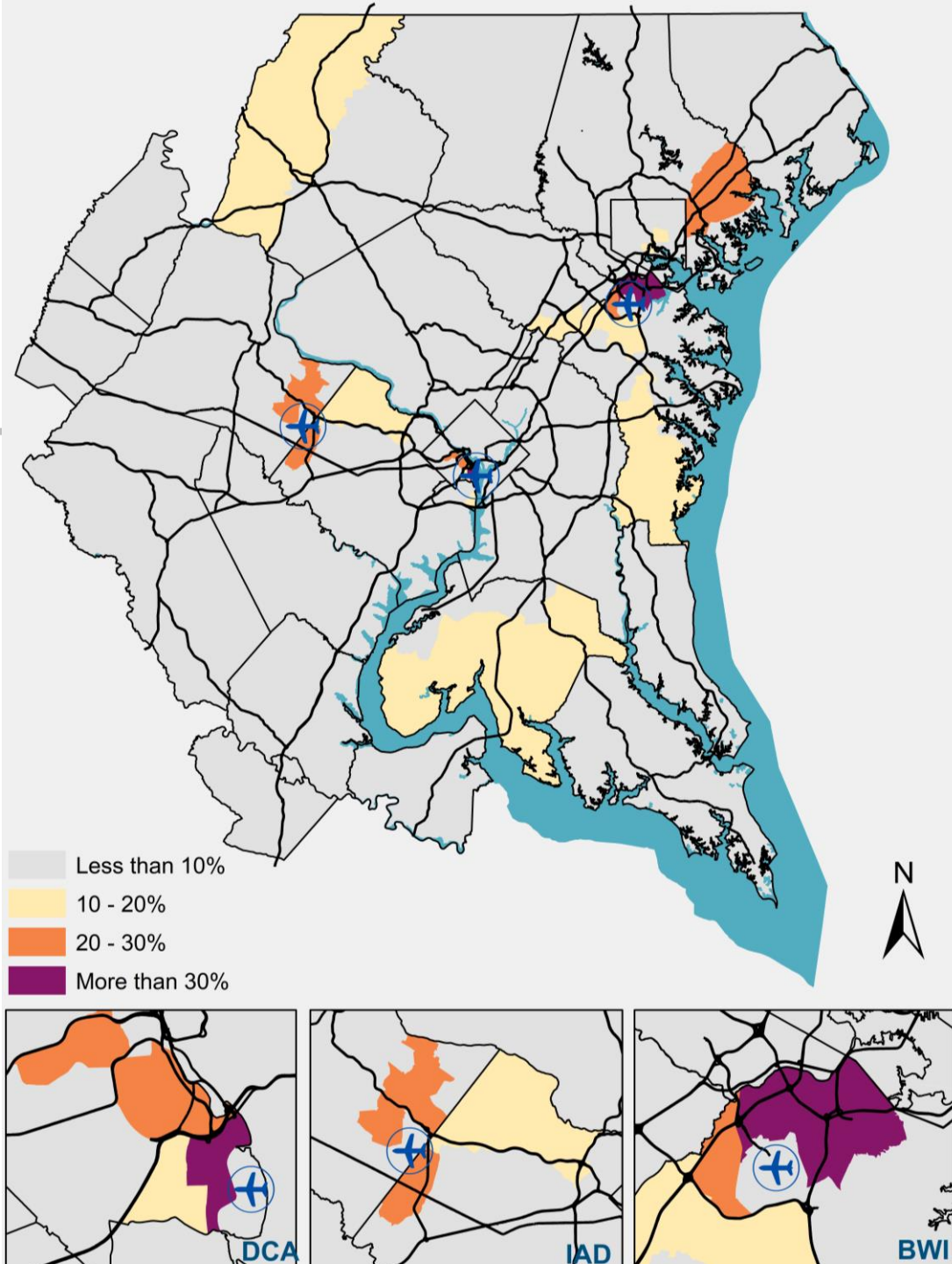
Public transportation carried 7% of the region's passengers. Usage of public transportation within the Washington Downtown Center was double the regional average and nearly five times that of the Baltimore Core.





# Percentage of Passengers Using Airport Bus/Van/Limo

The usage of this mode was low throughout the region, with the exception of AAZs in the Downtown Core and Baltimore Core, as well as areas surrounding BWI and IAD.



# Subregional Cores: Overview

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**Baltimore Core = Baltimore City**

- Baltimore Core = 5% of regional total; 95% departed from BWI

**Washington Core = DC, Arlington, Alexandria**

- Washington Core = 9.2 million passengers; 68% departed from DCA

**Travel Purpose - Business**

- 33% of passengers from Baltimore Core; 36% from Washington Core

**Mode**

- Taxicab: 7% Baltimore Core; 16% Washington Core
- TNC: 29% Baltimore Core; 36% Washington Core
- Public Transportation: 3% Baltimore Core; 14% Washington Core



# Airport Passenger Originations for Baltimore and Washington Sub-regional Cores, by Airport (thousands)

AIRPORT USED	Baltimore Core		Washington Core		All Other		Region	
	No.	%	No.	%	No.	%	No.	%
BWI	1,402	95%	882	10%	8,142	42%	10,426	35%
DCA	28	2%	6,200	68%	4,690	24%	10,918	36%
IAD	43	3%	2,088	23%	6,596	34%	8,726	29%
<b>TOTAL</b>	<b>1,473</b>	<b>100%</b>	<b>9,170</b>	<b>100%</b>	<b>19,428</b>	<b>100%</b>	<b>30,070</b>	<b>100%</b>

- 95% of passengers from Baltimore Core travel out of BWI – same as in 2017.
- 68% of passengers from Washington Core travel out of DCA – down 3%.
- 3% and 23%, respectively, travel out of IAD.

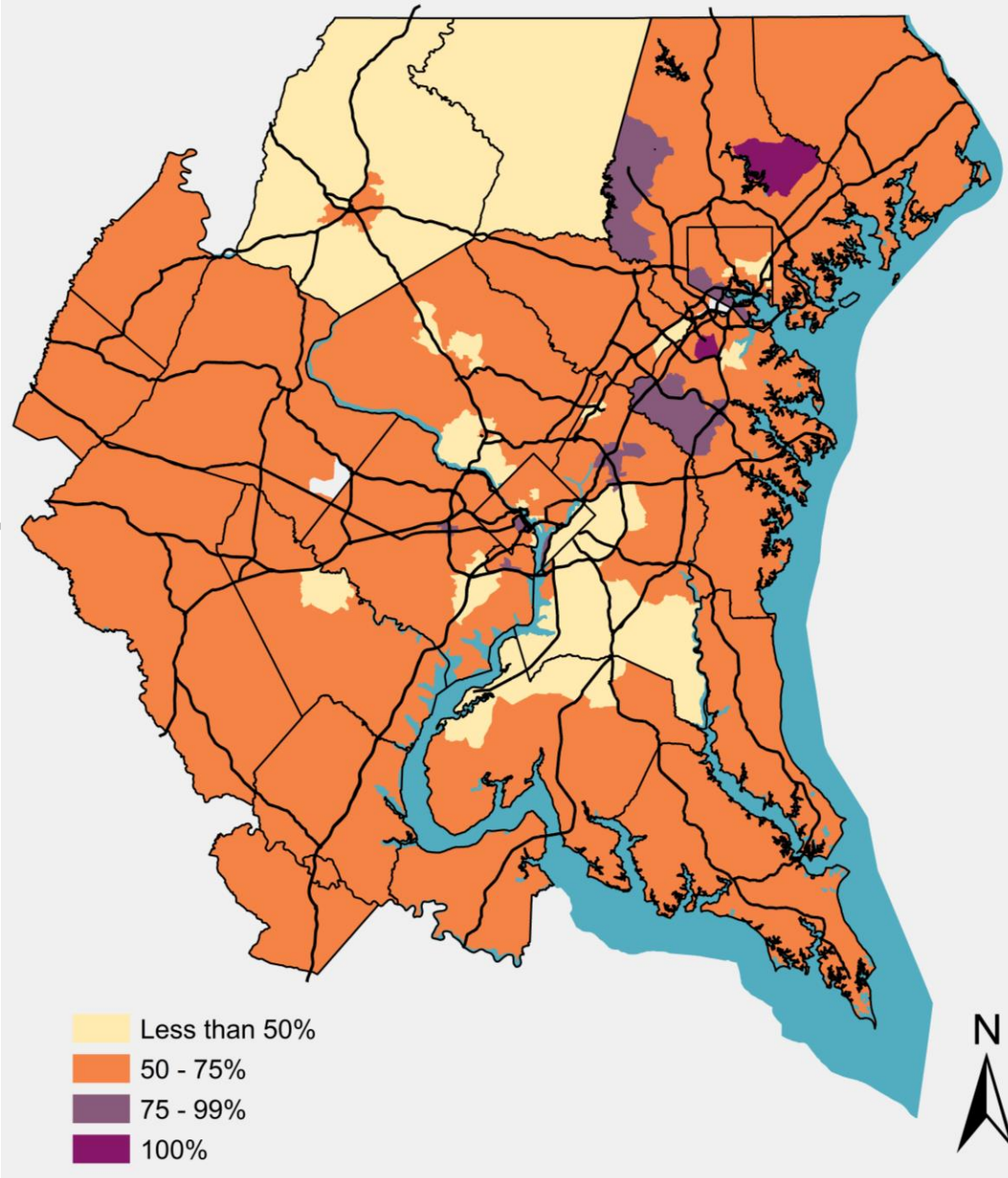
# PATTERNS OF USE: PREFERENCE, PURPOSE, ORIGIN

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# Percentage of Passengers Flying from Preferred Airport

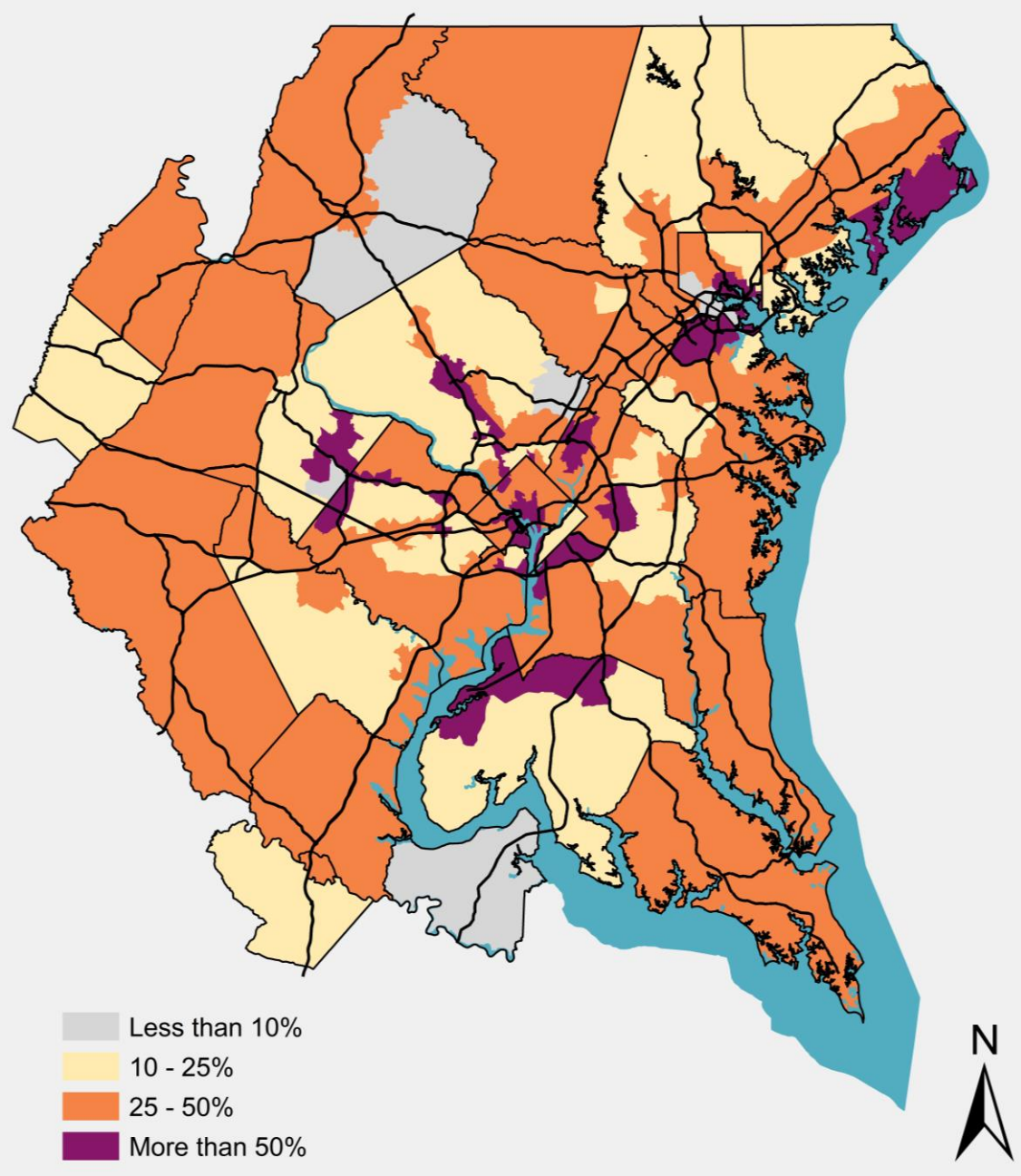
58% of passengers were satisfied with their airport choice – a 5 percent decline from 2017. Those traveling from the Baltimore Metro Area were the most satisfied and those from the Maryland Suburbs of DC were the least satisfied.





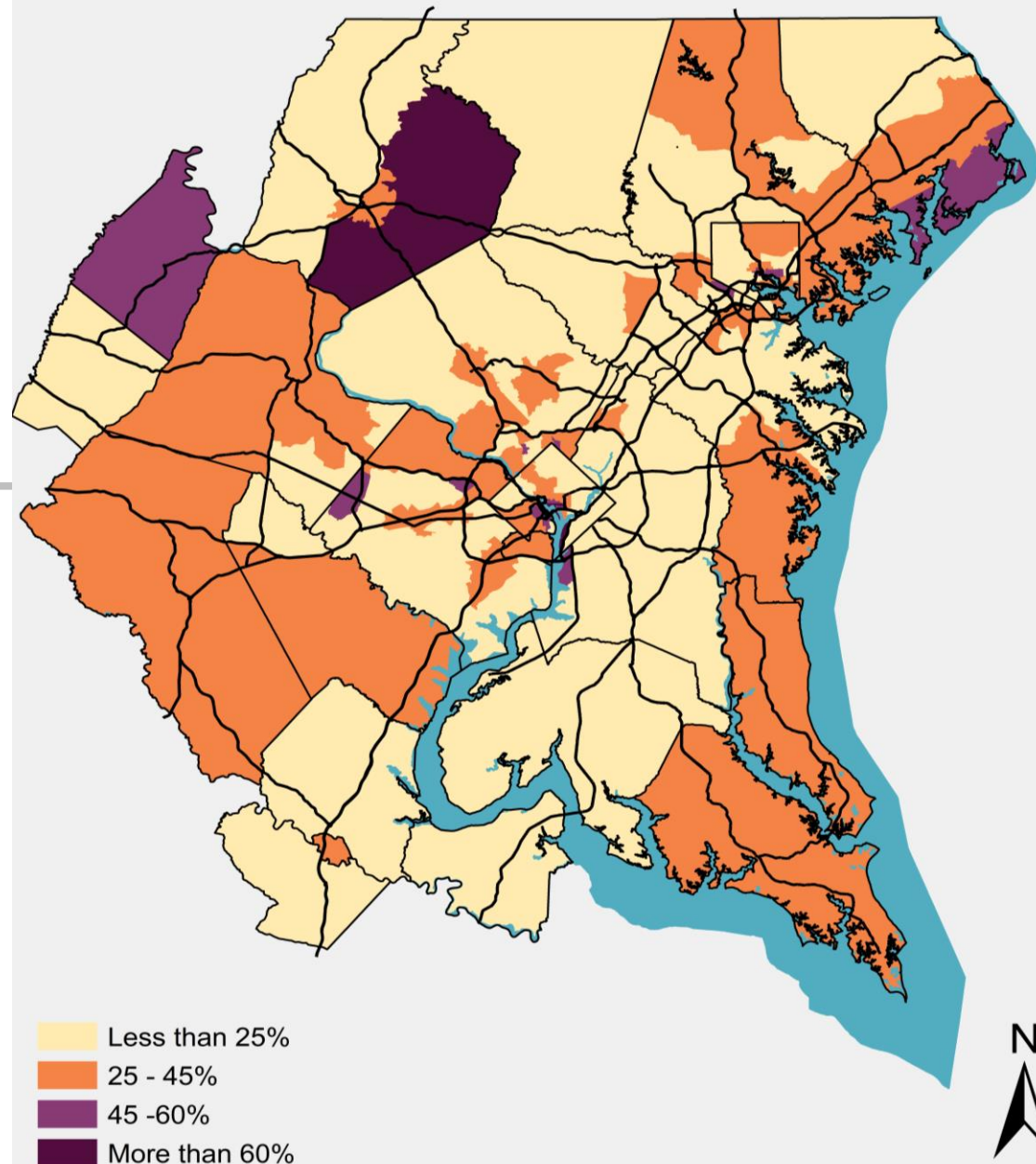
# Percentage of Passengers Flying on Business

36% (down from 43%) of passengers from the Washington Core and 33% (down from 39%) of passengers from the Baltimore Core traveled on business. This shift is due to much larger shares reporting “Other” as their travel purpose – which experienced an overall 12% share increase from 4% to 16%.



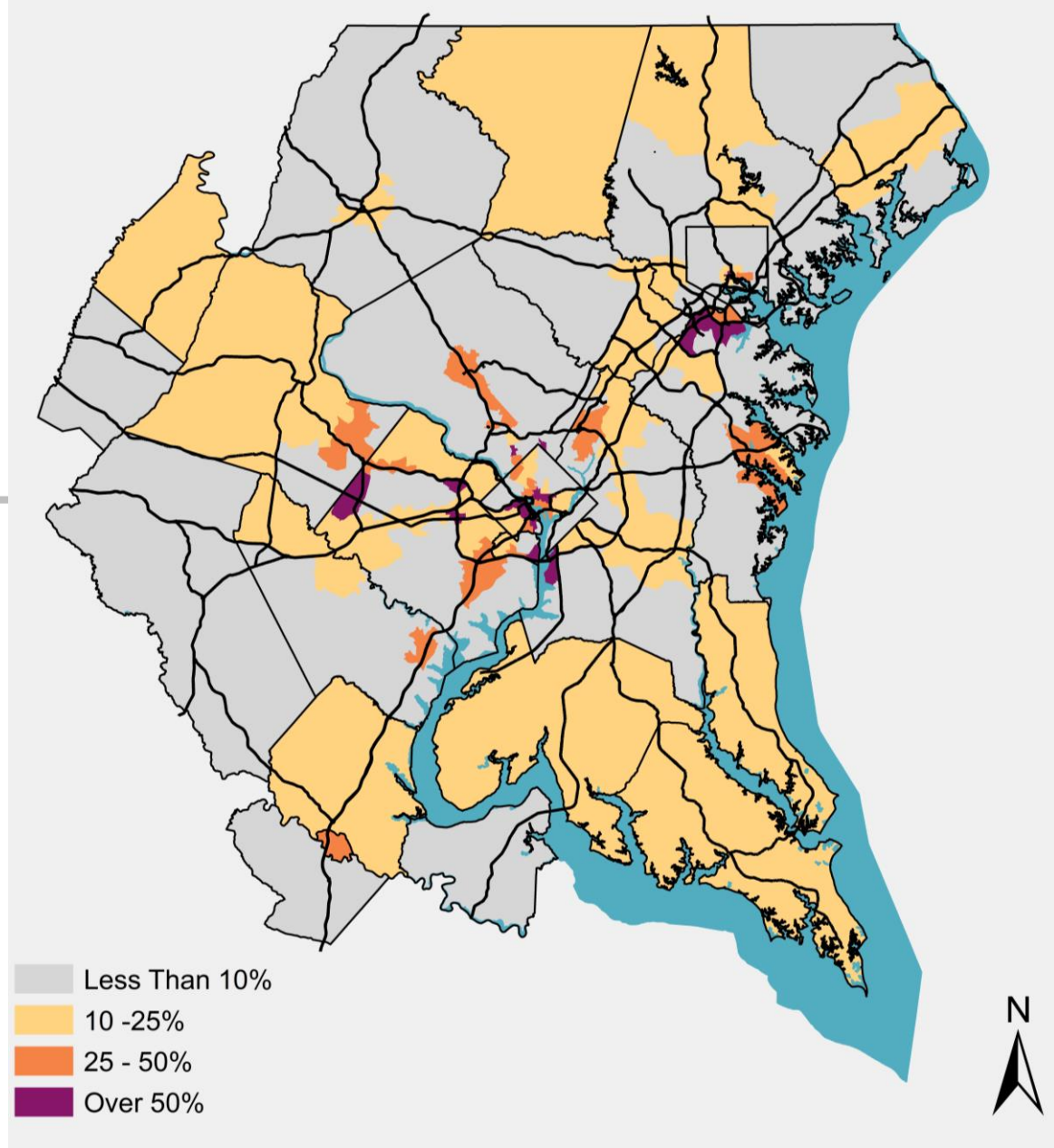
# Percentage of Passengers Leaving from Work

In 2019, the areas with the greatest concentrations of passengers leaving directly from work became more dispersed. For both the Baltimore Core and the Washington Core, 9% leave from work.



# Percentage of Passengers Leaving from Hotel/Motel

The greatest concentrations of passengers leaving from hotel/motel are those located closest to the airport. 27% of Baltimore Core passengers and 43% of Washington Core passengers leave from a hotel/motel.

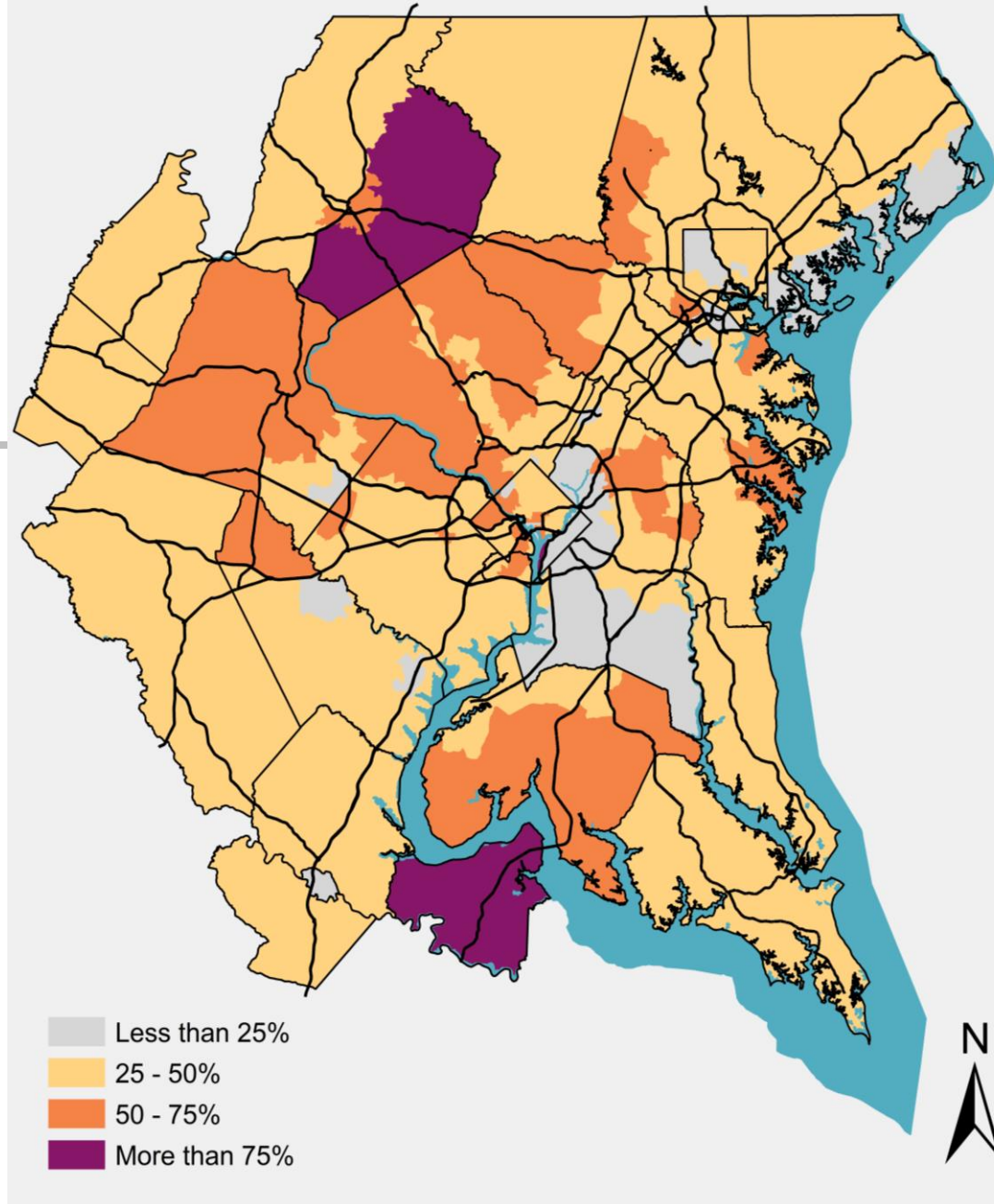




# Annual Household Income of \$150K+

Passengers in the upper income bracket are widespread.

Only a handful of zones in the region show less than 25 percent of air passengers reporting a household income of \$150,000 or more.



# AIR PASSENGER DESTINATIONS

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# Passenger Regional Allocations Strata

<b>Destination Region</b>	<b>%</b>
Atlantic	<b>27%</b>
Midwest	<b>14%</b>
New England	<b>8%</b>
Northeast/NY	<b>6%</b>
Pacific Northwest	<b>8%</b>
Plains	<b>3%</b>
South Central	<b>10%</b>
Southeast	<b>3%</b>
West	<b>7%</b>
<b>SUBTOTAL</b>	<b>86%</b>
International	<b>13%</b>
<b>TOTAL</b>	<b>100%</b>

- The Atlantic and Midwest regions combined received 41% of all departing passengers, the same as in 2017.
- The 2019 distribution of travel was generally consistent with 2017 findings.
- Between 2017 and 2019 there were minor increases in the Atlantic and Southeast, and minor decreases in the Midwest, Pacific Northwest, Northeast, and Plains.
- IAD remained dominant for international travel.

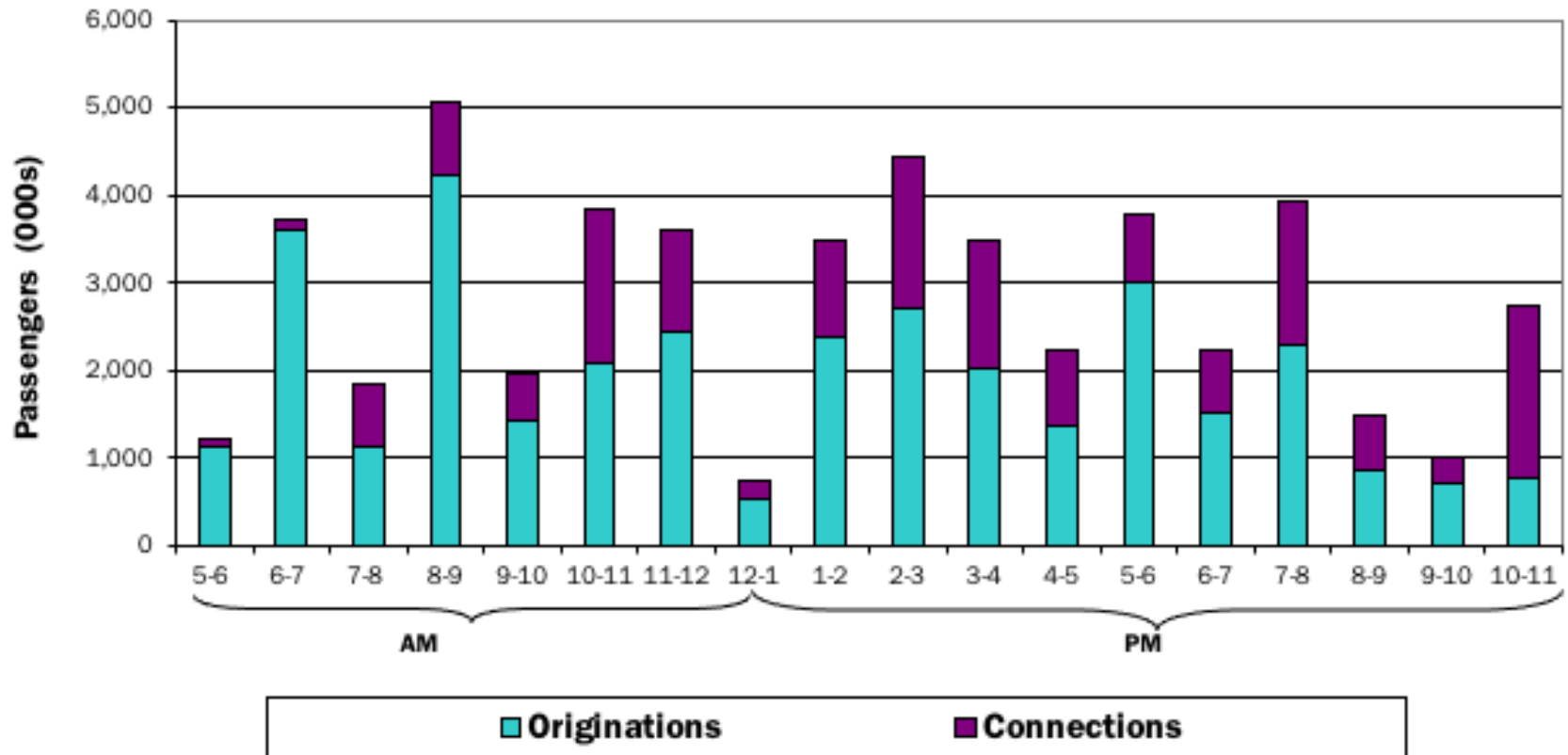


# DEPARTURES BY TIME OF DAY

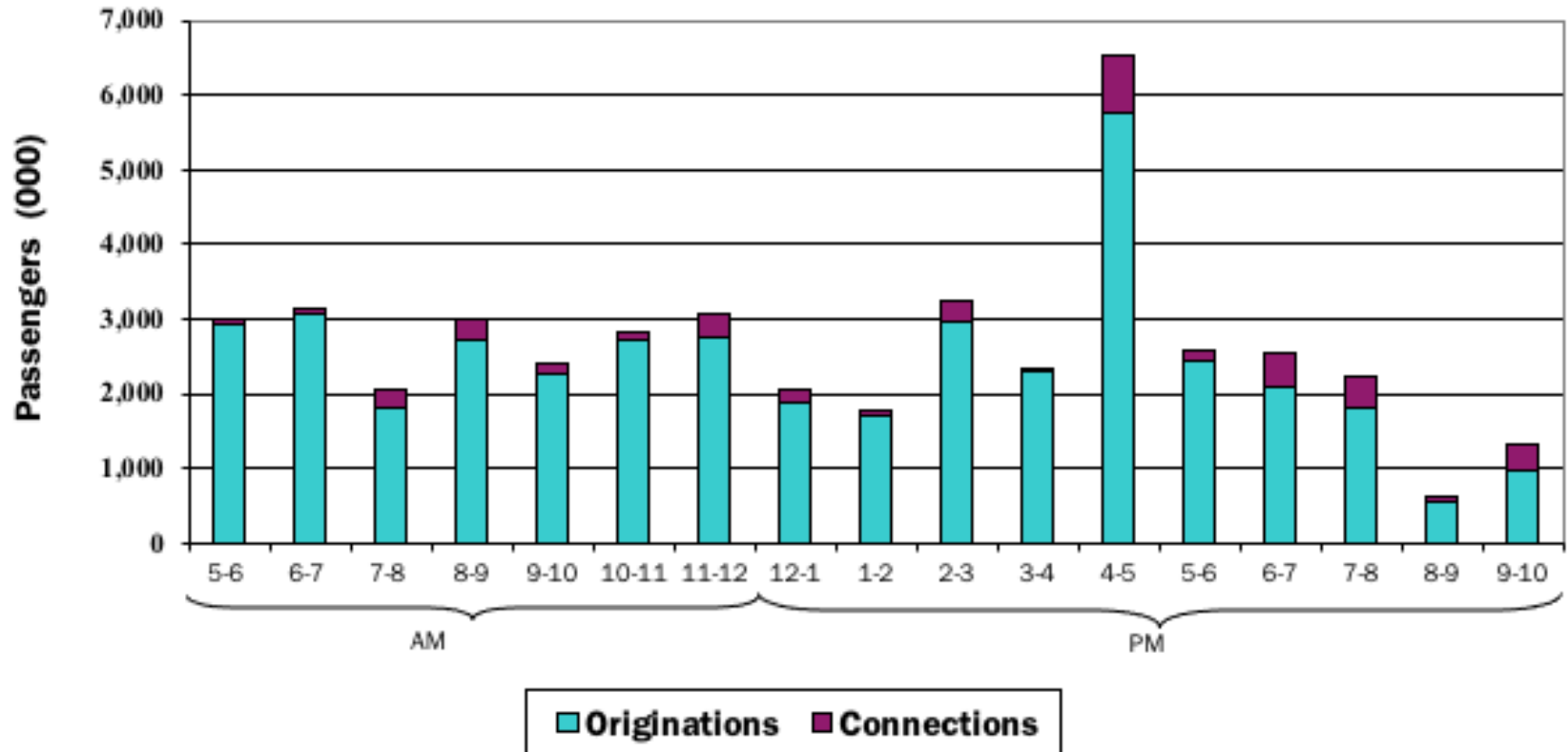
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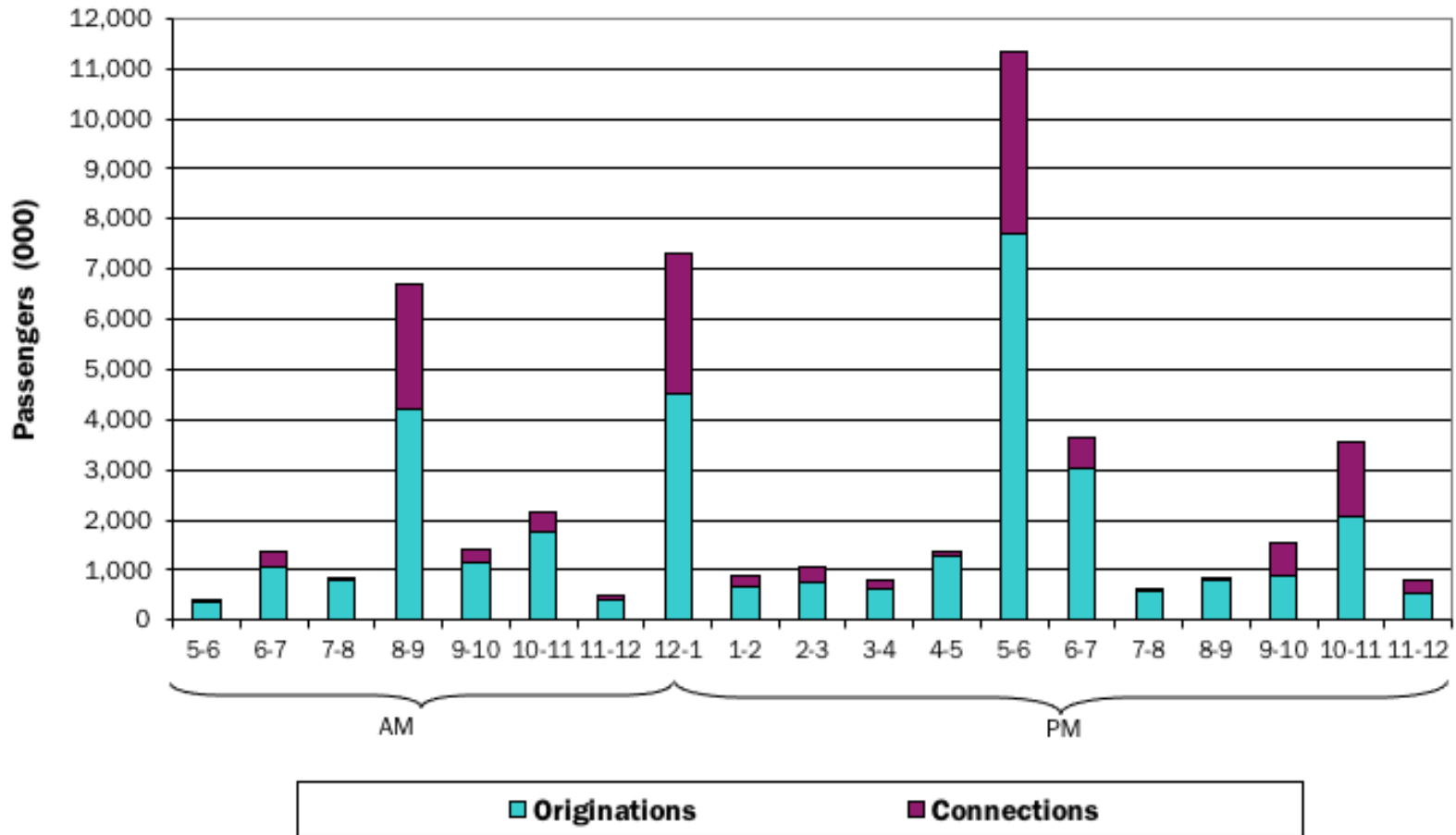
# Diurnal Passenger Distribution - BWI



# Diurnal Passenger Distribution - DCA



# Diurnal Passenger Distribution - IAD





# Conclusions

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- The Geographic Findings Report generally reflects similar patterns observed in previous Air Passenger Survey Results, with the followings exceptions:
  - 5% decline in airport satisfaction
  - Continued expansion of TNC ridership
  - 12% share increase of “Other” travel purpose from 4% to 16%
  - Significant percentage-wise local origination growth at IAD, especially from the Baltimore Metro Area. Note: actual numeric total remains low.
  - BWI saw the greatest percent increase in originations from Stafford County, Virginia, while DCA’s was from Anne Arundel County, Maryland.
- The Washington-Baltimore Air Systems Region continued to perform competitively across all three airports, with 13% growth in local originations.



# Next Steps

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- Finalize Geographic Findings Report
  - 1-Month Review by ATS – Comments Due Monday March 1
  - Publish Geographic Findings Report
- Present Geographic Findings Report to TPB Tech – TBD
- The geocoded survey file will be coming soon and distributed to the airports upon request (as per TPB protocol)



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