Round 8.0 / Fall 2010

Growth Trends to 2040:
Cooperative Forecasting in the Washington Region

Local governments in the Washington region have worked cooperatively for many years to develop region-wide and neighborhood level forecasts of employment, population, and households. Through this effort, a consistent set of local and regional forecasts is developed for use in program and facilities planning throughout the region.

The Cooperative Forecasting Program, established in 1975 and administered by the Metropolitan Washington Council of Governments (COG), enables local, regional, and federal agencies to coordinate planning decisions using common assumptions about future growth and development in the region. Each series of forecasts, or a "Round," provides land use activity forecasts of employment, population, and households by five-year increments. Each Round covers a period of 20 to 30 years.

The Cooperative Forecasting process provides data necessary for regional planning activities including analyzing the effects of growth and developing policy responses to regional issues. In addition, the forecasts are used to determine the demand for public facilities including schools, parks, medical facilities, roads, stores, and services.

The Cooperative Forecast is a multi-stage, "top-down/bottom-up" process undertaken by

Inside This Issue

Process . . . . . Page 1
Coordination . . . . . Page 2
Employment . . . . . .Page 3
Households . . . . . Page 5
Population . . . . . Page 6
Regional Activity Centers . . . . . Page 15

Metropolitan Washington Council of Governments Membership

Process

COG's Planning Directors Technical Advisory Committee and the Cooperative Forecasting and Data Subcommittee. It employs a regional econometric model and local jurisdictional forecasts. The model projects employment, population, and households for the metropolitan Washington region based on national economic trends and local demographic factors.

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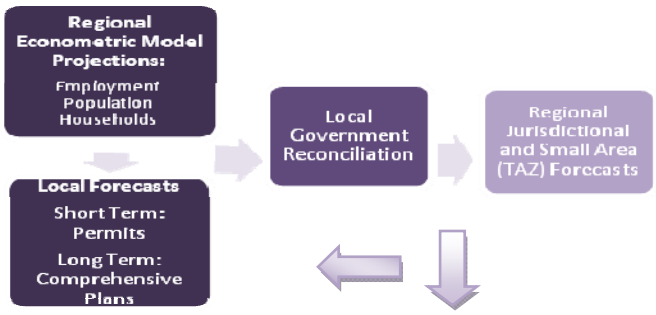
COG Cooperative Forecasting Process

Cooperative Forecasting Model (figure 1)



The model is based on the 1983 definition of the Metropolitan Statistical Area (MSA) that includes the COG member jurisdictions, as well as Calvert, Charles, and Stafford counties. Concurrently, local jurisdictions develop independent projections of population, households, and employment based on pipeline development, market conditions, planned transportation improvements, and adopted land use plans and zoning, taking into account the preliminary regional projections.

The Cooperative Forecasting and Data Subcommittee, which is comprised of local government planners, economists, and demographers, reviews and reconciles the two sets of projections. (figure 1) The model and the local jurisdictional projections must be within three percent of each other for the new set of Cooperative Forecasts to be reconciled.

The forecasts are presented and approved by the Planning Directors Technical Advisory Committee (PDTAC); the Metropolitan Development Policy Committee (MDPC); and the COG Board of Directors.

Recognizing that market conditions and policies may change, the subcommittee reviews the forecasts annually, and allows local governments to make minor adjustments. The forecasts may also be adjusted to reflect local governments' assessments of the likely housing and employment impacts due to major new transportation facilities. Updated forecasts are referred to as Round 7.1, Round 7.2A, etc. These forecasts are Round 8.0 as adopted by the COG Board in November 2010.

Coordination

In February 2003, the COG Board of Directors adopted a resolution to further enhance coordination between regional land use and transportation planning in metropolitan Washington. Beginning with Round 6.3 and for all subsequent rounds, the Cooperative Forecasts are approved by the COG Board concurrently with the National Capital Region Transportation Planning Board's (TPB) approval of the results of the annual air quality conformity analysis of the Transportation Improvement Program (TIP) and the Financially-Constrained Long Range Plan (CLRP).

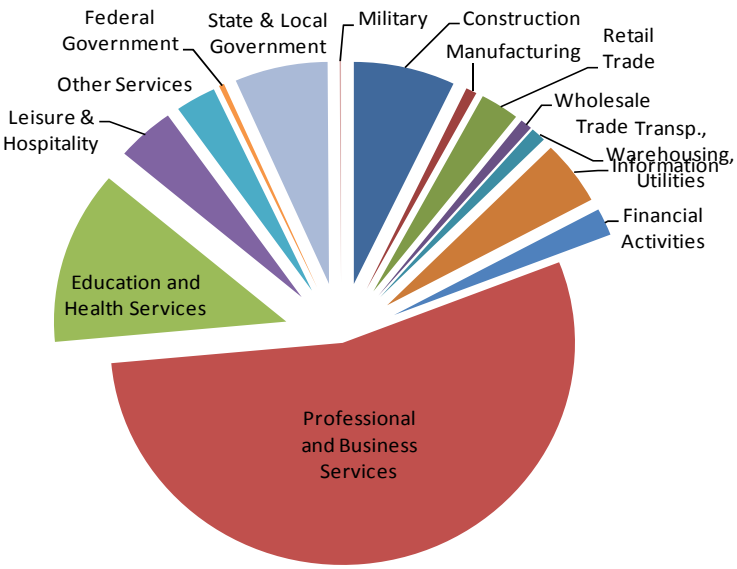
In reviewing the Round 7.0 forecasts in 2005, the PDTAC and the MDPC determined that local plans and zoning in the metropolitan Washington region do not currently provide for the amount of housing necessary for workers to fill the forecasted jobs. Previously, forecasts adopted by the COG Board were based on local plans and zoning capacities as provided for in adopted land use plans. In approving Round 7.0, the COG Board concluded that certain localities will need to re-plan and rezone land to provide sufficient housing to meet employment projections. This assumption is still implicit in the Round 8.0 Forecasts.

For the Round 8.0 Cooperative Forecasts, COG contracted with the George Mason University Center for Regional Analysis (CRA) for the development of new regional benchmark totals. With the guidance of COG staff and the CRA, the regional benchmark totals were developed using the econometric modeling forecasts from Global Insight, Inc. for the Washington Metropolitan region. The Planning Directors Technical Advisory Committee was briefed on the development of the benchmark totals methodology and gave their final approval of the benchmark totals at their June 2009 meeting.

The Round 8.0 econometric model revels dramatic increases in employment, households, and population by 2040, the end of the forecast period.

Regional employment would total more than 4.4 million jobs by 2040, a 41 percent increase over the 2005 employment base of 3.1 million jobs. The number of households would reach more than 2.6 million, a 41 percent increase. Regional population is anticipated to increase by 39 percent during the forecast period, reaching nearly 6.8 million in 2040. This will add nearly 1.9 million people to the region by 2040, which is slightly less than was added during the previous 30-year period.

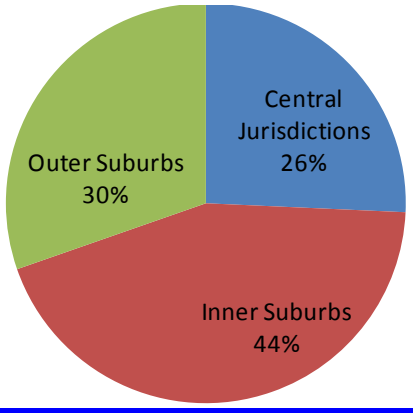
Industry Shares of 2005—2040 Growth: Two-thirds of All New Jobs in Services



Employment

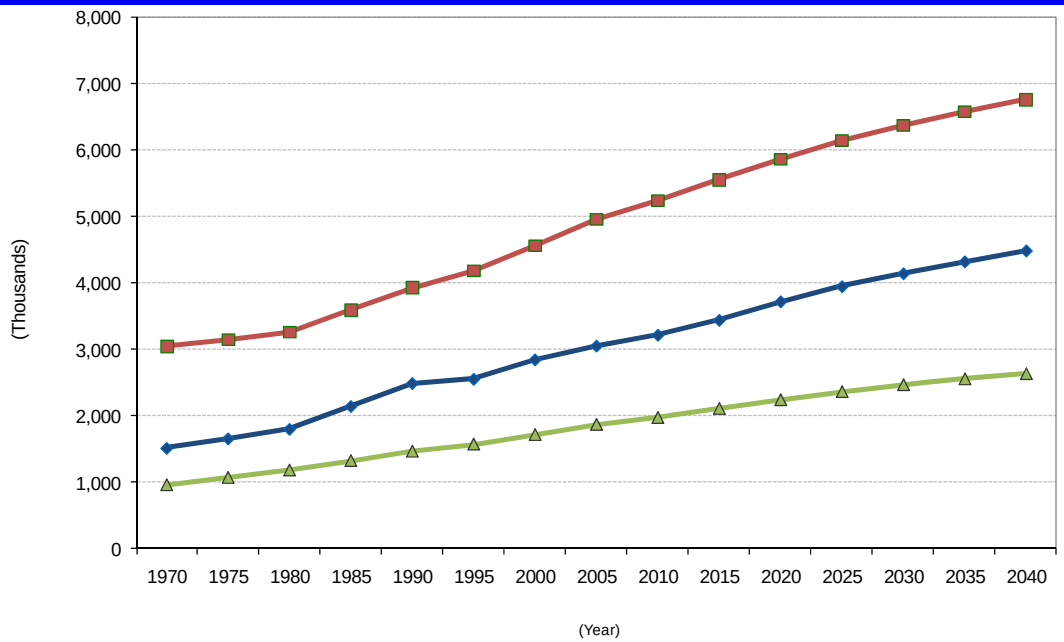
Employment growth would be the greatest during the 2015 to 2020 time period, when an average of 56,000 new jobs are anticipated per year–more than the amount of jobs added from 2010 to 2015. Two-thirds of all new jobs are anticipated in service industries such as engineering, computer and data processing, business services, and medical research. Job growth in Northern Virginia (53%) will outpace the growth anticipated in the Maryland suburbs (31%), and the District of Columbia (16%).

Regional Share of Employment Growth 2005-2040



Historic and Forecast Growth

Washington DC-MD-VA MSA[1]



Source: Round 8.0 Cooperative Forecasts[1] Based on the 1983 definition of the Washington Metropolitan Statistical Area (MSA)

Summary of Intermediate Employment Forecasts Round 8.0 Cooperative Forecasts (Thousands)

JURISDICTION	2005	2010	2015	2020	2025	2030	2035	2040	Number	% Change	Share
District of Columbia	750.2	786.0	822.9	868.3	897.9	924.0	950.1	977.2	**226.9**	**30.2%**	**15.9%**
Arlington County	195.2	205.2	218.2	243.8	262.4	268.6	278.5	281.1	**86.0**	**44.0%**	**6.0%**
City of Alexandria	105.8	108.9	117.7	124.1	135.4	142.3	153.6	160.4	**54.7**	**51.7%**	**3.8%**
Central Jurisdictions	**1,051.2**	**1,100.0**	**1,158.8**	**1,236.2**	**1,295.7**	**1,334.9**	**1,382.2**	**1,418.7**	**367.6**	**35.0%**	**25.7%**
Montgomery County	500.0	506.0	540.0	585.0	628.0	673.0	703.0	723.0	**223.0**	**44.6%**	**15.6%**
Rockville	76.6	74.5	83.6	91.6	96.8	99.4	102.4	105.4	**28.8**	**37.6%**	**2.0%**
Gaithersburg	48.8	50.4	54.9	62.5	67.1	72.6	79.6	83.4	**34.6**	**70.9%**	**2.4%**
Prince George's County	347.9	358.4	370.1	383.6	399.6	419.6	444.1	474.6	**126.8**	**36.4%**	**8.9%**
Fairfax County	601.9	641.3	684.8	743.6	781.4	812.2	837.6	861.7	**259.8**	**43.2%**	**18.2%**
City of Fairfax	26.1	27.3	28.7	30.6	32.4	34.0	35.7	37.5	**11.4**	**43.7%**	**0.8%**
City of Falls Church	11.3	11.4	12.0	14.3	16.2	17.6	18.0	18.3	**7.0**	**61.9%**	**0.5%**
Inner Suburbs	**1,487.2**	**1,544.4**	**1,635.7**	**1,757.1**	**1,857.6**	**1,956.4**	**2,038.4**	**2,115.1**	**627.9**	**42.2%**	**43.9%**
Loudoun County	125.6	143.7	167.6	206.5	236.3	257.2	271.5	285.4	**159.8**	**127.3%**	**11.2%**
Prince William County	113.1	115.4	134.8	155.3	174.8	195.9	217.8	240.8	**127.7**	**112.8%**	**8.9%**
City of Manassas	23.3	24.6	27.3	28.8	30.3	31.8	33.3	34.8	**11.5**	**49.1%**	**0.8%**
City of Manassas Park	3.0	4.5	4.6	4.7	4.8	4.9	5.0	5.1	**2.2**	**73.0%**	**0.2%**
Calvert County	32.4	35.2	41.1	44.5	46.3	47.2	48.1	49.0	**16.6**	**51.1%**	**1.2%**
Charles County	58.6	62.2	68.4	71.7	74.7	77.5	80.3	83.1	**24.5**	**41.9%**	**1.7%**
Frederick County	122.2	142.4	151.5	158.3	163.5	167.3	171.1	175.1	**52.9**	**43.3%**	**3.7%**
Stafford County	35.6	42.1	48.6	54.6	60.4	65.1	69.6	74.2	**38.6**	**108.6%**	**2.7%**
Outer Suburbs	**513.7**	**570.2**	**643.8**	**724.3**	**791.1**	**846.9**	**896.6**	**947.5**	**433.8**	**84.4%**	**30.4%**
Northern Virginia	**1,240.8**	**1,324.5**	**1,444.3**	**1,606.3**	**1,734.4**	**1,829.6**	**1,920.5**	**1,999.4**	**758.5**	**61.1%**	**53.1%**
Suburban Maryland	**1,061.0**	**1,104.2**	**1,171.1**	**1,243.1**	**1,312.1**	**1,384.6**	**1,446.7**	**1,504.8**	**443.8**	**41.8%**	**31.1%**
MSA REGIONAL TOTAL	**3,052.1**	**3,214.7**	**3,438.3**	**3,717.7**	**3,944.4**	**4,138.1**	**4,317.3**	**4,481.4**	**1,429.3**	**46.8%**	**100.0%**

Fairfax County, Montgomery County, and the District of Columbia would add the largest numbers of new jobs to the region's employment base during the 2005 to 2040 forecast period, followed by Prince George's and Loudoun counties.

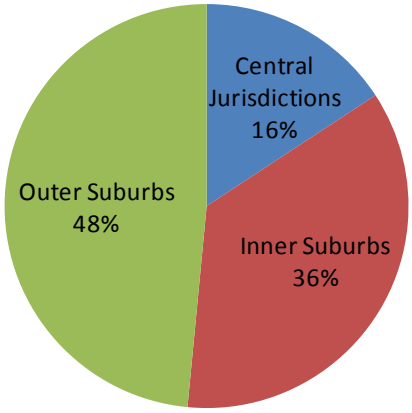
Collectively, the region's inner suburbs will add the largest number of new jobs, 627,900, by 2040. As with population and household growth, the largest percentage increases in employment will occur in the outer suburbs of Virginia and Maryland. Together, these outer jurisdictions will add 433,800 jobs to the region's base, and will grow their number of jobs 84 percent by 2040. Despite the tremendous growth in suburban employment shown in the forecasts, the District of Columbia will continue to have the largest number of jobs of any single jurisdiction and would account for a fifth of the region's employment in 2040. Collectively, the central jurisdictions will account for 26 percent of regional employment.

The addition of more than 764,400 households during the 2005 to 2040 forecast period reflects the growth in jobs and in-migration to the region. The largest number of new households will be in Montgomery, Fairfax, and Prince William counties, and the District of Columbia, which collectively contribute more than half of the household growth during the forecast period. Stafford County will grow at a rate of 149 percent, the most rapidly of all jurisdictions, adding 51,500 households to the 2005 base of 34,700 households.

Households

Regional economic growth will continue to attract new residents and fuel a general demand for new housing. Households, or occupied housing units, in turn form the basis for population forecasts for most jurisdictions participating in the Cooperative Forecasting process. Planners monitor housing construction and estimate population growth by multiplying the number of occupied housing units by the average number of people in the jurisdictions' households.

Regional Share of Population Growth



Summary of Intermediate Household Forecasts Round 8.0 Cooperative Forecasts

JURISDICTION	2005	2010	2015	2020	2025	2030	2035	2040	Number	% Change	Share
District of Columbia	253.4	265.2	287.3	296.8	309.0	317.2	325.4	339.0	**85.6**	**33.8%**	**11.2%**
Arlington County	92.2	100.5	108.1	114.4	118.0	121.3	122.7	124.2	**32.0**	**34.7%**	**4.2%**
City of Alexandria	66.3	66.6	68.5	73.7	78.6	82.9	87.0	90.6	**24.2**	**36.6%**	**3.2%**
Central Jurisdictions	**411.9**	**432.3**	**463.9**	**484.8**	**505.6**	**521.5**	**535.1**	**553.7**	**141.8**	**34.4%**	**18.6%**
Montgomery County	347.5	360.5	377.0	398.0	417.0	438.0	453.0	463.0	**115.5**	**33.2%**	**15.1%**
Rockville	23.0	24.3	26.6	28.8	30.0	31.5	33.0	34.5	**11.5**	**50.2%**	**1.5%**
Gaithersburg	21.7	22.1	23.6	25.7	27.9	30.4	32.2	33.8	**12.1**	**55.9%**	**1.6%**
Prince George's County	299.9	306.0	319.1	331.1	340.5	348.8	355.3	360.1	**60.2**	**20.1%**	**7.9%**
Fairfax County	376.7	386.0	403.0	425.5	446.0	461.9	475.4	483.2	**106.5**	**28.3%**	**13.9%**
City of Fairfax	8.6	9.2	9.9	10.4	10.7	10.8	11.2	11.5	**2.8**	**32.8%**	**0.4%**
City of Falls Church	4.6	5.0	5.9	6.4	6.9	7.1	7.3	7.4	**2.8**	**60.8%**	**0.4%**
Inner Suburbs	**1,037.3**	**1,066.7**	**1,114.8**	**1,171.3**	**1,221.0**	**1,266.6**	**1,302.2**	**1,325.2**	**287.8**	**27.7%**	**37.7%**
Loudoun County	87.5	102.3	112.7	127.4	141.8	150.2	155.0	158.3	**70.8**	**81.0%**	**9.3%**
Prince William County	119.0	133.3	152.5	167.9	181.1	192.0	200.8	207.6	**88.6**	**74.5%**	**11.6%**
City of Manassas	12.8	14.1	14.8	15.5	16.3	17.1	17.8	18.6	**5.7**	**44.8%**	**0.8%**
City of Manassas Park	4.2	5.0	5.3	5.4	5.4	5.4	5.4	5.4	**1.2**	**28.0%**	**0.2%**
Calvert County	29.9	32.0	34.3	36.0	37.4	38.3	39.3	40.3	**10.4**	**34.8%**	**1.4%**
Charles County	47.4	51.0	57.5	64.3	70.8	75.8	80.9	85.9	**38.5**	**81.1%**	**5.0%**
Frederick County	79.5	87.7	95.9	104.1	112.5	123.1	134.8	147.5	**68.0**	**85.6%**	**8.9%**
Stafford County	34.7	43.4	52.1	59.0	65.9	72.7	79.4	86.2	**51.5**	**148.7%**	**6.7%**
Outer Suburbs	**415.0**	**468.8**	**525.1**	**579.7**	**631.2**	**674.7**	**713.3**	**749.7**	**334.8**	**80.7%**	**43.8%**
Northern Virginia	**806.6**	**865.4**	**932.7**	**1,005.6**	**1,070.8**	**1,121.4**	**1,161.9**	**1,192.8**	**386.2**	**47.9%**	**50.5%**
Suburban Maryland	**804.2**	**837.2**	**883.8**	**933.5**	**978.1**	**1,024.1**	**1,063.3**	**1,096.8**	**292.6**	**36.4%**	**38.3%**
MSA REGIONAL TOTAL	**1,864.2**	**1,967.8**	**2,103.8**	**2,235.9**	**2,357.9**	**2,462.8**	**2,550.6**	**2,628.6**	**764.4**	**41.0%**	**100.0%**

Population

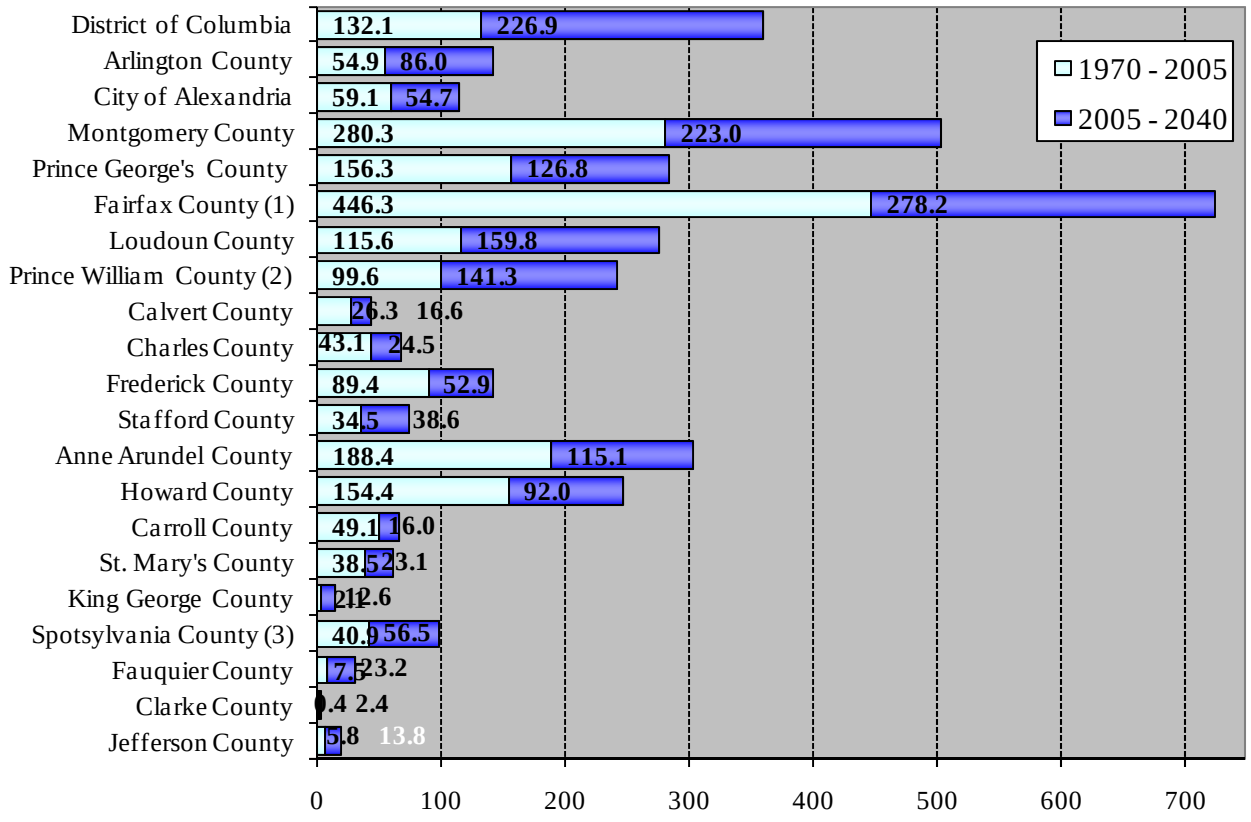
The region's population is expected to grow steadily through the forecast period, adding an average of approximately 51,000 persons a year. Population will be spurred by the long-term strength of the region's economy, high rates of in-migration and international immigration, and declines in average household size less rapid than previously anticipated. The region's population 65 years of age and older will more than double from 2000 to 2030, while the number of children will increase by about 30 percent during the period.

Most of the population growth will be in Montgomery, Fairfax, and Prince William counties. The outer jurisdictions will experience the fastest rates of growth, led by Stafford (139 percent), Frederick (84 percent), and Loudoun (78 percent) counties. The region's central jurisdictions will grow more slowly. In the City of Alexandria and Arlington County, population will increase by 39 and 27 percent, respectively. The District of Columbia will experience an end of short-term population loss and will grow by 31 percent during the forecast period.

Summary of Intermediate Population Forecasts Round 8.0 Cooperative Forecasts

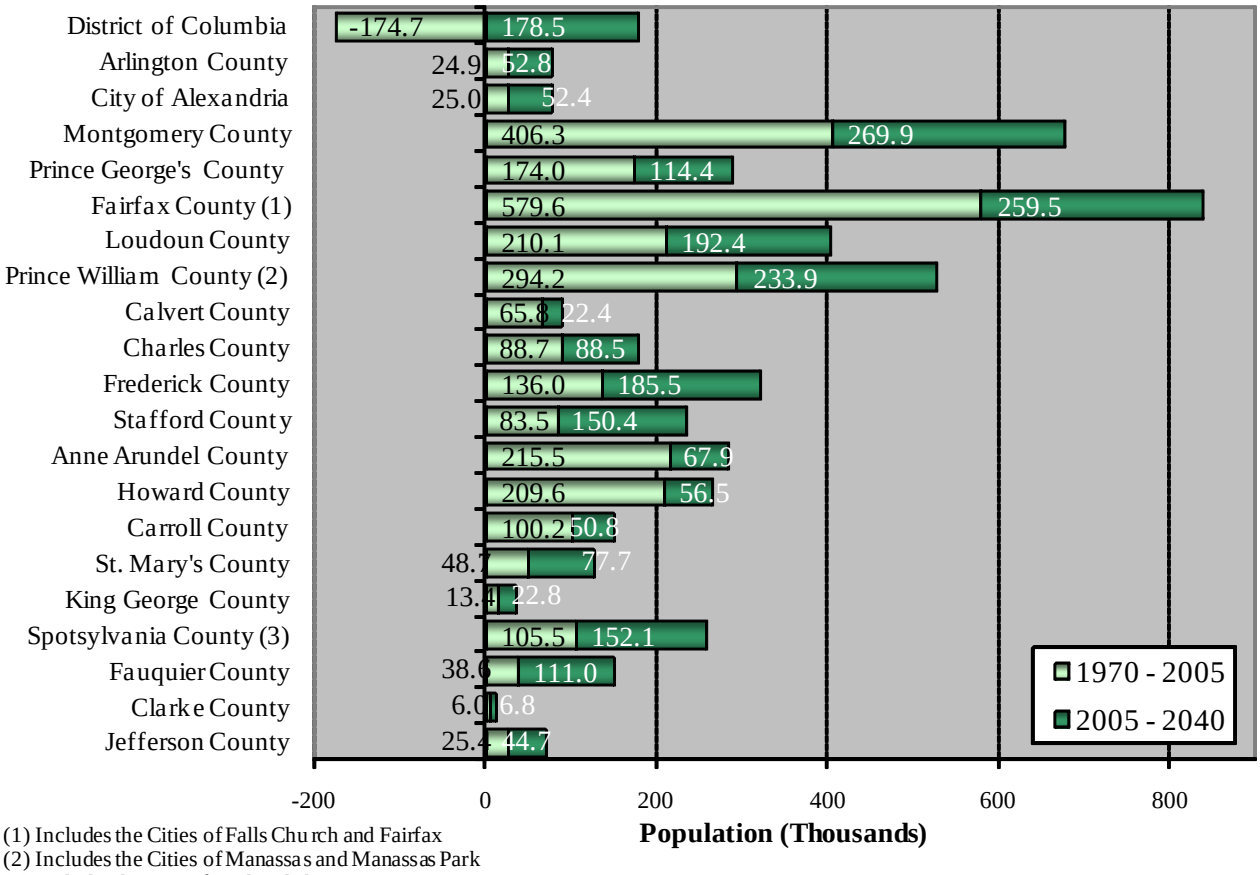
JURISDICTION	2005	2010	2015	2020	2025	2030	2035	2040	Number	% Change	Share
District of Columbia	582.0	605.5	651.5	669.8	693.8	711.9	730.4	760.5	178.5	30.7%	9.9%
Arlington County	199.2	212.3	224.8	235.5	241.4	247.3	249.6	252.0	52.8	26.5%	2.9%
City of Alexandria	135.9	145.0	149.1	158.5	166.9	173.3	180.9	188.3	52.4	38.6%	2.9%
Central Jurisdictions	917.1	962.8	1,025.4	1,063.8	1,102.1	1,132.5	1,160.8	1,200.8	283.7	30.9%	15.8%
Montgomery County	929.1	980.0	1,017.0	1,065.0	1,109.0	1,152.0	1,182.0	1,199.0	269.9	29.0%	15.0%
Rockville	59.6	62.5	67.3	71.8	74.5	77.6	80.8	83.9	24.3	40.8%	1.4%
Gaithersburg	57.2	58.3	62.0	67.2	72.1	76.7	81.0	84.6	27.5	48.0%	1.5%
Prince George's County	835.7	846.2	873.1	895.7	913.4	928.3	939.0	950.1	114.4	13.7%	6.4%
Fairfax County	1,033.6	1,056.4	1,094.1	1,147.2	1,195.1	1,232.2	1,263.4	1,281.3	247.6	24.0%	13.8%
City of Fairfax	22.4	23.9	25.6	26.9	27.2	27.5	28.3	29.2	6.7	30.0%	0.4%
City of Falls Church	10.6	11.3	12.9	13.9	14.7	15.1	15.5	15.7	5.1	48.1%	0.3%
Inner Suburbs	2,831.5	2,917.7	3,022.7	3,148.7	3,259.4	3,355.1	3,429.2	3,475.2	643.8	22.7%	35.8%
Loudoun County	247.3	290.0	318.7	357.7	397.1	419.0	431.2	439.7	192.4	77.8%	10.7%
Prince William County	354.8	396.5	443.6	479.4	510.2	535.6	556.2	572.5	217.7	61.3%	12.1%
City of Manassas	37.6	40.4	41.8	43.3	44.9	46.5	48.1	49.7	12.1	32.1%	0.7%
City of Manassas Park	12.9	15.0	15.8	16.5	16.7	16.8	16.9	17.0	4.2	32.3%	0.2%
Calvert County	86.5	91.7	96.5	100.5	103.3	105.1	107.0	108.9	22.4	25.9%	1.2%
Charles County	136.4	144.6	160.1	176.0	191.5	204.6	213.7	224.9	88.5	64.9%	4.9%
Frederick County	220.9	243.2	265.6	287.9	311.1	340.0	371.7	406.4	185.5	84.0%	10.3%
Stafford County	108.1	132.2	156.2	177.0	197.7	218.0	238.2	258.5	150.4	139.1%	8.4%
Outer Suburbs	1,204.4	1,353.6	1,498.1	1,638.3	1,772.4	1,883.6	1,982.9	2,077.6	873.1	72.5%	48.5%
Northern Virginia	2,162.5	2,322.9	2,482.4	2,656.0	2,811.9	2,931.3	3,028.3	3,103.8	941.3	43.5%	52.3%
Suburban Maryland	2,208.5	2,305.7	2,412.3	2,525.1	2,628.2	2,728.0	2,814.3	2,889.3	680.8	30.8%	37.8%
MSA REGIONAL TOTAL	4,953.0	5,234.2	5,546.2	5,850.8	6,134.0	6,371.2	6,572.9	6,753.6	1,800.6	36.4%	100.0%

Historic and Forecast Employment Growth for Jurisdictions in the TPB Modeled Region Area 1970-2005 & 2005-2040



(1) Includes the Cities of Falls Church and Fairfax
(2) Includes the Cities of Manassas and Manassas Park
(3) Includes the City of Fredericksburg

Historic and Forecast Population Growth for Jurisdictions in the TPB Modeled Area 1970-2005 & 2005-2040



(1) Includes the Cities of Falls Church and Fairfax
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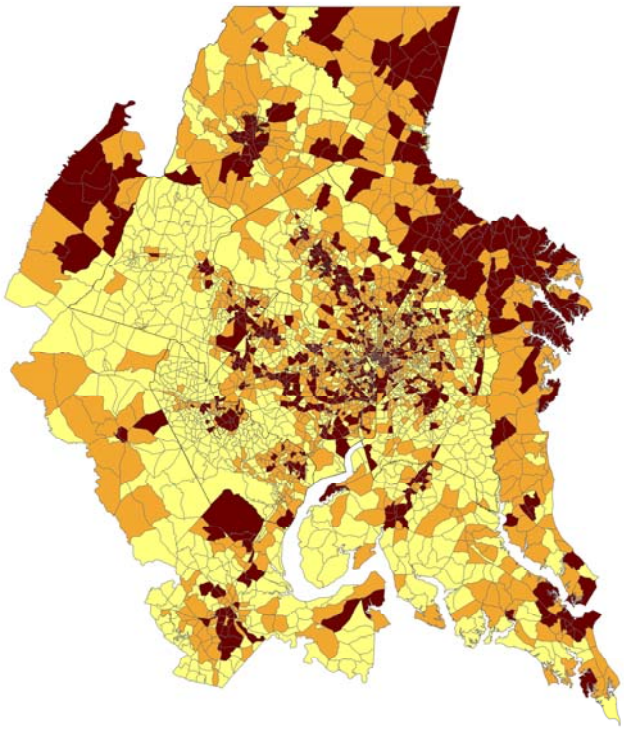
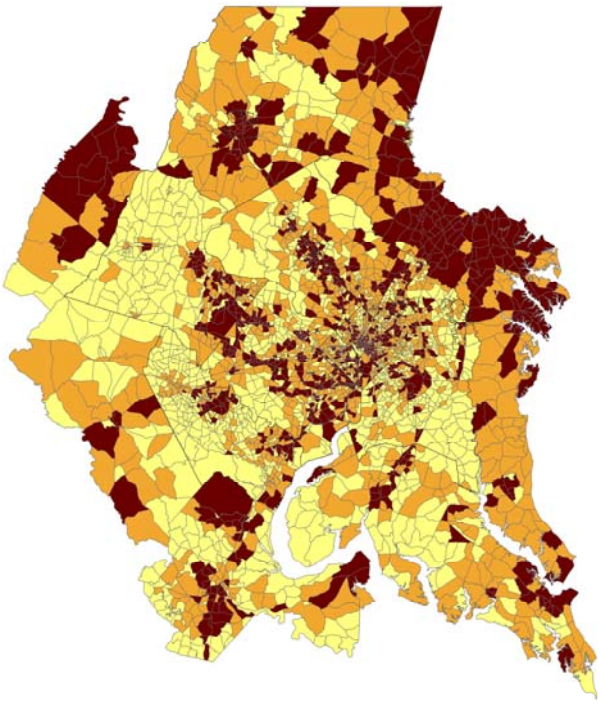
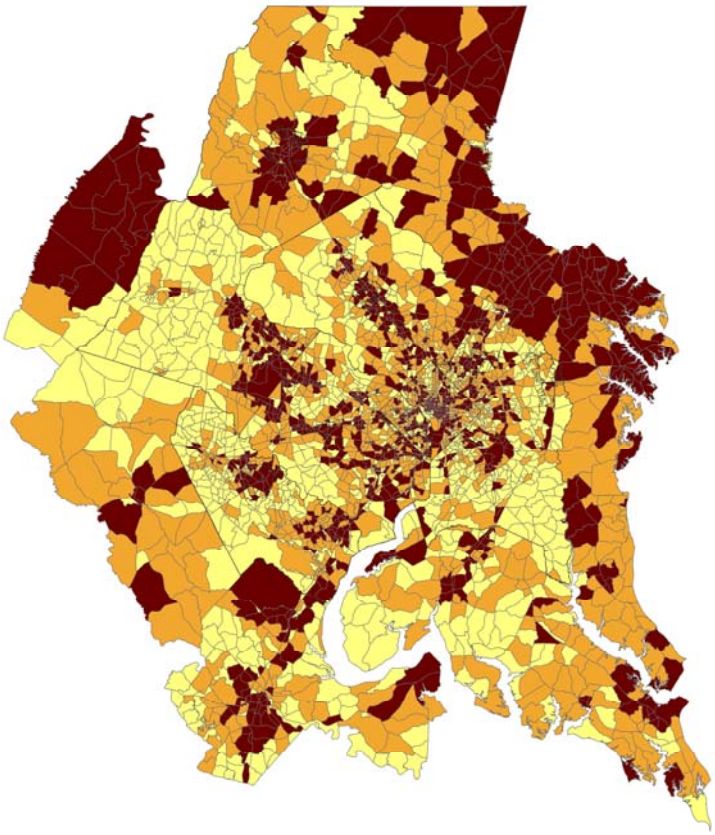
Employment 2005



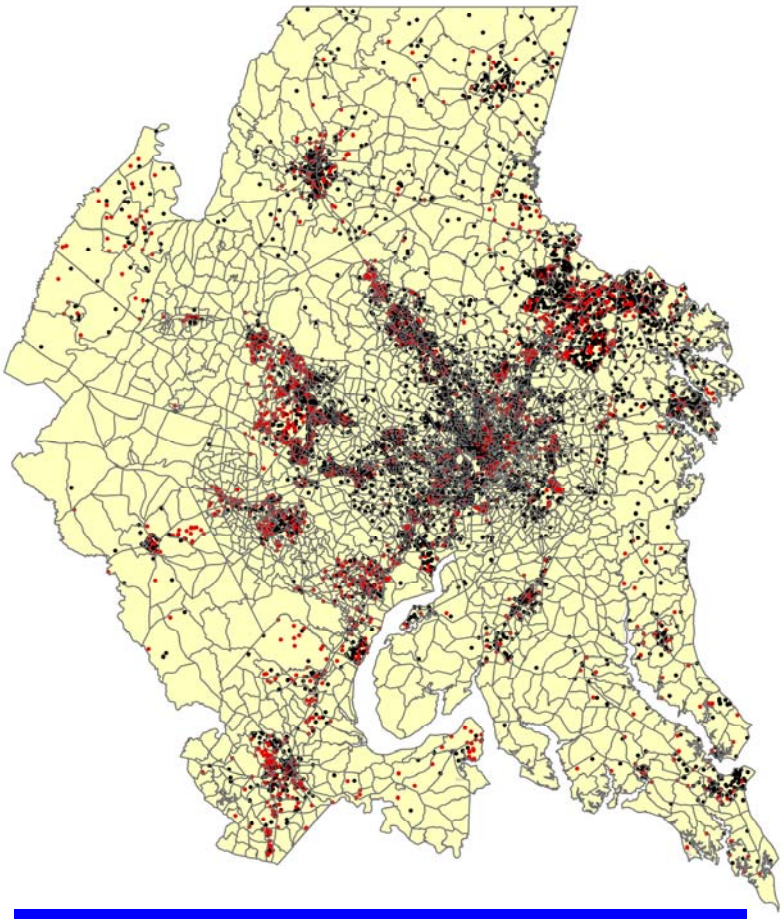
Employment 2020



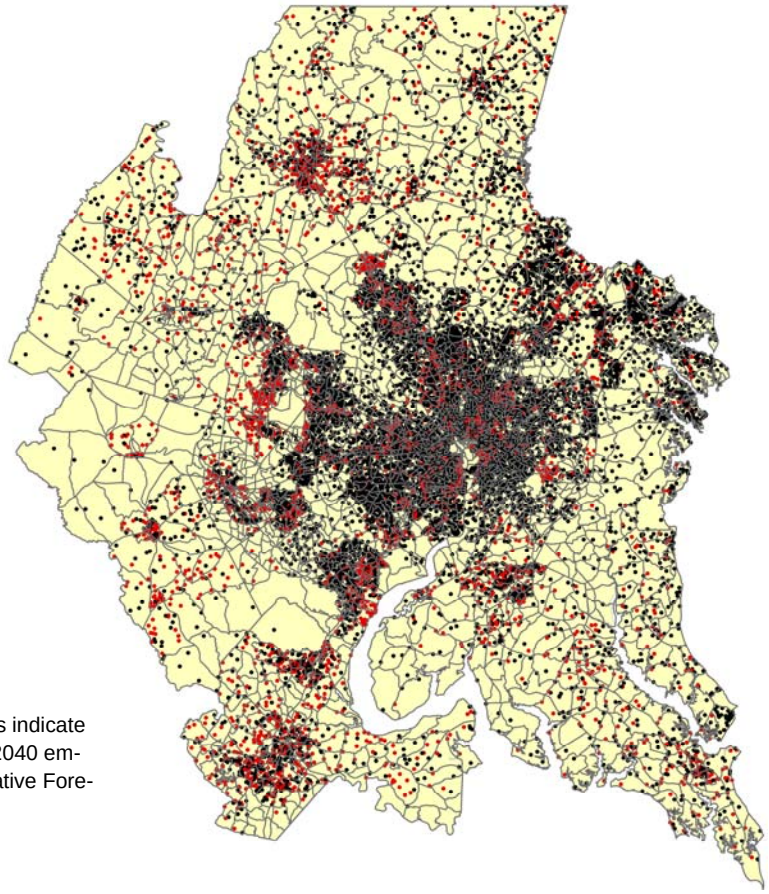
Employment 2040



Employment Growth Areas 2005-2040

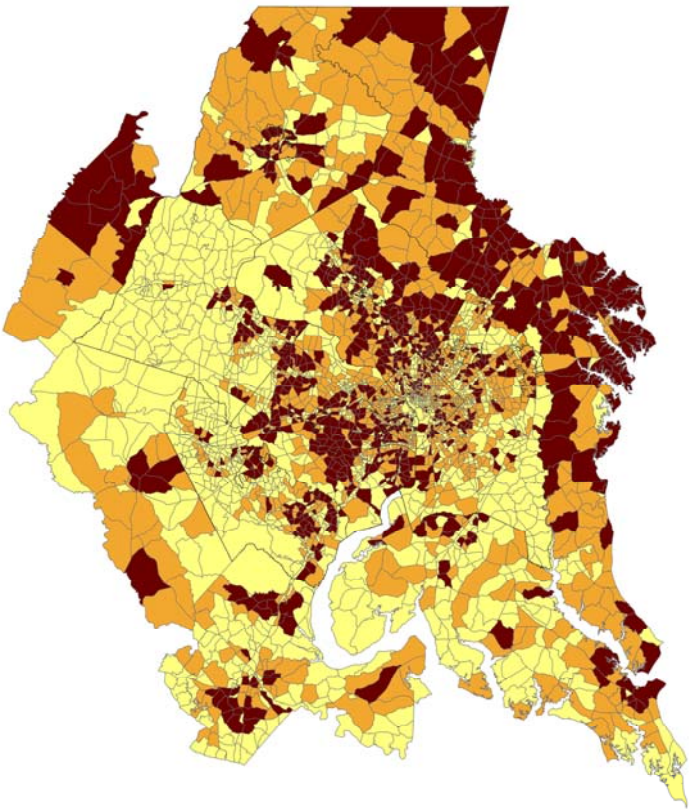


Population Growth Areas 2005-2040

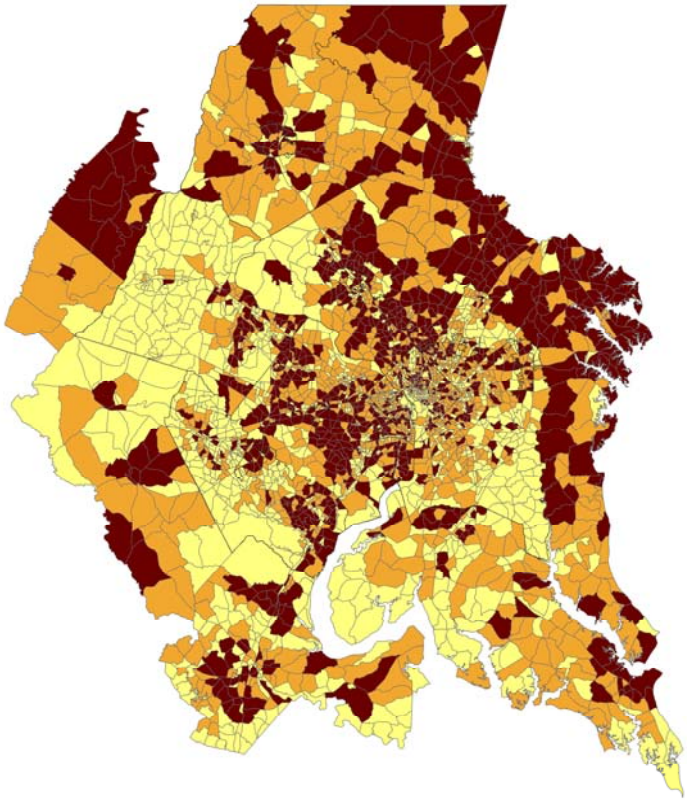


Note: One dot represents 500 jobs. Black dots indicate 2005 employment, red dots indicate 2005 to 2040 employment growth. Source: Round 8.0 Cooperative Forecasts

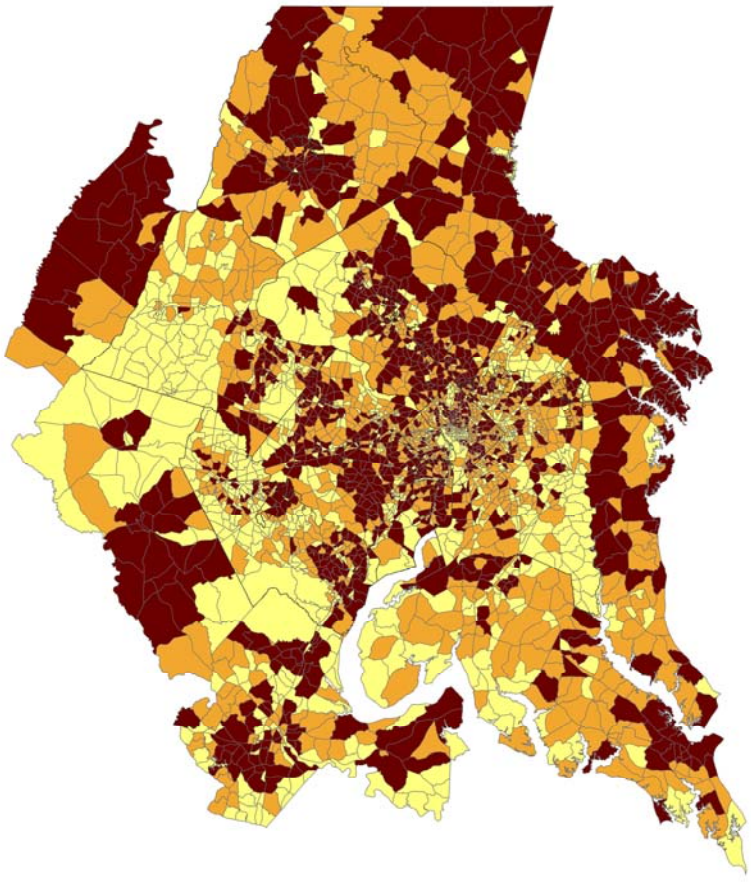
Population 2005



Population 2020

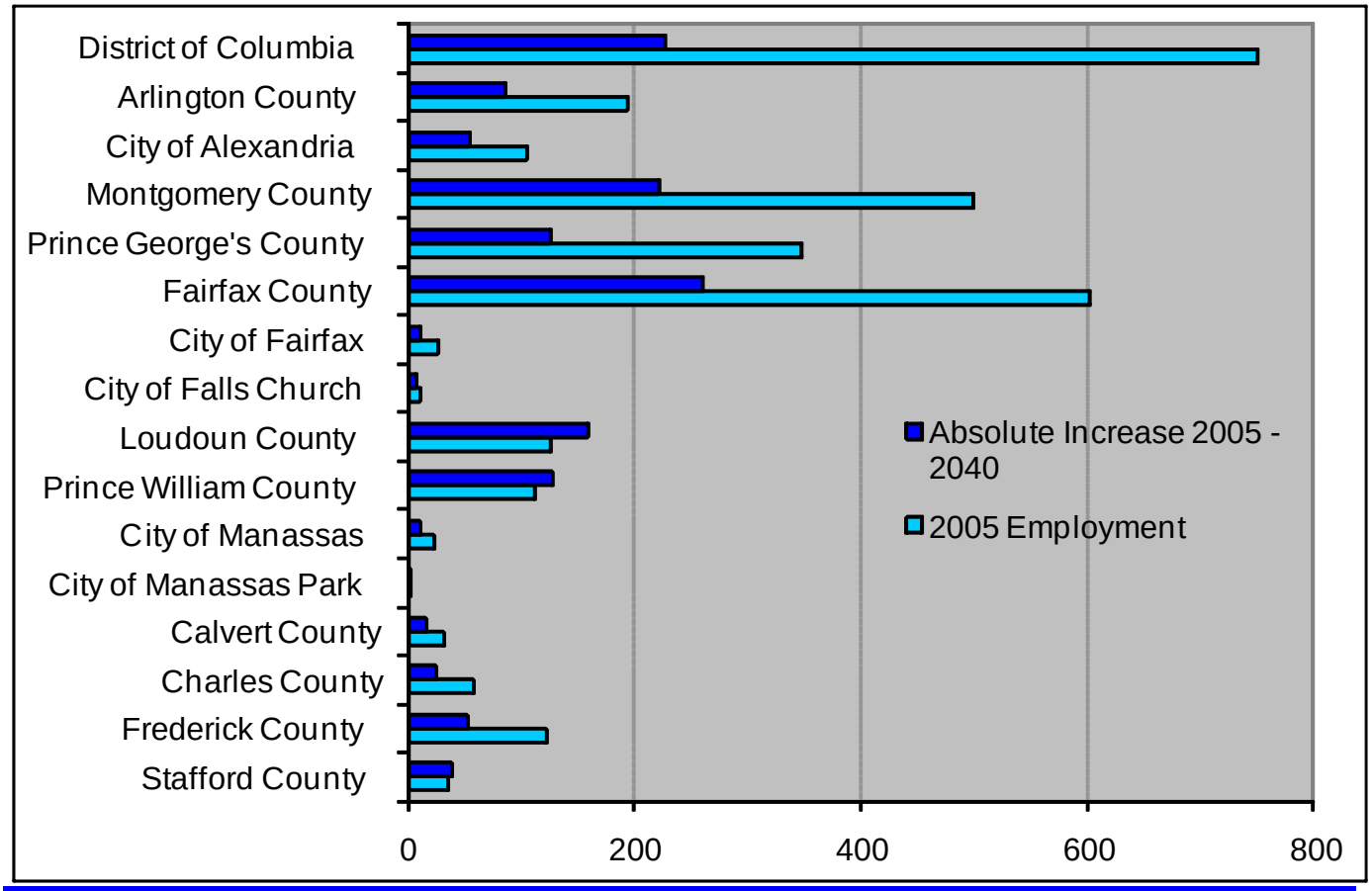


Population 2040

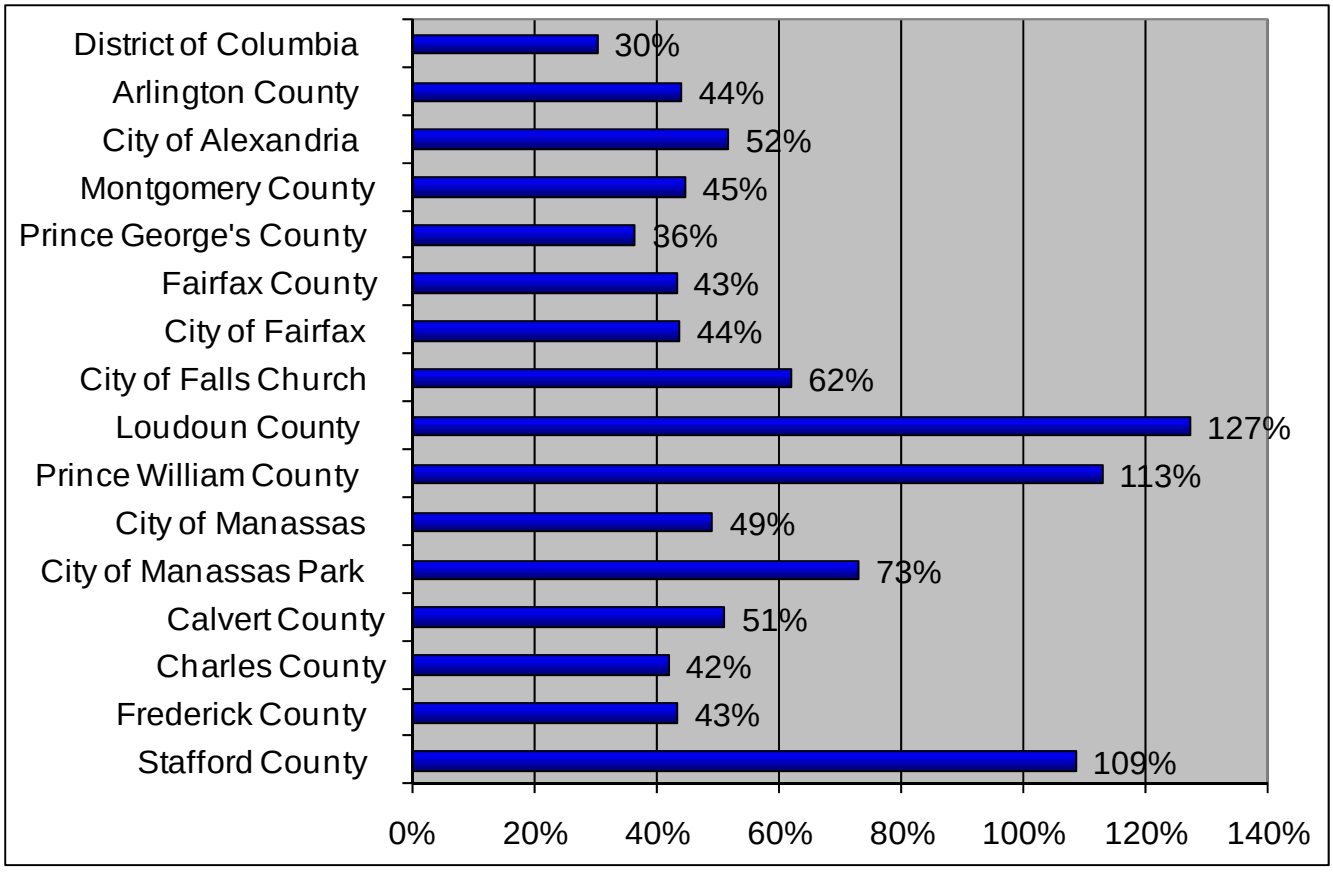


Employment Growth by Jurisdiction

2005 Employment and Forecast 2005 - 2040

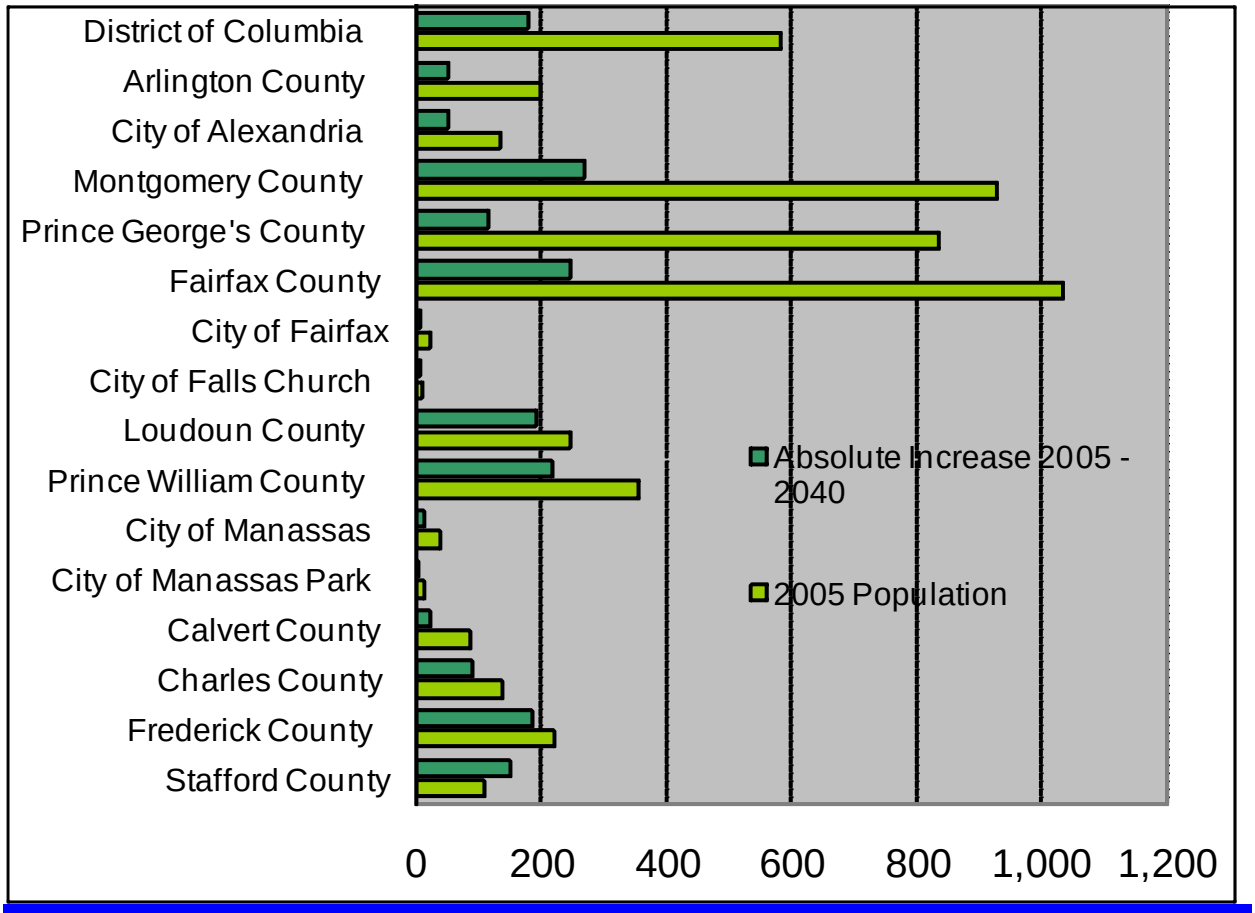


Percent Employment Growth by Jurisdiction

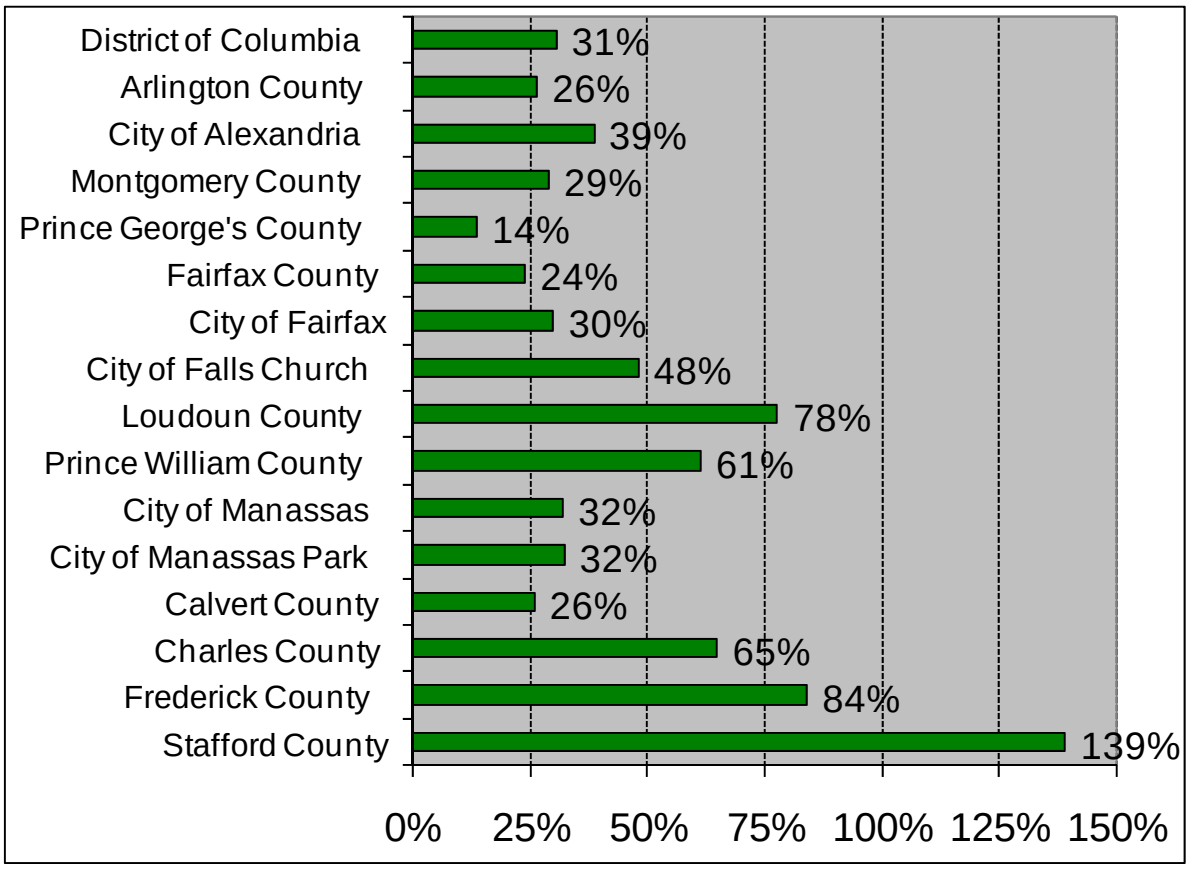


Population Growth by Jurisdiction

Forecast 2005—2040

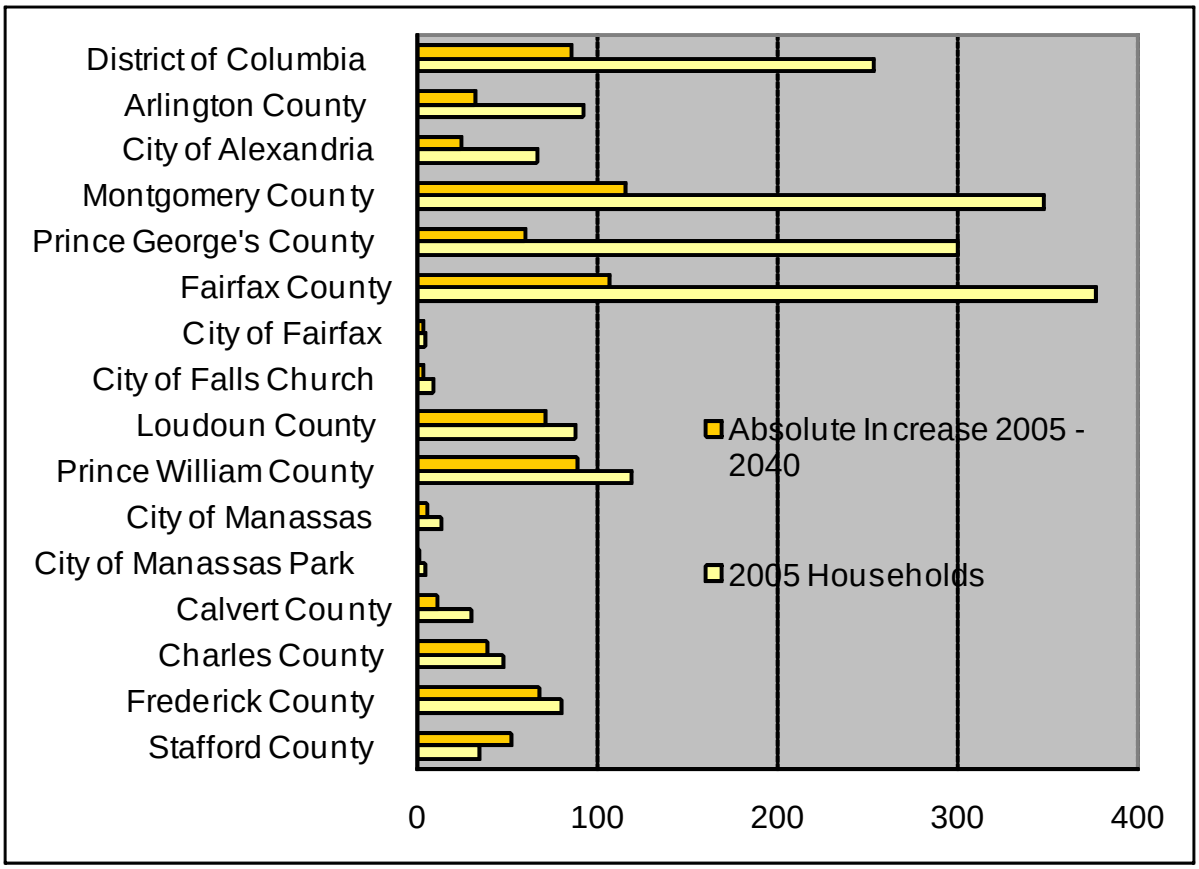


Percent Population Growth by Jurisdiction



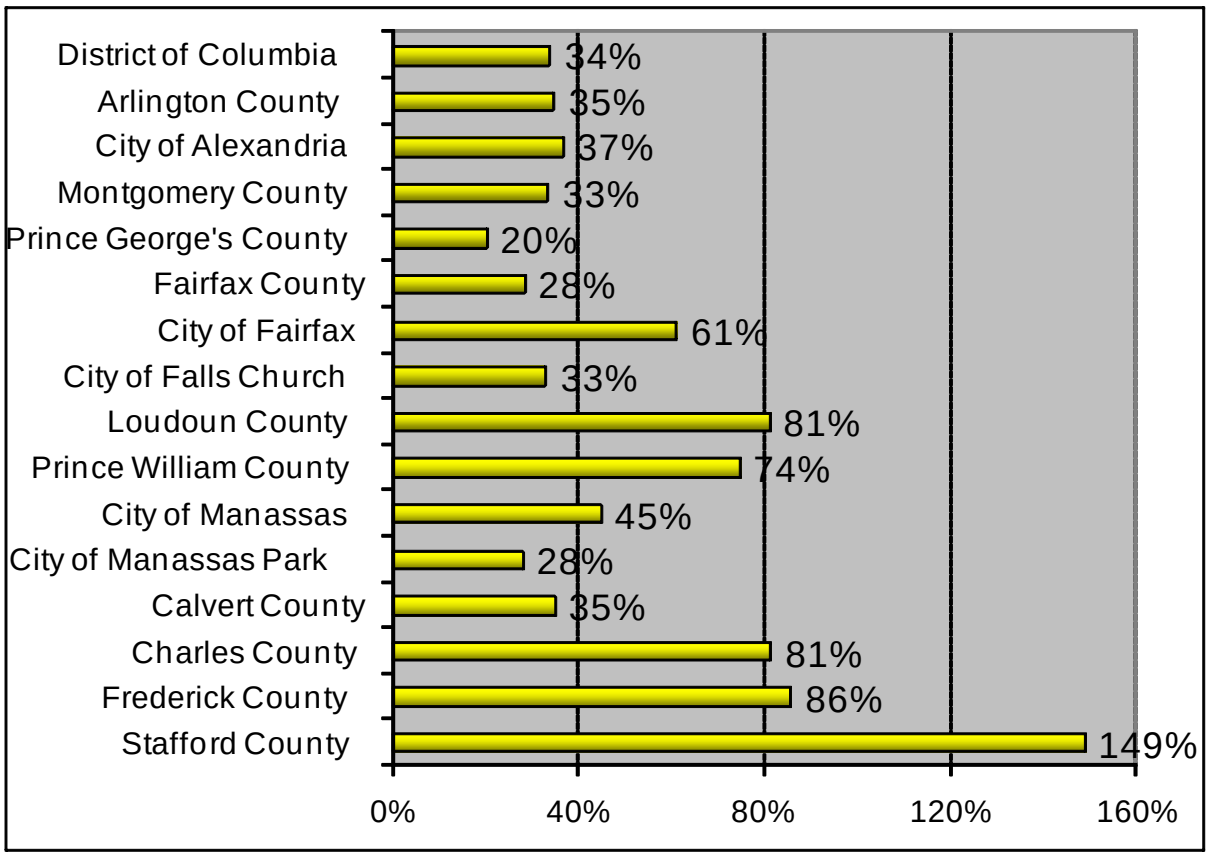
Household Growth by Jurisdiction

2005 Household and Forecast 2005 - 2040

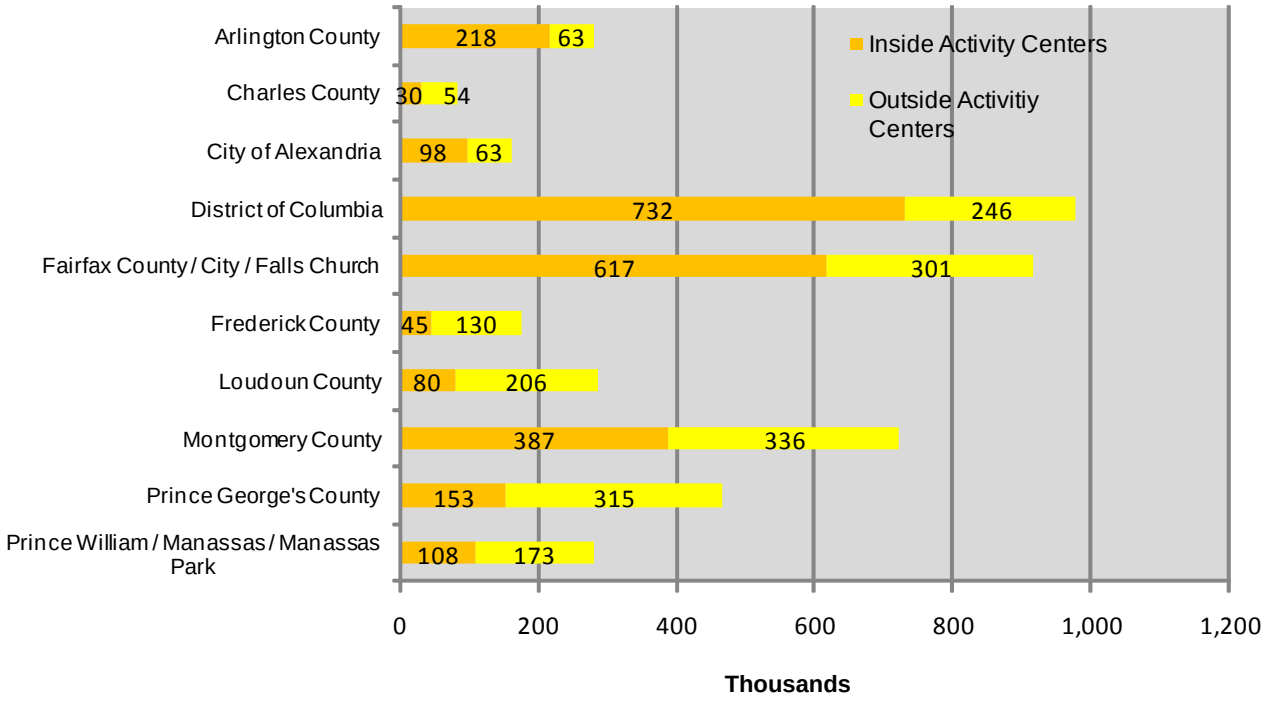


Percent Household Growth by Jurisdiction

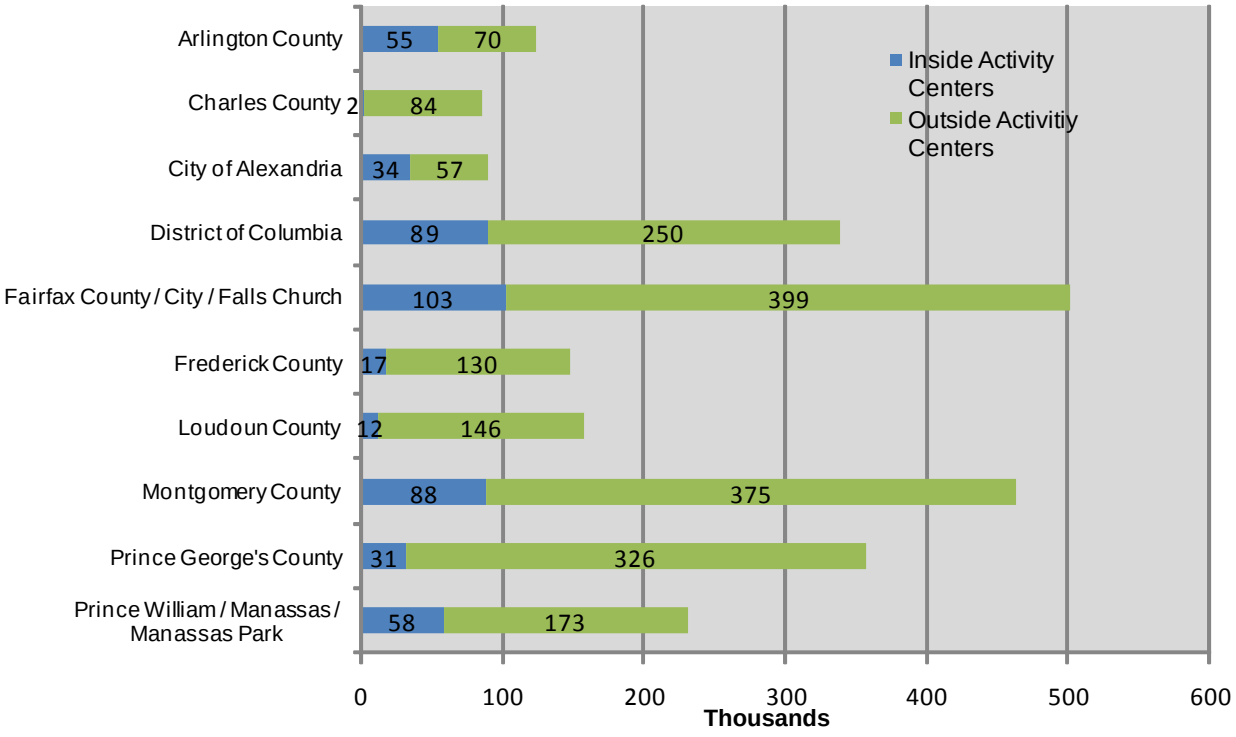
Forecast 2005—2040



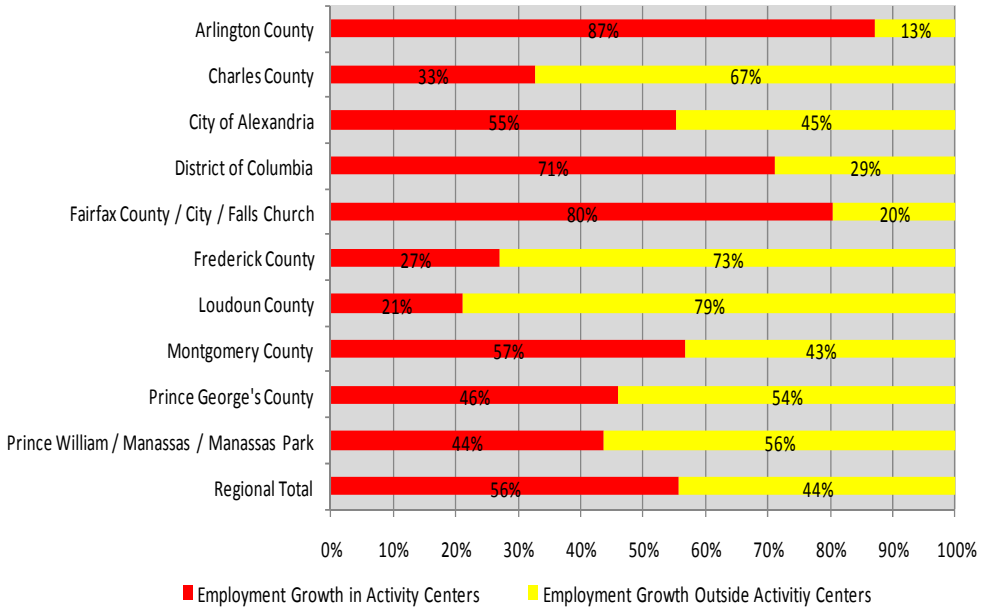
Round 8.0 Employment in Activity Centers by Jurisdiction in 2040



Round 8.0 Households in Activity Centers by Jurisdiction in 2040



Round 8.0 Percent of Employment Growth Between 2005 and 2040 Occurring in Activity Centers



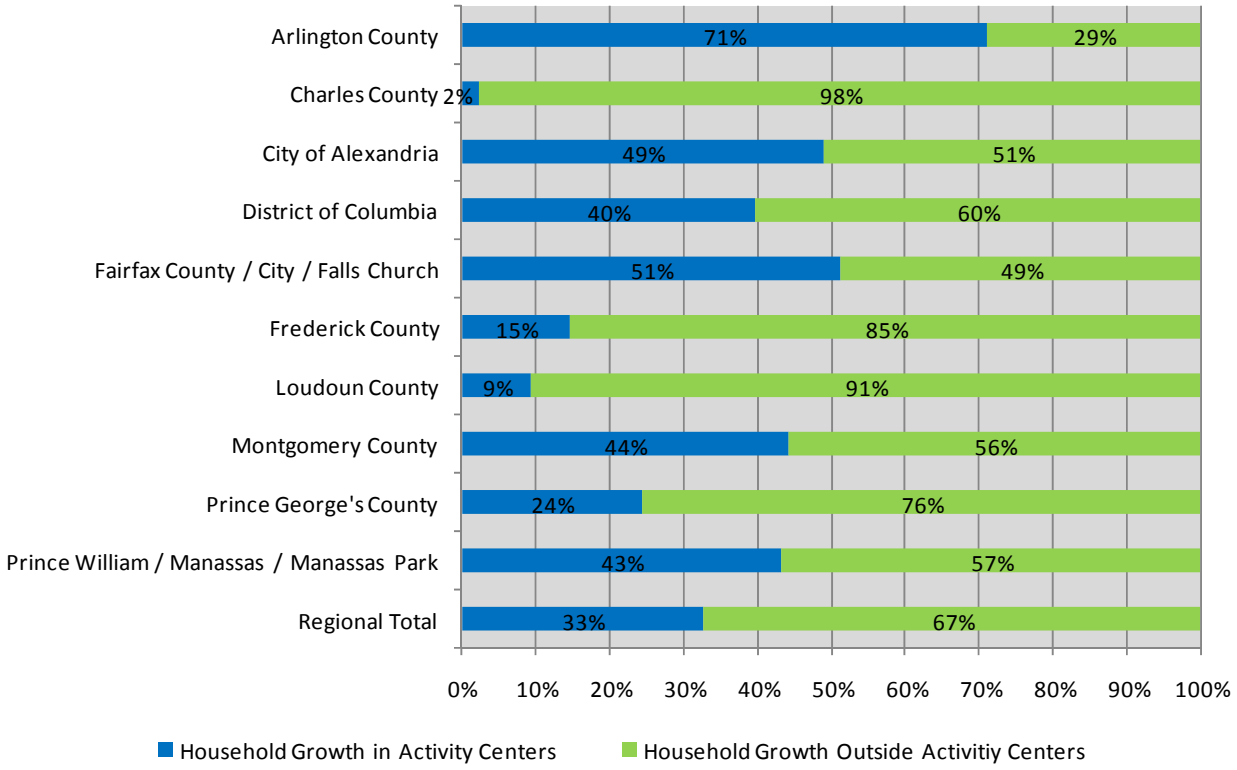
Regional Activity Centers

In 2005, 55 percent of the region's jobs were located in regional activity centers. During the 2005 to 2040 forecast period, 48 percent of job growth will be concentrated in activity centers. The highest percentages of jobs located in regional activity centers in 2040 will be found in the Central Jurisdictions; the City of Alexandria (61 percent), the District of Columbia (75 percent), and Arlington County (78 percent).

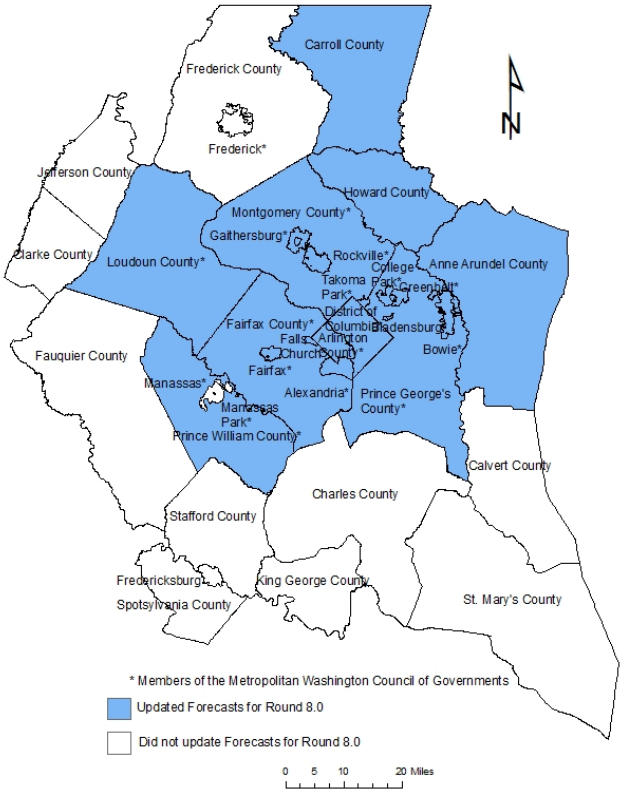
Households in regional activity centers account for 13 percent of the region's total households in 2040. From 2005 to 2040, 104 percent of the household growth is projected to occur in regional activity centers. In 2040 the highest percentages of households located in regional activity centers will be in the Central Jurisdictions; City of Alexandria (38 percent), Arlington County (44 percent), and the District of Columbia (26 percent).

Note: Regional Activity Centers analysis is based on center boundaries derived from the Round 7.0 Regional Activity Centers using the new 3722 TAZ System (December 2010.) Subject to change. For more information on regional activity centers go to http://www.mwcog.org/planning/planning/activitycenters/.

Round 8.0 Percent of Household Growth Between 2005 and 2040 Occurring in Regional Activity Centers



Jurisdictions Updating Their Forecasts for Round 8.0



The Metropolitan Washington Council of Governments (COG) is the regional organization of the Washington area's major local governments and their governing officials. COG works toward solutions to such regional issues as growth, transportation, inadequate housing, air pollution, water supply, water quality, economic development, and noise, and serves as the regional planning organization for the metropolitan Washington region.

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