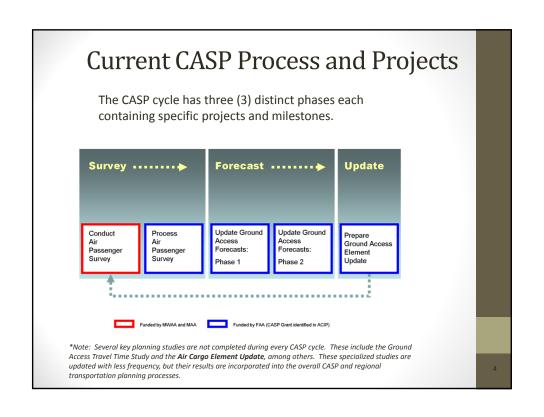
Update of the Regional Air Cargo Plan

TPB Regional Freight Subcommittee
December 5, 2014
Rich Roisman, AICP
Principal Transportation Planner / Air Systems Program Manager

Overview

- TPB Continuous Air System Planning (CASP)
 Program
- Previous Air Cargo Studies
- Air Cargo Plan Update Scope of Work and Schedule
- Updated Plan Background Information on Population and Employment
- Next Steps

Having Three Commercial Airports is a Key Regional Asset • Historically, three airports with three distinct markets Serve air passengers and air cargo Multimodal ground access COG (with MWAA and BWI) conducts regional air passenger surveys every two years · COG also prepares airport ground access forecasts, monitors ground access travel time, and prepares a regional air system plan (including an air cargo element) Aviation Technical Subcommittee has oversight of the CASP Work Program



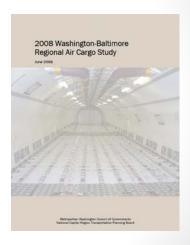
Previous Airport and Air Cargo Studies

- The Future of Washington's Airports (1975) Air Cargo Not Covered
- Washington-Baltimore Regional Airport System Plan Volume I:
 Commercial Airports (1988) Air Cargo Not Covered
 - In adopting plan, TPB recommends that future air system planning efforts include an assessment of regional air cargo needs
- Washington-Baltimore Regional Airport System Plan Volume II:
 Ground Access (1993-4) Air Cargo Not Covered
 - Numerous comments received that plan does not yet adequately address goods movement with respect to air cargo
- Washington-Baltimore Regional Airport System Plan Volume
 III: Air Cargo (1997-8) First Regional Air Cargo Plan!
 - Analyzes BWI and IAD only (DCA excluded)
 - "Another issue related to regional access that was stressed at Dulles is highway access to points west."

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2008 Washington-Baltimore Regional Air Cargo Study

- Focuses primarily on IAD and BWI
- Four main recommendations focused on:
 - Improving circulation, truck access and congestion around air cargo facilities
 - Incorporating air cargo needs into airport comprehensive planning
 - Airport participation in regional surface transportation planning process
 - Collaboratively identify mutually beneficial opportunities for improving regional airport ground access



http://www.mwcog.org/transportation/activities/airports/documents/AirCargo_FinalReport-26June_1s.pdf

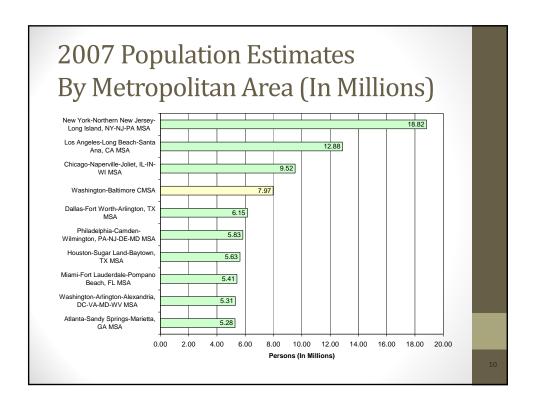
2014-15 Regional Air Cargo Study: Scope of Work

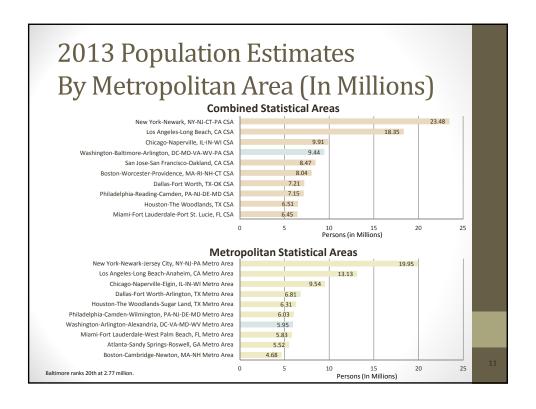
- Regional Air Cargo System Supply Analysis
 - Facilities Review
 - Literature Review
 - Supply Analysis Technical Report
- Regional Air Cargo System Demand Analysis
 - Estimated Potential Demand for Air Cargo
 - Impact of 2008-2009 Recession and other economic factors
 - Forecasted Airport Ground Access
 - Compare Demand with Supply Identified in Technical Report
 - Surface Network Analysis Focused on Regional Freight Network with added Airport Access Facilities
- Draft and Final Reports

2014-15 Regional Air Cargo Study: Project Schedule

- Supply Analysis was to have to begun in December 2013 and be completed in August 2014
- Delays due to staffing issues and other Air Systems project demands
- Supply Analysis ongoing, Demand Analysis to follow
- Draft Study Report by Spring
- Final Report issued no later than June 30, 2015

Plan Update: Background Demographic and Employment Information

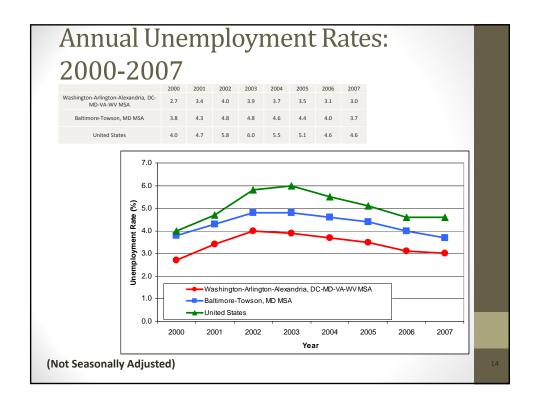


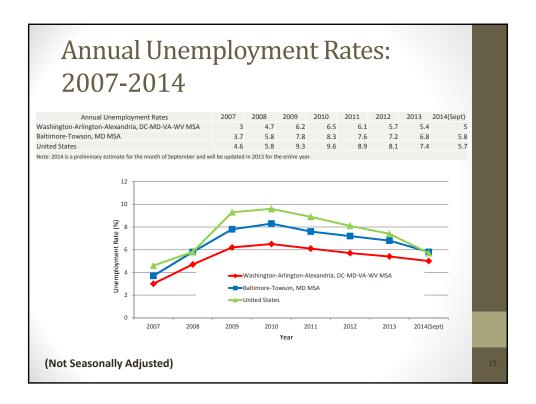


Findings

- Washington-Baltimore-Arlington CSA remains an economic engine for the country
 - It is still the fourth largest area
- Will try to reconcile the geographical definitional differences for updated report

Per Capita Income From 2007 Report: 2001 Washington-Arlington-Alexandria, DC-VA-MD-42.370 42.762 46.452 51,868 43,026 Current: 31.524 38.127 39.804 40.873 39.379 40.144 42.332 44.200 United States 43,514 54,577 56,876 58,577 57,249 58,223 60,834 61,743 Washington-Arlington-Alexandria, DC-VA-MD-WV (Metropolitan Statistical Area) 35,929 45,796 47,792 49,139 48,709 49,646 52,413 54,201 Baltimore-Columbia-Towson, MD (Metropolitan Statistical Area) Per Capita Income has been up and down, but growing since 2010 Growth has been less in the regions than nationally since 2010





Unemployment

- Recession occurred within months of previous report
- Unemployment is almost back down to 2007 levels
- Wages have stagnated affects demand for consumer goods

Population by Jurisdiction: 2007 Report

Washington / Baltimore Air System Planning Region

	Jurisdiction		Populatio	n (1000s)	Percent Change (%)				
	Julistiction	2000	2010	2020	2030	2000-10	2010-20	2020-30	2010-30
	District of Columbia	572.1	601.1	665.2	714.1	5.1	10.7	7.3	18.8
	Anne Arundel County, MD	489.7	532.5	555.0	571.7	8.8	4.2	3.0	7.4
	Baltimore City, MD	651.2	659.2	675.8	685.9	1.2	2.5	1.5	4.0
	Baltimore County, MD	754.3	821.7	842.3	849.7	8.9	2.5	0.9	3.4
	Calvert County, MD	74.6	91.0	96.0	101.4	22.0	5.5	5.6	11.4
	Carroll County, MD	150.9	183.5	206.1	226.7	21.6	12.3	10.0	23.5
	Charles County, MD	120.5	147.4	177.2	204.2	22.3	20.2	15.3	38.5
	Frederick County, MD	195.3	243.2	287.9	339.7	24.6	18.4	18.0	39.7
	Harford County, MD	218.6	257.0	277.0	282.1	17.6	7.8	1.8	9.8
	Howard County, MD	250.8	288.7	316.6	325.0	15.1	9.7	2.6	12.6
	Montgomery County, MD	866.3	982.6	1,067.7	1,137.6	13.4	8.7	6.5	15.8
	Prince George's County, MD	815.1	908.2	968.9	1,000.3	11.4	6.7	3.2	10.1
	St. Mary's County, MD	86.2	100.8	114.8	127.6	16.9	13.9	11.2	26.6
	City of Alexandria, VA	128.3	142.6	156.2	171.1	11.2	9.5	9.5	20.0
	Arlington County, VA	190.3	217.2	235.8	242.5	14.1	8.6	2.8	11.6
	Clarke County, VA	12.7	15.4	16.9	18.8	21.9	9.7	11.2	21.9
	Fairfax County, VA	1,000.7	1,171.3	1,319.1	1,375.9	17.0	12.6	4.3	17.5
	Fauquier County, VA	56.1	74.5	98.8	131.2	32.6	32.7	32.8	76.2
ource: MWCOG	City of Fredericksburg, VA	19.3	22.1	24.8	26.0	14.9	12.2	4.7	17.4
ource: MWCOG ound 7.1	King George County, VA	16.8	23.5	28.1	32.8	40.1	19.3	16.7	39.2
ooperative Forecasts	Loudoun County, VA	169.6	301.1	409.9	468.5	77.6	36.1	14.3	55.6
approved January 008) and BMC	Prince William County, VA	326.7	469.3	548.8	613.7	43.7	16.9	11.8	30.8
ound 7 Cooperative	Spotsylvania County, VA (part)	71.6	105.8	137.5	166.4	47.8	29.9	21.0	57.2
orecasts (approved ebruary 2007)	Stafford County, VA	92.4	135.3	175.0	210.9	46.4	29.3	20.5	55.8
euruary 2007)	Jefferson County, WV	42.2	51.4	62.7	76.4	21.9	21.9	21.9	48.6
	Total	7,372.2	8,546.8	9,464.1	10,100.0	15.9	10.7	6.7	18.2

Population by Jurisdiction: Current

Washington / Baltimore Air System Planning Region

/										
	Jurisdiction		Population ((1000s)		Percent Change (%)				
	Jurisaiction	2010	2020	2030	2040	2010-20	2020-30	2030-40	2010-40	
	District of Columbia	601.8	715.5	808.7	883.6	15.9	11.5	8.5	31.9	
	Anne Arundel County, MD	537.3	573.5	597.1	615.6	6.3	4.0	3.0	12.7	
	Baltimore City, MD	621.0	647.3	667.2	680.3	4.1	3.0	1.9	8.7	
	Baltimore County, MD	805.0	831.5	856.9	875.0	3.2	3.0	2.1	8.0	
	Calvert County, MD	91.7	100.5	105.1	108.9	8.8	4.4	3.5	15.8	
	Carroll County, MD	167.1	175.9	183.2	189.6	5.0	4.0	3.4	11.9	
	Charles County, MD	144.6	176.0	202.6	224.9	17.8	13.1	9.9	35.7	
	Frederick County, MD	233.4	258.8	297.7	330.0	9.8	13.1	9.8	29.3	
	Harford County, MD	244.8	264.9	284.0	301.9	7.6	6.7	5.9	18.9	
	Howard County, MD	287.1	321.3	343.3	350.1	10.6	6.4	1.9	18.0	
	Montgomery County, MD	972.6	1,067.0	1,153.9	1,202.8	8.8	7.5	4.1	19.1	
	Prince George's County, MD	863.4	899.9	950.0	995.5	4.1	5.3	4.6	13.3	
	St. Mary's County, MD	104.8	130.1	151.4	173.8	19.4	14.1	12.9	39.7	
City of Alexand Arlington Cour Clarke County, Fairfax County Fauquier Coun	City of Alexandria, VA	140.0	158.1	174.0	194.9	11.4	9.1	10.7	28.2	
	Arlington County, VA	207.6	236.1	258.8	276.1	12.1	8.8	6.3	24.8	
	Clarke County, VA	14.0	15.0	15.8	16.6	6.7	5.1	4.8	15.7	
	Fairfax County, VA	1,116.8	1,193.6	1,308.9	1,414.2	6.4	8.8	7.4	21.0	
	Fauquier County, VA	65.2	74.1	83.3	93.0	12.0	11.0	10.4	29.9	
Source: MWCOG	City of Fredericksburg, VA	24.3	27.2	30.6	33.6	10.7	11.1	8.9	27.7	
Cooperative	King George County, VA	23.6	30.2	37.8	44.7	21.9	20.1	15.4	47.2	
Forecast Round 8.3	Loudoun County, VA	312.3	368.0	468.7	484.5	15.1	21.5	3.3	35.5	
(approved October 2014) and BMC	Prince William County, VA	454.1	552.0	623.1	676.0	17.7	11.4	7.8	32.8	
Cooperative	Spotsylvania County, VA (part)	96.0	119.4	139.4	155.4	19.6	14.3	10.3	38.2	
Forecast Round 8.0	Stafford County, VA	129.0	169.8	212.7	251.9	24.0	20.2	15.6	48.8	
(approved August	Jefferson County, WV	53.5	62.7	71.2	79.1	14.7	11.9	10.0	32.4	
2013)	Total	8,311.0	9,168.4	10,025.4	10,652.0	9.4	8.5	5.9	22.0	

Population Projection Findings

- 2010 Census found lower population numbers than had been projected
- Resulting post Census growth has been pushed out (as seen in 2020), but is still expected by around 2030
- Percent growth in population between 2010 and 2030 in 2008 report was 18.2% and is currently expected to be 20.6% regionally

	useholds by	,	0110			· -	P		
	Washington / Balt	imore A	ir Syst	em Pla	anning	Regio	on		
			Household				Percent Ch	ange (%)	
	Jurisdiction	2000	2010	2020	2030	2000-10	2010-20	2020- 30	2010-30
	District of Columbia	248.3	265.8	302.0	325.7	7.0	13.6	7.9	22.6
	Anne Arundel County, MD	178.7	202.4	217.5	229.1	13.3	7.5	5.3	13.2
	Baltimore City, MD	258.0	266.1	278.7	284.7	3.1	4.7	2.1	7.0
	Baltimore County, MD	299.9	330.8	339.6	343.1	10.3	2.7	1.0	3.7
	Calvert County, MD	25.4	31.0	34.3	36.2	22.0	10.6	5.5	16.6
	Carroll County, MD	52.5	64.9	74.8	84.6	23.7	15.2	13.2	30.4
	Charles County, MD	41.7	52.2	63.7	76.9	25.3	21.9	20.8	47.2
	Frederick County, MD	70.1	87.7	104.1	123.1	25.2	18.7	18.2	40.4
	Harford County, MD	79.7	97.0	107.9	112.7	21.8	11.3	4.4	16.2
	Howard County, MD	91.0	110.0	126.6	133.0	20.9	15.1	5.0	20.9
	Montgomery County, MD	323.4	368.8	406.7	440.1	14.0	10.3	8.2	19.3
	Prince George's County, MD	289.8	329.8	360.6	379.1	13.8	9.3	5.1	14.9
	St. Mary's County, MD	30.6	36.4	42.6	48.4	18.9	16.9	13.6	32.8
	City of Alexandria, VA	61.9	70.3	78.3	87.0	13.6	11.4	11.0	23.7
	Arlington County, VA	86.9	103.0	114.3	117.8	18.6	10.9	3.1	14.3
	Clarke County, VA	4.9	6.1	6.9	7.8	24.3	11.7	13.3	26.5
	Fairfax County, VA	363.1	426.0	479.2	500.1	17.3	12.5	4.4	17.4
rce:	Fauquier County, VA	20.2	26.9	35.7	47.5	33.0	33.0	33.0	76.8
COG Round	City of Fredericksburg, VA	8.1	9.4	10.8	11.4	15.6	15.7	4.8	21.2
Cooperative ecasts	King George County, VA	6.1	8.8	10.7	12.5	44.7	21.6	16.5	41.7
roved	Loudoun County, VA	59.9	106.3	146.0	165.9	77.5	37.4	13.6	56.0
uary 2008)	Prince William County, VA	109.7	159.3	188.6	212.9	45.3	18.4	12.8	33.6
BMC Round operative	Spotsylvania County, VA (part)	24.8	36.8	48.7	58.7	48.6	32.3	20.6	59.6
ecasts	Stafford County, VA	30.2	43.5	57.5	69.2	44.1	32.1	20.4	59.0
proved ruary 2007)	Jefferson County, WV	16.2	20.4	26.0	33.1	26.4	27.1	27.4	61.9

,		Air System Planning Region Households (1000s) Percent Change (%) 2020 2030 2040 2010-20 2020-30 2030-40							
	Households (1000s) Percent Change (%)								
Jurisdiction	2010	2020	2030	2040	2010-20	2020-30	2030-40		

	Jurisdiction		Households	(1000s)		Percent Change (%)				
	Jurisdiction	2010	2020	2030	2040	2010-20	2020-30	2030-40	2010-40	
	District of Columbia	266.7	305.6	340.3	370.8	14.6	11.4	8.9	39.0	
	Anne Arundel County, MD	199.4	213.5	227.6	241.6	7.1	6.6	6.1	21.2	
	Baltimore City, MD	249.9	261.4	269.6	275.0	4.6	3.1	2.0	10.0	
	Baltimore County, MD	316.7	327.4	337.5	344.6	3.4	3.1	2.1	8.8	
	Calvert County, MD	32.0	36.0	38.3	40.3	12.4	6.4	5.1	25.8	
	Carroll County, MD	62.4	66.2	69.7	72.9	6.1	5.2	4.5	16.7	
	Charles County, MD	51.0	64.3	75.8	85.9	26.2	18.0	13.3	68.6	
	Frederick County, MD	84.8	96.5	111.1	123.2	13.8	15.2	10.9	45.3	
	Harford County, MD	90.2	100.3	109.8	117.6	11.2	9.5	7.1	30.4	
	Howard County, MD	104.7	126.8	137.6	140.7	21.1	8.5	2.2	34.3	
	Montgomery County, MD	361.0	397.0	434.8	460.2	10.0	9.5	5.8	27.5	
	Prince George's County, MD	304.0	336.1	359.9	379.0	10.5	7.1	5.3	24.7	
	St. Mary's County, MD	38.9	49.4	58.1	66.5	27.0	17.8	14.4	71.1	
	City of Alexandria, VA	68.1	77.0	84.7	94.9	13.0	10.1	12.0	39.3	
	Arlington County, VA	98.1	112.2	121.4	128.6	14.4	8.2	5.9	31.2	
	Clarke County, VA	5.5	6.0	6.3	6.6	8.6	5.7	4.9	20.4	
	Fairfax County, VA	399.6	429.7	478.9	523.5	7.5	11.4	9.3	31.0	
	Fauquier County, VA	23.7	27.0	30.3	33.8	13.9	12.3	11.7	42.9	
Source: MWCOG	City of Fredericksburg, VA	9.5	11.0	12.5	13.7	15.4	14.4	9.5	44.5	
Cooperative	King George County, VA	8.4	11.2	14.4	17.1	34.2	27.8	19.3	104.7	
Forecast Round 8.3 (approved October	Loudoun County, VA	104.6	139.5	158.1	164.3	33.4	13.4	3.9	57.1	
	Prince William County, VA	147.8	183.3	210.5	229.9	24.0	14.8	9.2	55.5	
2014) and BMC	Spotsylvania County, VA (part)	32.8	42.2	50.1	55.6	28.4	18.8	11.0	69.3	
Cooperative Forecast Round 8.0	Stafford County, VA	41.8	57.5	73.4	87.7	37.7	27.5	19.5	109.9	
(approved August	Jefferson County, WV	19.9	26.1	31.0	35.7	30.9	18.9	15.2	79.3	
2013)	Total	3,121.5	3,503.0	3,841.9	4,109.7	12.2	9.7	7.0	31.7	

Household Projection Findings

- 2010 Census found lower household counts than had been projected
- Fewer household are now being projected for 2020 and 2030 than had been previously assumed (about 100,000 each)
 - Demographers have been debating how small the average household size can get
- Percent growth in households between 2010 and 2030 in 2008 report was 20.9% and is currently expected to be 23.1% regionally

	Washington / E	Baltimore	e Air S	ystem	Plann	ing Re	gion				
		Employment (1000s)					Percent Change (%)				
	Jurisdiction	2000	2010	2020	2030	2000-10	2010-20	2020-30	2010-30		
	District of Columbia	743.6	783.7	844.3	881.4	5.4	7.7	4.4	12.5		
	Anne Arundel County, MD	297.0	341.3	398.8	439.0	14.9	16.9	10.1	28.7		
	Baltimore City, MD	460.6	451.4	471.2	481.6	-2.0	4.4	2.2	6.7		
	Baltimore County, MD	452.0	509.7	523.7	527.7	12.7	2.8	0.8	3.5		
	Calvert County, MD	22.8	32.9	34.5	35.6	44.1	4.9	3.2	8.2		
	Carroll County, MD	68.3	84.3	88.3	90.3	23.4	4.8	2.3	7.2		
	Charles County, MD	41.9	62.9	66.8	69.1	50.2	6.2	3.4	9.9		
	Frederick County, MD	96.3	142.4	158.3	167.3	47.9	11.1	5.7	17.4		
	Harford County, MD	96.0	129.7	147.3	163.5	35.1	13.6	11.0	26.1		
	Howard County, MD	160.0	196.4	231.2	260.2	22.7	17.7	12.6	32.5		
	Montgomery County, MD	472.1	542.6	613.3	668.1	14.9	13.0	8.9	23.1		
	Prince George's County, MD	340.4	367.8	422.1	520.3	8.0	14.8	23.3	41.5		
	St. Mary's County, MD	49.6	61.9	65.1	67.2	24.8	5.2	3.2	8.6		
	City of Alexandria, VA	89.3	107.8	124.5	141.5	20.8	15.5	13.6	31.3		
	Arlington County, VA	182.6	215.4	241.9	258.4	18.0	12.3	6.9	20.0		
	Clarke County, VA	4.4	5.1	5.7	6.4	15.1	13.1	11.3	25.9		
	Fairfax County, VA	615.3	726.7	835.3	907.2	18.1	14.9	8.6	24.8		
irce: MWCOG	Fauquier County, VA	17.2	22.3	29.2	35.4	29.5	30.9	21.3	58.7		
ınd 7.1 operative	City of Fredericksburg, VA	21.9	28.1	34.0	39.9	28.3	21.2	17.3	42.2		
ecasts	King George County, VA	11.1	13.0	15.4	17.7	17.5	17.9	15.1	35.7		
proved January 08) and BMC	Loudoun County, VA	90.5	166.9	241.3	290.7	84.4	44.6	20.5	74.2		
is) and BIVIC ind 7	Prince William County, VA	119.9	157.7	190.2	217.8	31.6	20.6	14.5	38.1		
perative	Spotsylvania County, VA (part)	27.9	39.1	47.4	55.7	40.3	21.1	17.4	42.2		
recasts oproved	Stafford County, VA	30.2	44.1	57.1	67.9	46.1	29.5	18.9	54.0		
pprovea bruary 2007)	Jefferson County, WV	12.8	16.8	20.8	24.5	31.6	24.0	17.5	45.7		
,	Total	4,523.7	5,249.9	5,907.7	6,434.5	16.1	12.5	8.9	22.6		

	Washington / Balti	more A	ir Syst	em Pla	annino	a Regi	on			
			Percent Change (%)							
	Jurisdiction	2010	Employmen 2020	2030	2040	2010-20	2020-30	2030-40	2010-40	
	District of Columbia	783.5	861.8	944.1	1,001.8	10.0	9.5	6.1	27.9	
	Anne Arundel County, MD	323.1	361.7	391.3	424.1	11.9	8.2	8.4	31.2	
	Baltimore City, MD	381.8	401.3	427.6	453.0	5.1	6.6	5.9	18.6	
	Baltimore County, MD	446.3	482.9	500.5	514.3	8.2	3.6	2.8	15.2	
	Calvert County, MD	35.2	44.5	47.2	49.0	26.4	6.1	3.8	39.2	
	Carroll County, MD	70.9	76.1	80.9	85.4	7.3	6.3	5.5	20.4	
	Charles County, MD	62.2	71.7	77.5	83.1	15.3	8.1	7.2	33.6	
	Frederick County, MD	98.7	106.2	114.6	125.6	7.6	7.8	9.6	27.2	
	Harford County, MD	104.7	126.0	146.3	167.3	20.3	16.1	14.4	59.8	
	Howard County, MD	181.4	211.4	241.4	260.3	16.5	14.2	7.8	43.5	
	Montgomery County, MD	510.3	564.4	635.3	715.1	10.6	12.6	12.6	40.1	
	Prince George's County, MD	342.6	377.9	427.5	497.7	10.3	13.1	16.4	45.3	
	St. Mary's County, MD	63.0	71.6	76.6	80.7	13.7	7.0	5.4	28.2	
	City of Alexandria, VA	102.9	116.8	149.6	167.6	13.5	28.0	12.1	62.9	
	Arlington County, VA	223.3	276.3	303.0	308.8	23.7	9.7	1.9	38.3	
	Clarke County, VA	4.2	4.5	4.8	5.0	7.0	5.7	4.8	18.5	
	Fairfax County, VA	657.5	758.3	866.7	930.7	15.3	14.3	7.4	41.6	
	Fauquier County, VA	22.4	25.4	28.6	31.9	13.7	12.4	11.7	42.7	
Source: MWCOG	City of Fredericksburg, VA	31.5	39.7	47.8	54.8	25.9	20.5	14.7	74.1	
Cooperative	King George County, VA	16.2	19.4	22.5	25.7	19.4	16.1	14.5	58.6	
orecast Round 8.3	Loudoun County, VA	145.1	197.3	248.8	278.2	36.0	26.1	11.8	91.8	
approved October	Prince William County, VA	143.6	186.2	230.0	278.2	29.7	23.5	21.0	93.7	
2014) and BMC Cooperative	Spotsylvania County, VA (part)	40.1	46.2	52.1	61.4	15.3	12.7	17.8	53.0	
Forecast Round 8.0	Stafford County, VA	46.7	58.4	70.2	84.2	25.1	20.2	19.9	80.4	
(approved August	Jefferson County, WV	15.9	18.7	21.2	23.6	17.2	13.6	11.0	47.8	2
2013)	Total	4,853.0	5,504.6	6,155.9	6,707.4	13.4	11.8	9.0	38.2	

At-Place Employment Projection Findings

- Due to the recession, 2010 employment numbers are lower than had been previously forecasted
- There is a ripple effect out to 2020 and 2030 with lower employment estimates
- Area will still see growth in employment over time
- Percent growth in employment between 2010 and 2030 in 2008 report was 22.6% and is currently expected to be 26.8% regionally

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Next Steps

- Review other work done
 - MPOs
 - States
 - Airport Authorities
 - Related stakeholders
- Review any available relevant academic papers
- Assess current air cargo facilities at area airports
- Supply Report
- Demand Analysis
- Draft and Final Reports (Spring and June 2015)