Growth Trends to 2030:

Cooperative Forecasting in the Washington Region

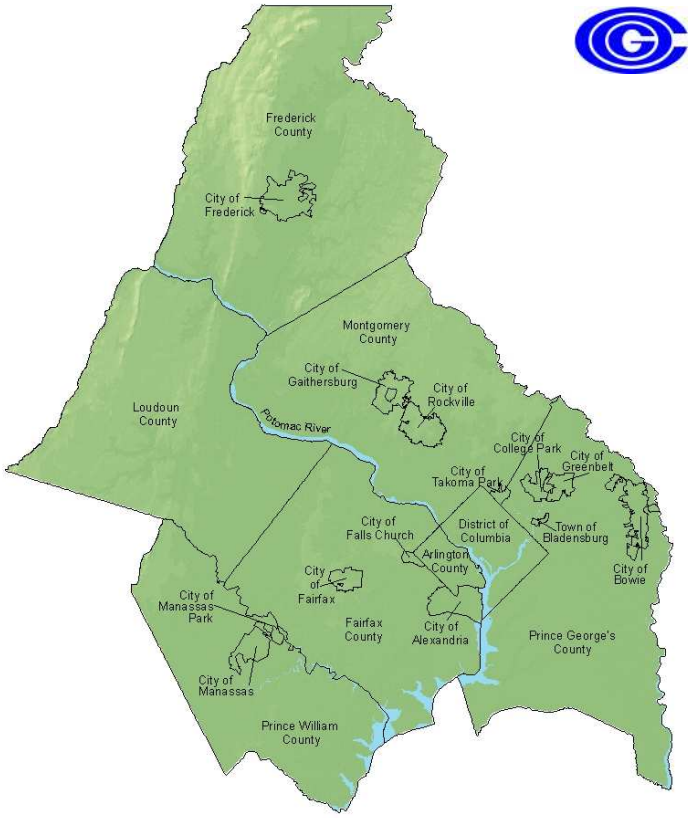
Fall 2006

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 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.

Membership of the Metropolitan Washington Council of Governments

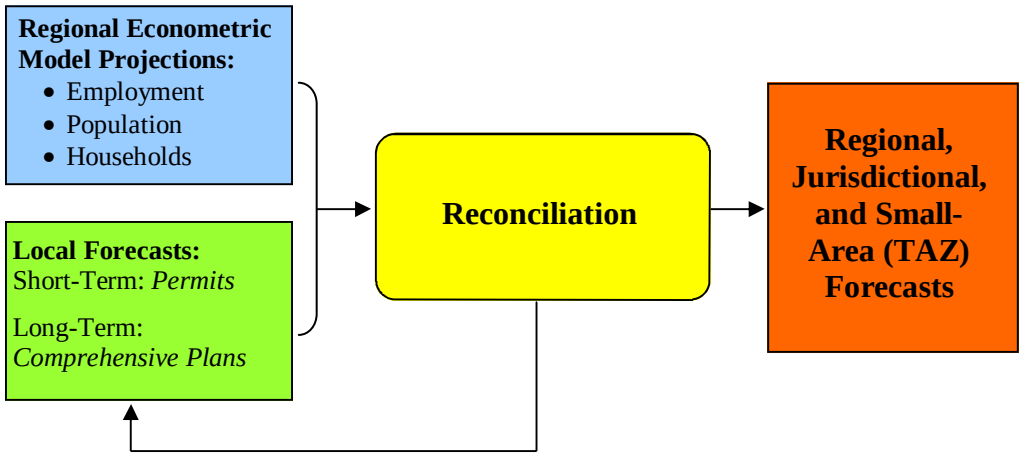


Process

The Cooperative Forecasts is a multi-stage, "top-down/bottom-up" process undertaken by COG's Planning Directors Technical Advisory Committee and the Cooperative Forecasting and Data Subcommittee that employs both a regional econometric model and local jurisdictional forecasts. The model projects employment, population, and households for the metropolitan Washington area based on national economic trends and local demographic factors. 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. 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.

COG Cooperative Forecasting Process



Process (continued)

Once the forecasts are reconciled and approved by the Cooperative Forecasting Subcommittee, they are presented and approved by the following committees at COG: the Planning Directors Technical Advisory Committee; the Metropolitan Development Policy Committee; and ultimately the COG Board of Directors, which is composed of local elected officials from throughout the region.

For each Round, forecasts are produced for three scenarios – high, intermediate, and low – reflecting the range of uncertainty about long-range market and development trends.

Recognizing that market conditions and policies may change, the subcommittee also reviews the forecasts annually, and allows local governments to make minor adjustments to reflect these changes. The forecasts may also be adjusted to reflect local governments' assessments of the likely housing and employment impacts due to major new transportation facilities. These updated forecasts are referred to as Round 6.3, Round 6.4a, etc. The forecasts in this report are Round 7.0a, intermediate series, as adopted by the COG Board in October 2006.

Coordination

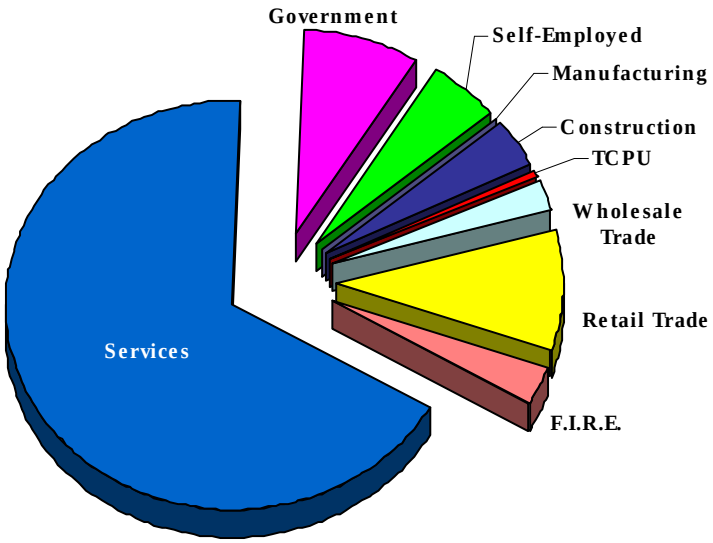
In February 2003, the COG Board of Directors adopted Resolution R8-03 which recommended that, beginning with Round 6.3 and for all subsequent rounds, the Cooperative Forecasts would be approved by the COG Board concurrently with the National Capital Region Transportation Planning Board's (TPB) approval of the results of the annual air quality conformity analysis of the Transportation Improvement Program (TIP) and the Financially-Constrained Long Range Plan (CLRP). The purpose of Resolution R8-03 is to further enhance coordination between regional land use and transportation planning in Metropolitan Washington.

In reviewing the Round 7.0 forecasts last year, the Planning Directors Technical Advisory Committee and the Metropolitan Development Policy Committee 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 7.0a Forecasts.

The Round 7.0a Forecasts reveal dramatic increases in employment, households, and population by 2030, the end of the forecast period. Under the intermediate scenario, regional employment would total more than 4.2 million jobs by 2030, a 39 percent increase over the 2005 employment base of 3.0 million jobs. Also, under this scenario, households would reach more than 2.5 million, a 35 percent increase.

After modest growth in the 1970s and early 1980s, the region's population grew rapidly in the late 1980s. During the 1990s, the region also experienced growth with the population reaching nearly 5.0 million residents in 2005. Regional population is anticipated to increase by 33 percent during the forecast period, reaching more than 6.6 million in 2030. This will add more than 1.6 million people to the region by 2030, which is slightly less than the amount of people added during the previous 30-year period.

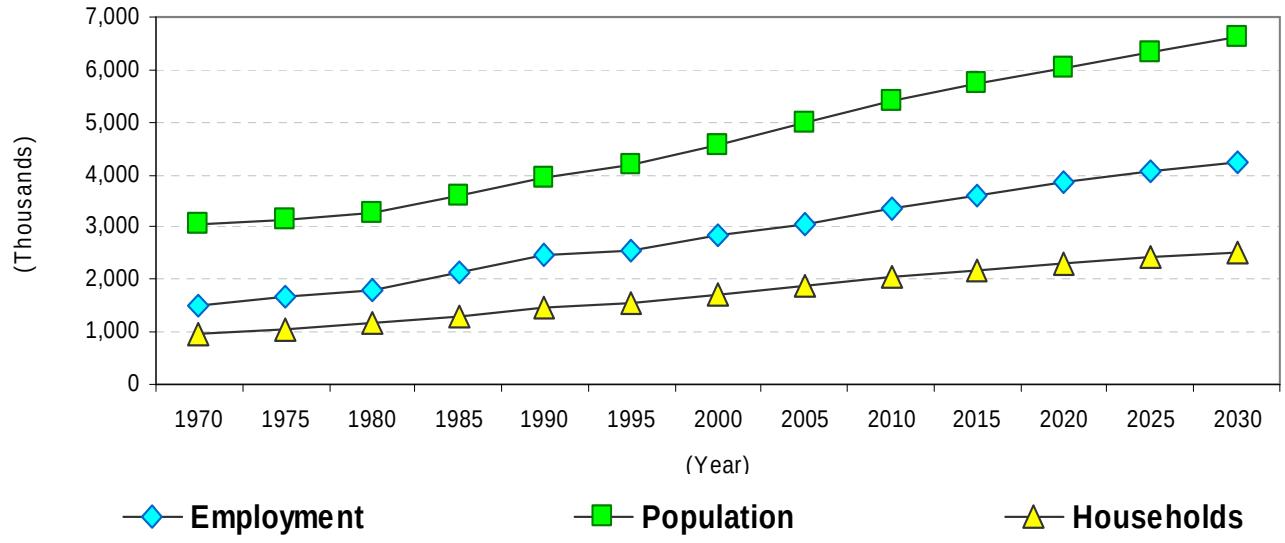
Two-thirds of All New Jobs in Services
(Industry Shares of 2005—2030 Growth)



Employment

Regional employment, projected to increase nearly 39 percent from 2005 to 2030, will experience a slightly higher rate of growth than both population and households. Employment growth would be the greatest during the 2005 to 2010 time period, when an average of 64,000 new jobs are anticipated per year– slightly 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 (39%), and the District of Columbia (15%).

Historic and Forecast Growth
Washington DC-MD-VA MSA[1]



Source: Round 7.0a Cooperative Forecasts
[1]Based on the 1983 definition of the Washington Metropolitan Statistical Area (MSA)

Employment (continued)

Fairfax, Prince George's, and Montgomery counties would add the largest numbers of new jobs to the region's employment base during the 2005 to 2030 forecast period, followed by Loudoun County and the District of Columbia.

Collectively, the region's inner suburbs will add the largest number of new jobs, 620,900, by 2030. However, 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 327,400 jobs to the region's base, and will grow their number of jobs 65 percent by 2030.

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 2030. Collectively, the central jurisdictions will account for 30 percent of regional employment.

Summary of Intermediate Employment Forecasts

Round 7.0a Cooperative Forecasts

(Thousands)

JURISDICTION	2000	2005	2010	2015	2020	2025	2030
District of Columbia	743.6	744.8	783.5	816.0	829.5	843.8	859.1
Arlington County	182.6	195.2	217.8	237.8	254.4	263.6	275.8
City of Alexandria	89.3	105.6	113.3	123.2	132.5	141.3	148.0
Central Jurisdictions	**1,015.5**	**1,045.6**	**1,114.5**	**1,177.0**	**1,216.5**	**1,248.7**	**1,282.9**
Montgomery County (1)	474.3	500.0	545.0	580.0	615.0	645.0	670.0
Rockville (2)	68.7	75.3	87.6	93.7	99.9	102.1	104.7
Prince George's County	338.3	358.7	390.0	424.0	460.9	501.0	544.7
Fairfax County (3)	577.0	600.5	683.9	729.6	774.5	814.2	844.6
City of Fairfax (4)	28.8	29.2	31.3	33.3	35.3	37.3	39.3
City of Falls Church	9.5	9.5	11.8	15.1	17.8	19.9	20.3
Inner Suburbs	**1,427.8**	**1,498.0**	**1,662.0**	**1,782.0**	**1,903.5**	**2,017.4**	**2,118.9**
Loudoun County	90.5	122.7	153.7	183.8	212.9	242.0	271.2
Prince William County	94.6	111.6	128.6	143.7	159.1	173.5	186.0
City of Manassas	22.5	23.3	24.6	26.2	26.3	26.6	26.8
City of Manassas Park	2.7	3.0	4.5	4.6	4.7	4.8	4.9
Calvert County (5)	22.8	29.4	32.9	33.7	34.5	35.1	35.6
Charles County (5)	41.9	56.5	62.9	64.8	66.8	67.9	69.1
Frederick County	96.3	122.2	142.4	151.5	158.3	163.5	167.3
Stafford County (6)	30.5	38.3	46.1	52.7	59.2	66.3	73.4
Outer Suburbs	**401.9**	**506.9**	**595.8**	**660.9**	**721.9**	**779.7**	**834.3**
Northern Virginia	**1,128.0**	**1,238.9**	**1,415.7**	**1,550.0**	**1,676.9**	**1,789.5**	**1,890.3**
Suburban Maryland	**973.6**	**1,066.8**	**1,173.2**	**1,253.9**	**1,335.5**	**1,412.5**	**1,486.6**
MSA REGIONAL TOTAL	**2,845.2**	**3,050.4**	**3,372.3**	**3,619.9**	**3,841.8**	**4,045.9**	**4,236.0**

(1) Forecasts for years 2000 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Forecasts for all years include Fairfax County Government employees working at the Fairfax County Public Safety Center.
(4) Forecasts for all years do not include Fairfax County Government employees (+/- 2,000 jobs) working at the Fairfax County Public Safety Center.
(5)Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.
(6) Source: Fredericksburg Area Metropolitan Planning Organization (FAMPO), CLRP 2030 Projections, March 2003, adjusted to common employment definition.

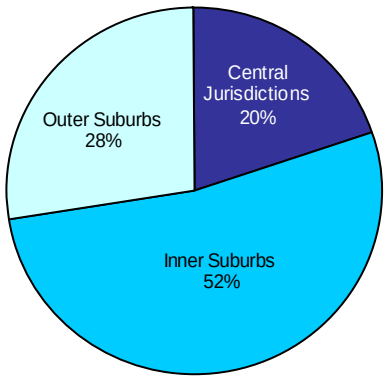
Households

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.

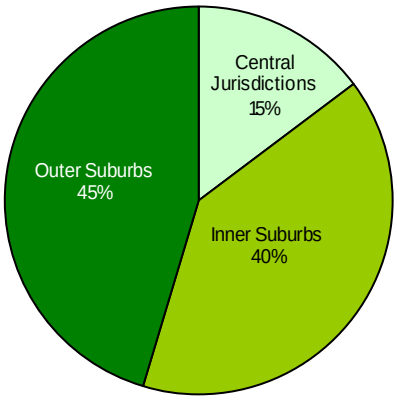
The addition of more than 661,000 households during the 2005 to 2030 forecast period reflects the growth in jobs and in-migration to the region. The largest number of new households will be in Fairfax, Montgomery, Loudoun, and Prince William counties, which collectively contribute more than half of the household growth during the forecast period.

Loudoun County will grow at a rate of 94 percent, the most rapidly of all jurisdictions, adding 82,600 households to the 2005 base of 87,500 households.

Regional Share of Employment Growth 2005 - 2030



Regional Share of Population Growth 2005 - 2030



Summary of Intermediate Population Forecasts
Round 7.0a Cooperative Forecasts
(Thousands)

JURISDICTION	2000	2005	2010	2015	2020	2025	2030
District of Columbia	572.1	577.5	608.7	641.9	673.0	712.0	733.8
Arlington County	190.3	198.3	212.2	223.3	233.1	241.6	249.6
City of Alexandria	128.3	135.9	143.9	149.4	153.2	159.5	169.4
Central Jurisdictions	**890.7**	**911.6**	**964.8**	**1,014.6**	**1,059.2**	**1,113.1**	**1,152.8**
Montgomery County (1)	873.3	942.0	1,000.0	1,040.0	1,077.1	1,115.3	1,155.8
Rockville (2)	47.4	59.9	65.3	68.3	68.8	69.0	69.5
Prince George's County	808.1	852.9	872.6	893.3	914.9	949.7	993.1
Fairfax County (3)	969.0	1,040.9	1,132.5	1,211.5	1,276.0	1,303.7	1,330.9
City of Fairfax (4)	21.4	22.1	23.5	25.0	25.6	25.7	26.5
City of Falls Church	10.4	10.6	12.3	13.9	14.7	14.9	15.4
Inner Suburbs	**2,682.1**	**2,868.5**	**3,040.9**	**3,183.7**	**3,308.3**	**3,409.3**	**3,521.8**
Loudoun County	169.6	247.3	318.1	379.6	422.9	454.9	480.6
Prince William County	281.3	352.1	416.8	463.4	489.9	524.9	556.3
City of Manassas	35.1	37.6	38.6	40.3	40.8	41.2	41.9
City of Manassas Park	10.3	12.9	15.0	15.8	16.5	16.7	16.8
Calvert County (5)	74.6	82.8	91.0	93.5	96.0	98.3	101.4
Charles County (5)	120.5	138.0	147.4	162.3	177.2	193.1	204.2
Frederick County	195.3	220.9	243.2	265.6	287.9	310.4	339.7
Stafford County (6)	92.4	107.1	121.7	136.4	151.0	174.5	195.8
Outer Suburbs	**979.2**	**1,198.6**	**1,391.9**	**1,556.8**	**1,682.2**	**1,814.0**	**1,936.7**
Northern Virginia	**1,908.1**	**2,164.7**	**2,434.7**	**2,658.5**	**2,823.8**	**2,957.7**	**3,083.2**
Suburban Maryland	**2,071.8**	**2,236.5**	**2,354.2**	**2,454.7**	**2,553.1**	**2,666.8**	**2,794.3**
MSA REGIONAL TOTAL	**4,551.9**	**4,978.7**	**5,397.6**	**5,755.1**	**6,049.8**	**6,336.4**	**6,611.3**

(1) Forecasts for years 2000 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Forecasts for all years include Fairfax County group quarters population at the Fairfax County Public Safety Center.
(4) Forecasts for all years do not include Fairfax County group quarters population (+/- 1,000 people) at the Fairfax County Public Safety Center and Fairfax County household population (+/-1,300 people) in TAZ 1609.
(5)Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.
(6) Source: Fredericksburg Area Metropolitan Planning Organization (FAMPO), CLRP 2030 Projections, March 2003. The estimates for 2010, 2020 and 2030 are control totals provided by the Virginia Employment Commission (VEC) and should only be used for transportation planning purposes. Incremental five-year estimates (2005, 2015, and 2025) have been developed by MWCOG for the purpose of transportation modeling and air quality analysis.

Summary of Intermediate Household Forecasts
Round 7.0a Cooperative Forecasts
(Thousands)

JURISDICTION	2000	2005	2010	2015	2020	2025	2030
District of Columbia	248.3	252.0	265.3	280.7	293.3	308.9	318.7
Arlington County	86.9	92.1	99.6	105.9	111.5	116.0	119.9
City of Alexandria	61.9	66.3	71.0	74.6	76.7	80.5	86.5
Central Jurisdictions	**397.1**	**410.5**	**435.8**	**461.2**	**481.4**	**505.4**	**525.0**
Montgomery County (1)	324.6	347.0	370.0	390.0	407.9	424.8	441.3
Rockville (2)	17.2	22.6	25.1	26.1	26.3	26.5	26.7
Prince George's County	288.6	308.5	321.8	334.6	346.9	360.8	378.1
Fairfax County	350.5	377.6	411.5	442.7	462.6	472.6	482.4
City of Fairfax (3)	8.2	8.5	9.0	9.6	9.9	10.1	10.5
City of Falls Church	4.5	4.6	5.5	6.5	6.9	7.0	7.3
Inner Suburbs	**976.3**	**1,046.2**	**1,117.8**	**1,183.5**	**1,234.1**	**1,275.3**	**1,319.7**
Loudoun County	59.9	87.5	112.7	134.4	149.7	161.0	170.1
Prince William County	94.6	117.9	140.9	158.5	169.4	181.2	193.1
City of Manassas	11.8	12.8	13.4	13.7	13.9	14.1	14.4
City of Manassas Park	3.3	4.2	5.0	5.3	5.4	5.4	5.4
Calvert County (4)	25.4	28.3	31.0	32.7	34.3	35.1	36.2
Charles County (4)	41.7	48.2	52.2	57.9	63.7	72.3	76.9
Frederick County	70.1	79.5	87.7	95.9	104.1	112.5	123.1
Stafford County (5)	30.2	36.3	40.9	46.4	51.9	59.8	68.4
Outer Suburbs	**336.9**	**414.7**	**483.9**	**544.8**	**592.4**	**641.4**	**687.6**
Northern Virginia	**711.6**	**807.9**	**909.5**	**997.6**	**1,057.7**	**1,107.7**	**1,157.9**
Suburban Maryland	**750.3**	**811.4**	**862.7**	**911.1**	**956.9**	**1,005.5**	**1,055.7**
MSA REGIONAL TOTAL	**1,710.3**	**1,871.3**	**2,037.5**	**2,189.5**	**2,307.9**	**2,422.1**	**2,532.3**

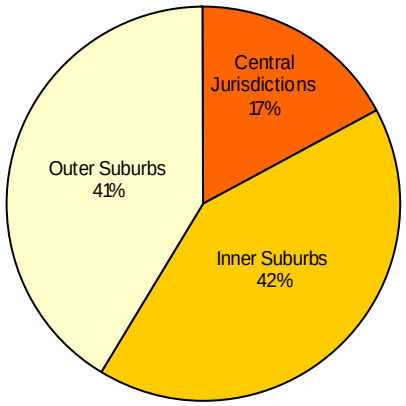
(1) Forecasts for years 2000 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Forecasts for all years do not include Fairfax County households (+/- 500 households) in TAZ 1609.
(4)Tri-County Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County, Charles County and St. Mary's County.
(5) Source: Fredericksburg Area Metropolitan Planning Organization (FAMPO), CLRP 2030 Projections, March 2003.

Population

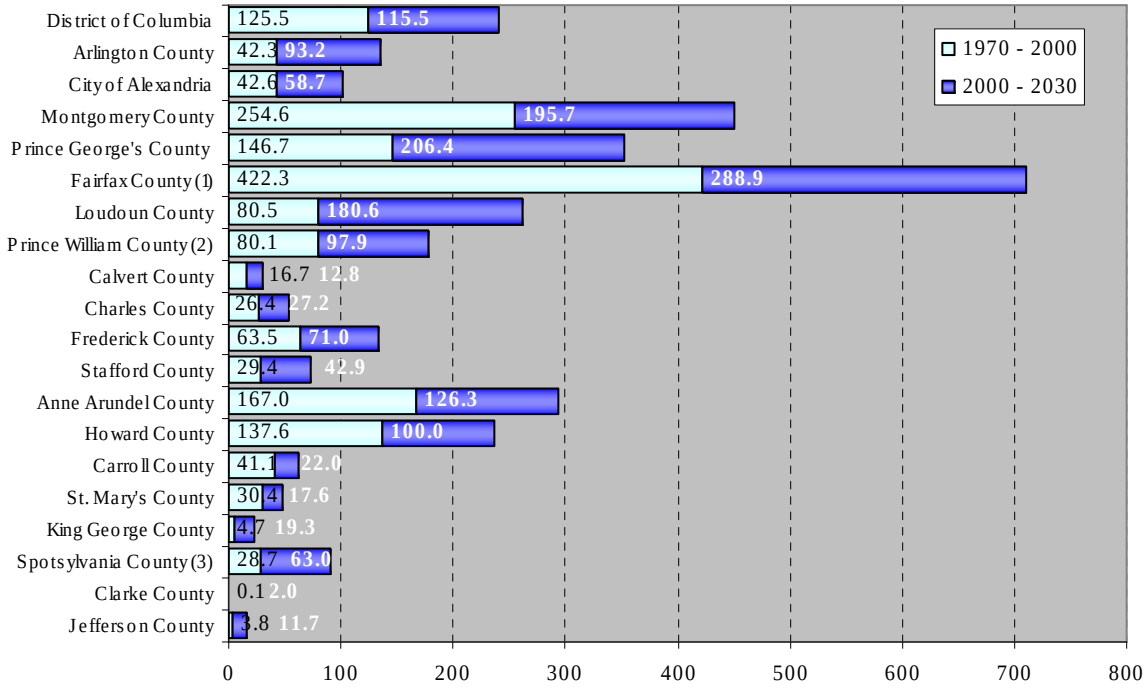
The region's population is expected to grow steadily through the forecast period, adding an average of approximately 65,000 persons a year. Population will be spurred by the long-term strength of the region's economy, high rates of in-migration and international immigration, and declines in average household 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 Fairfax, Loudoun, Montgomery and Prince William counties. However, the outer jurisdictions will experience the fastest rates of growth, led by Loudoun (94 percent), Stafford (83 percent), and Prince William (58 percent) counties. The region's central jurisdictions will grow more slowly. In Arlington County and the City of Alexandria, population will increase by 26 and 25 percent, respectively. The District of Columbia will experience an end of short-term population loss and will grow by 27 percent during the forecast period.

Regional Share of Household Growth 2005 - 2030

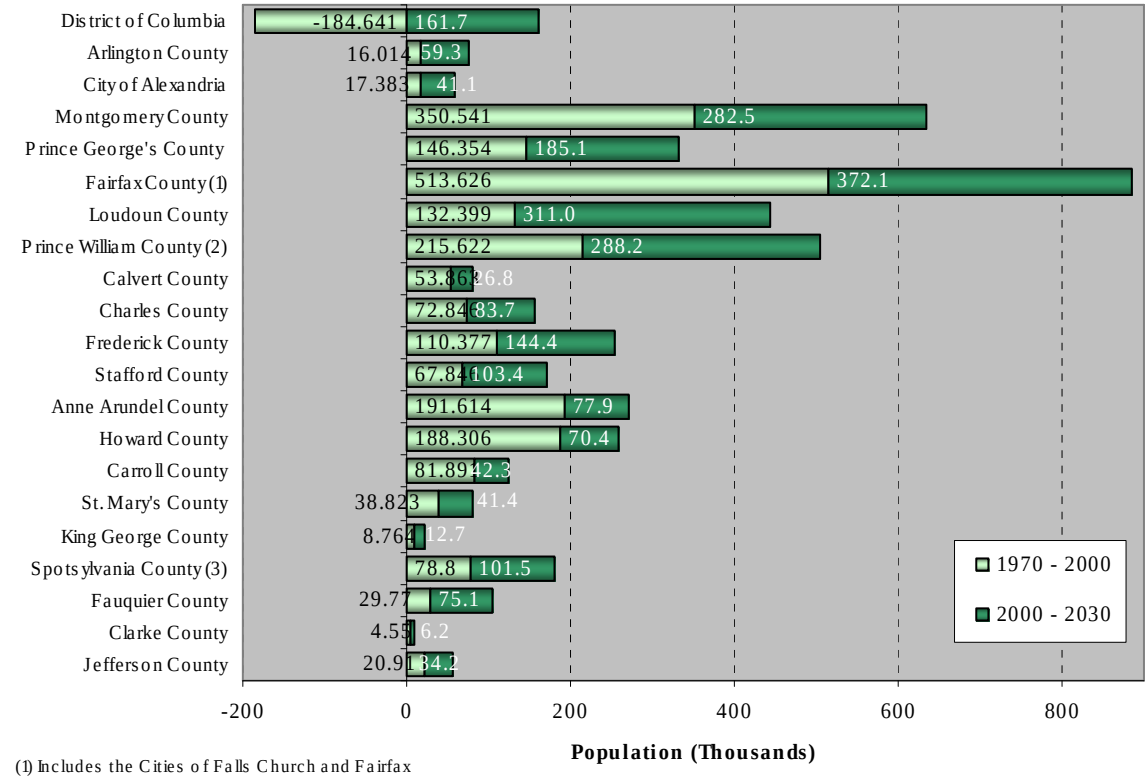


Historic and Forecast Employment Growth for Jurisdictions in the TPB Modeled Area 1970 - 2000 & 2000 - 2030



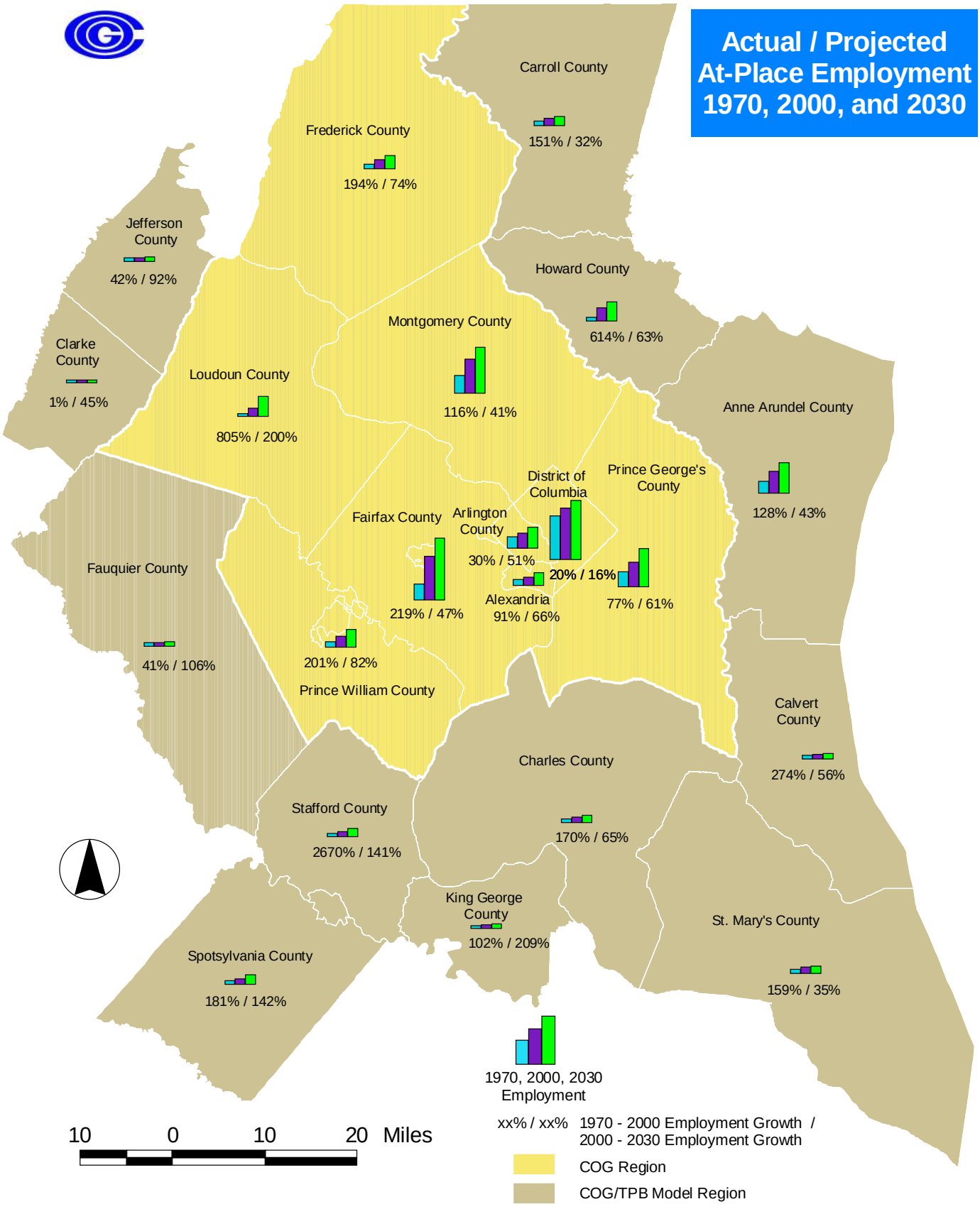
(1) Includes the Cities of Falls Church and Fairfax
(2) Includes the Cities of Manassas and Manassas Park
(3) Includes the City of Fredericksburg

Historic and Forecast Population Growth for Jurisdictions in the TPB Modeled Area 1970 - 2000 & 2000 - 2030



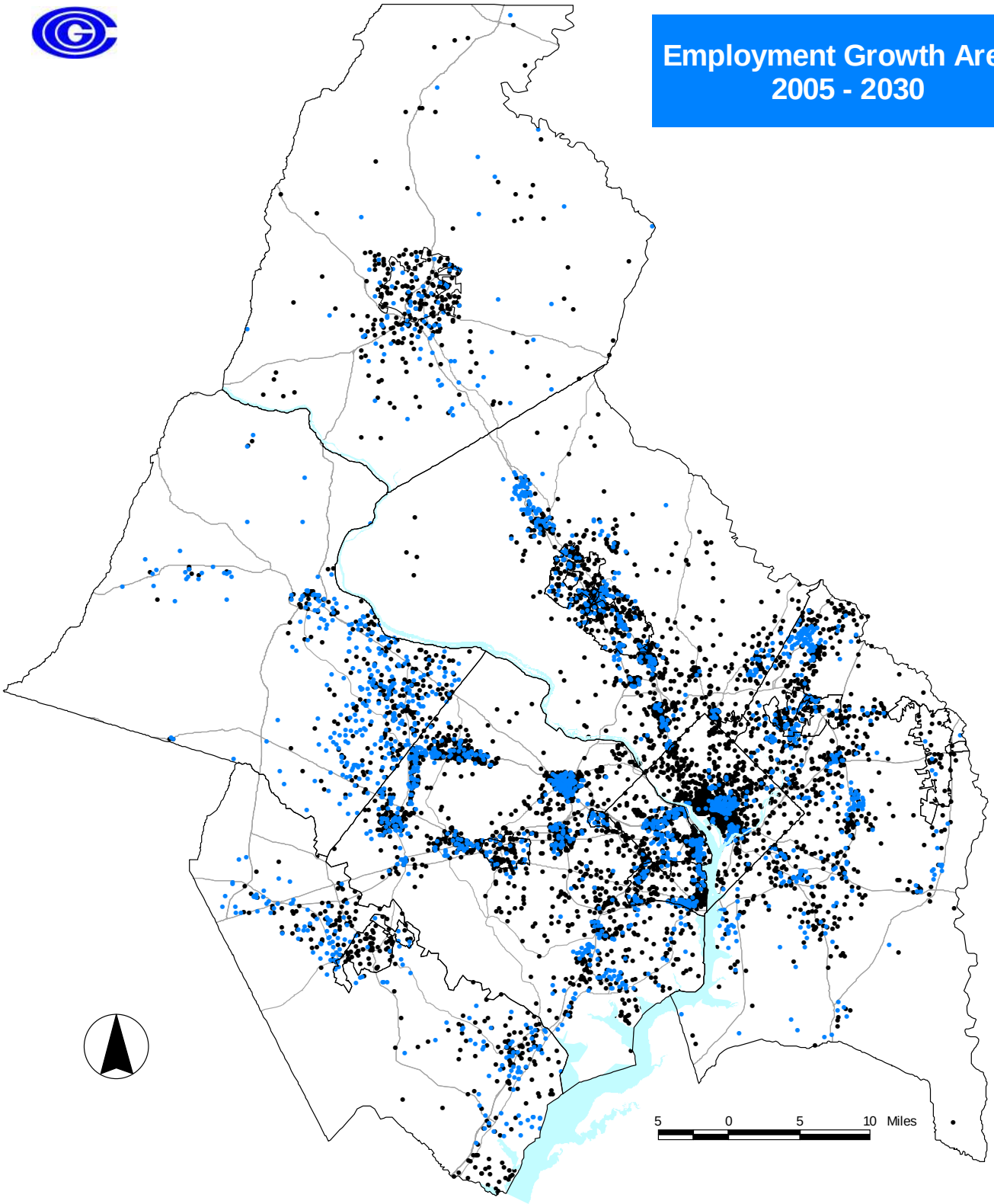
(1) Includes the Cities of Falls Church and Fairfax
(2) Includes the Cities of Manassas and Manassas Park
(3) Includes the City of Fredericksburg

Actual / Projected At-Place Employment 1970, 2000, and 2030



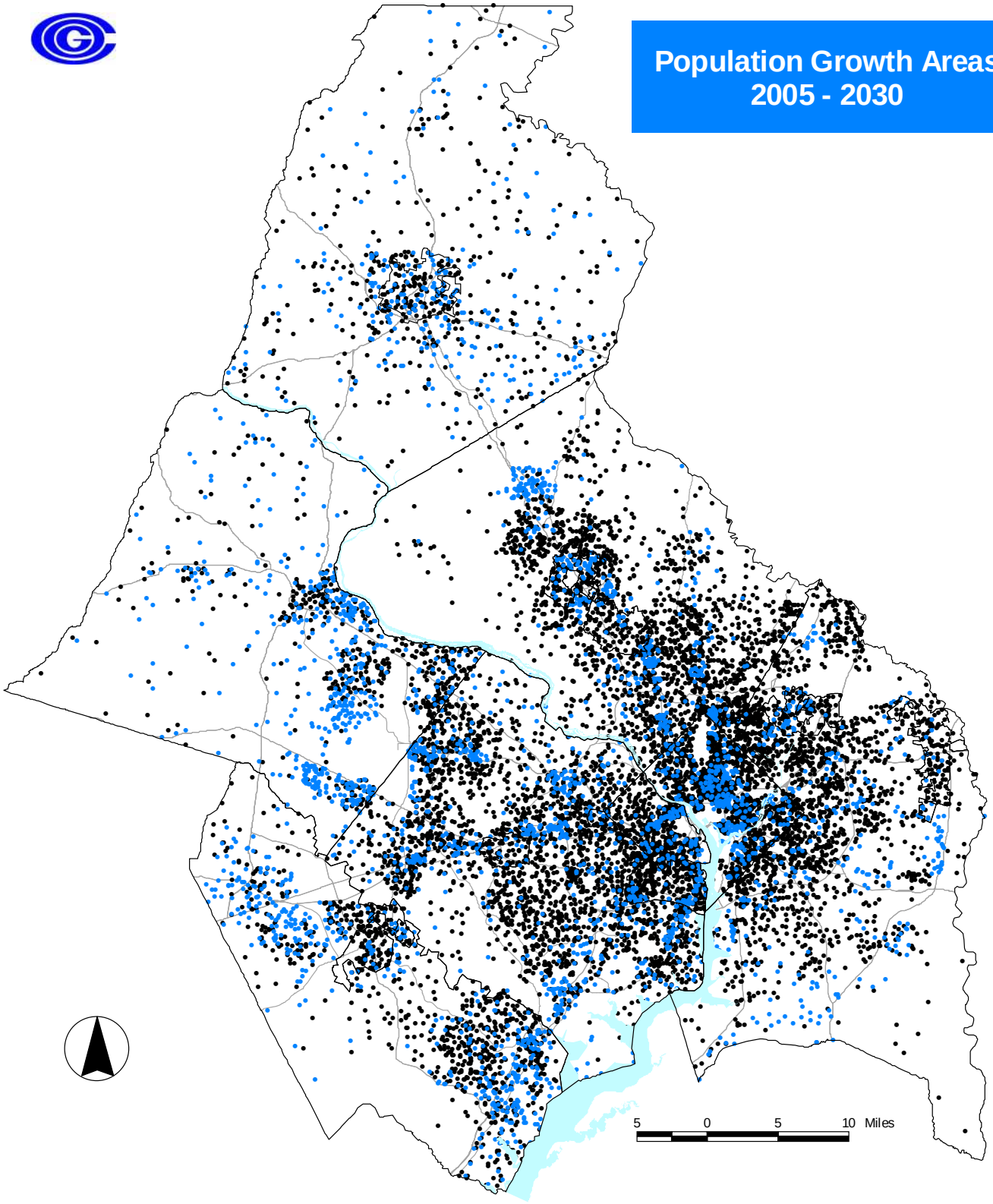
Source: Round 7.0a Cooperative Forecasts
Notes: The southern portion of Spotsylvania County is not included in the TPB model area. Independent cities in Virginia are included in county totals.

Employment Growth Areas 2005 - 2030



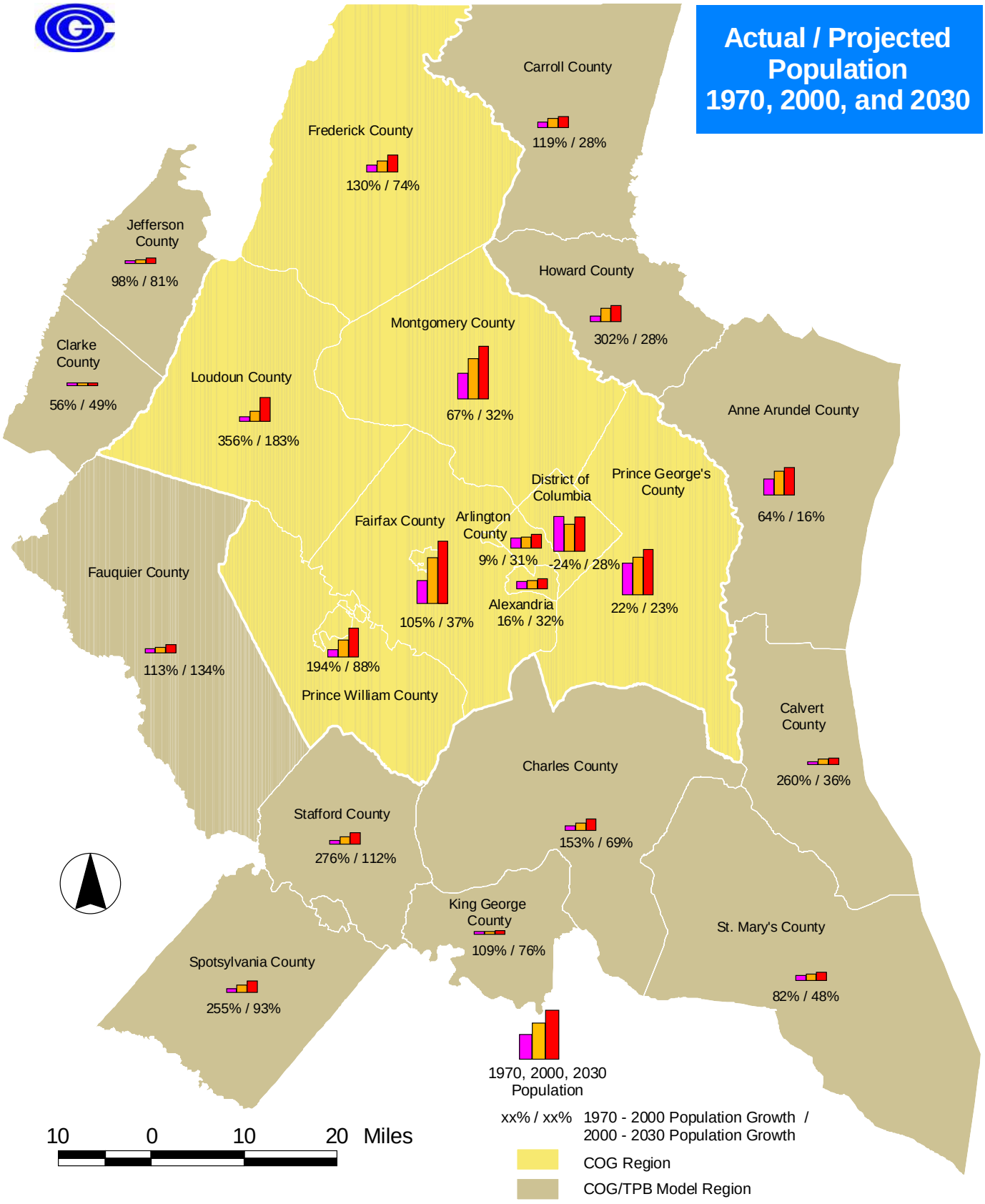
Note: One dot represents 500 jobs. Black dots indicate 2005 employment, blue dots indicate 2005 to 2030 employment growth.
Source: Round 7.0a Cooperative Forecasts

Population Growth Areas 2005 - 2030



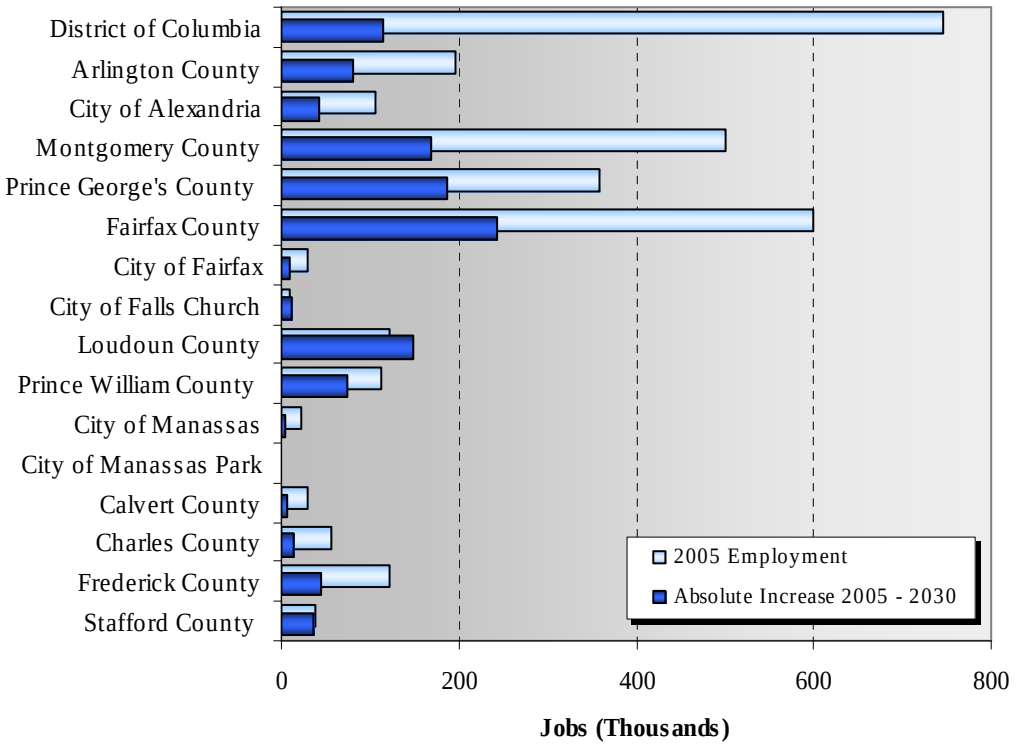
Note: One dot represents 500 people. Black dots indicate 2005 population, blue dots indicate 2005 to 2030 population growth.
Source: Round 7.0a Cooperative Forecasts

Actual / Projected Population 1970, 2000, and 2030

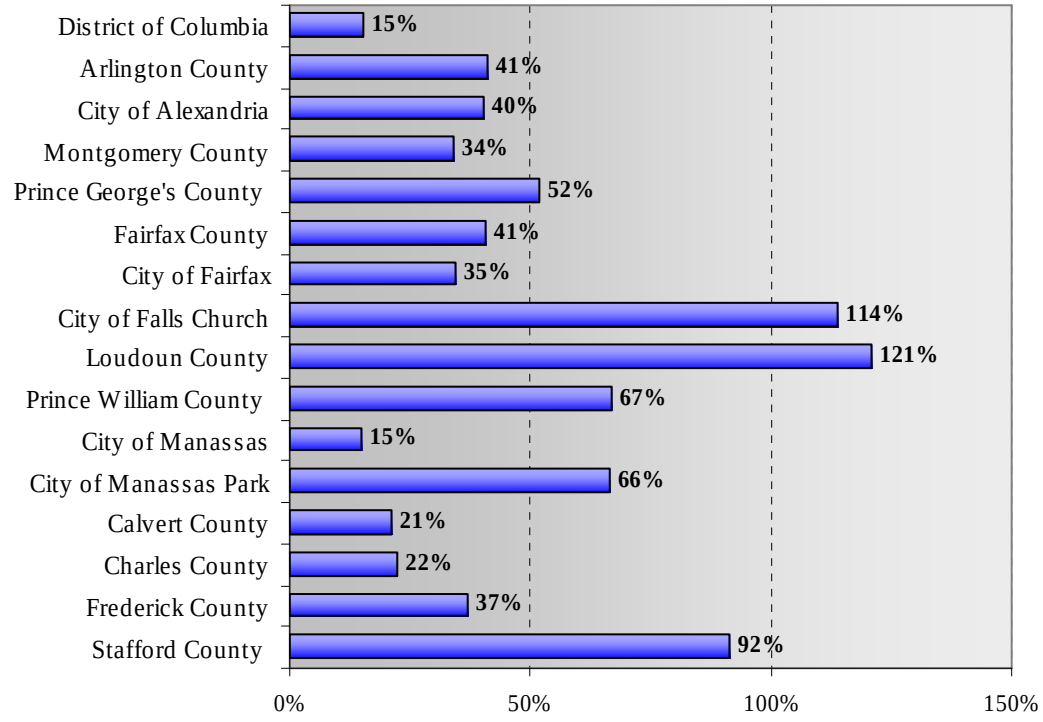


Source: Round 7.0a Cooperative Forecasts
Notes: The southern portion of Spotsylvania County is not included in the TPB model area. Independent cities in Virginia are included in county totals.

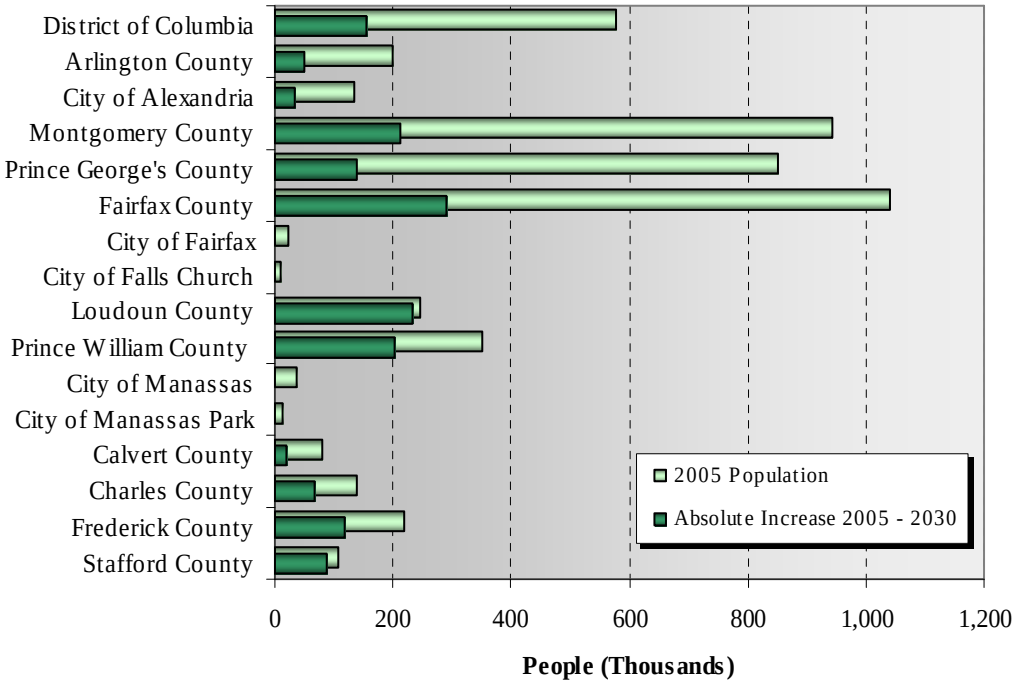
Employment Growth by Jurisdiction
2005 Employment and Forecast 2005 - 2030



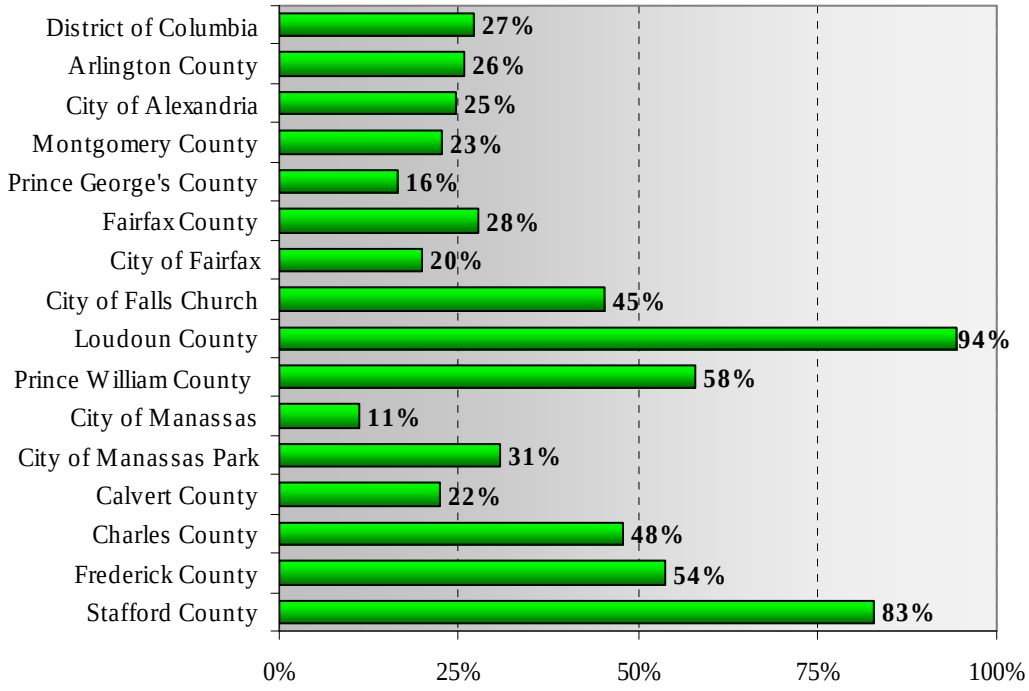
Percent Employment Growth by Jurisdiction
Forecast 2005 - 2030



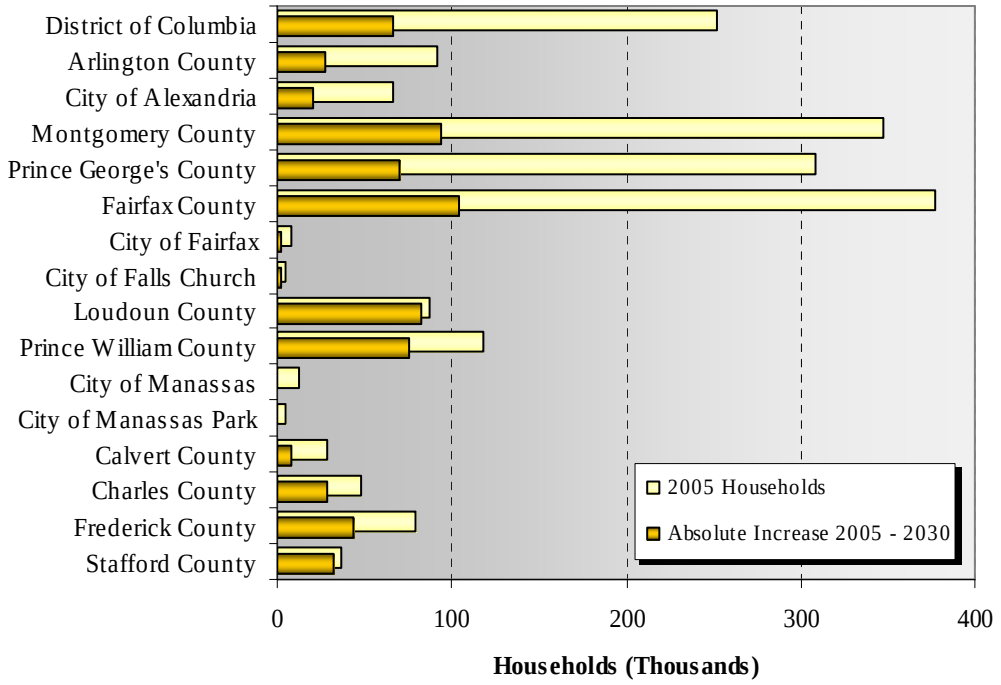
Population Growth by Jurisdiction
2005 Population and Forecast 2005 - 2030



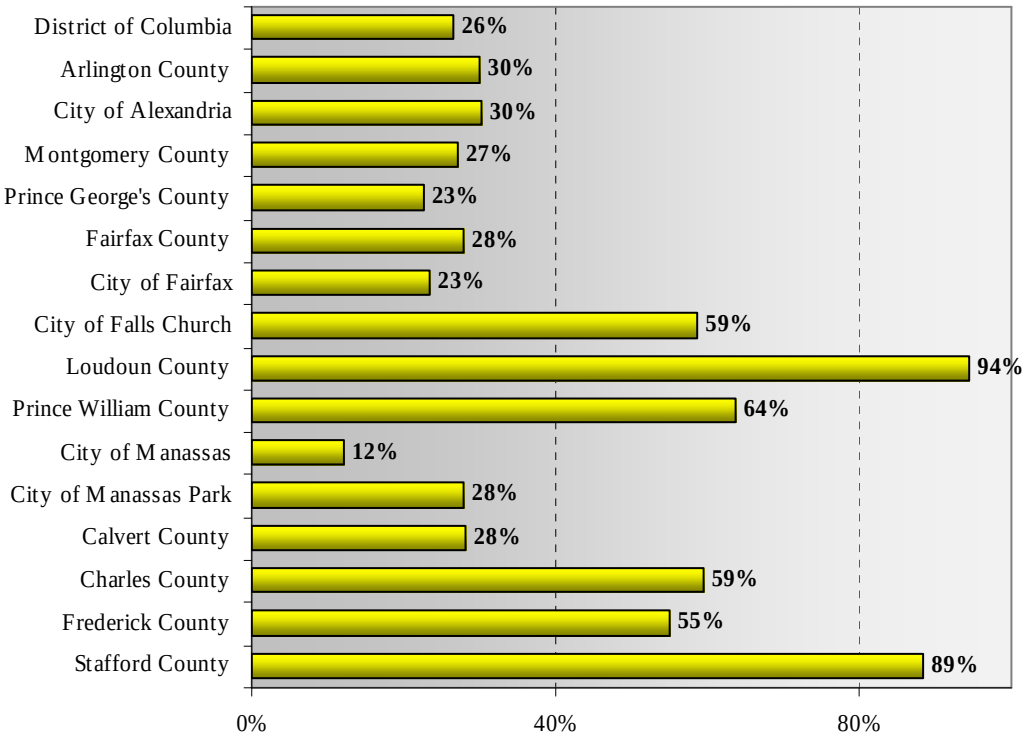
Percent Population Growth by Jurisdiction
Forecast 2005 - 2030



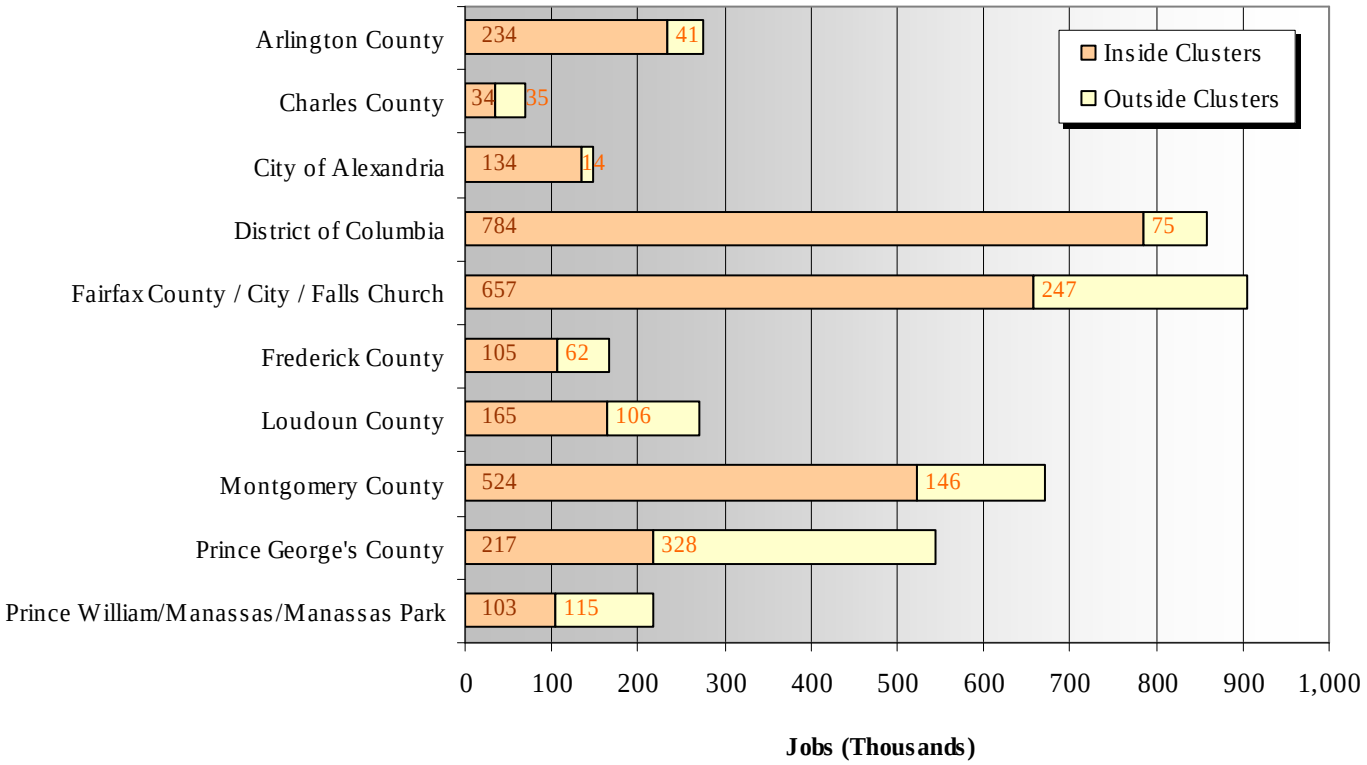
Household Growth by Jurisdiction
2005 Household and Forecast 2005 - 2030



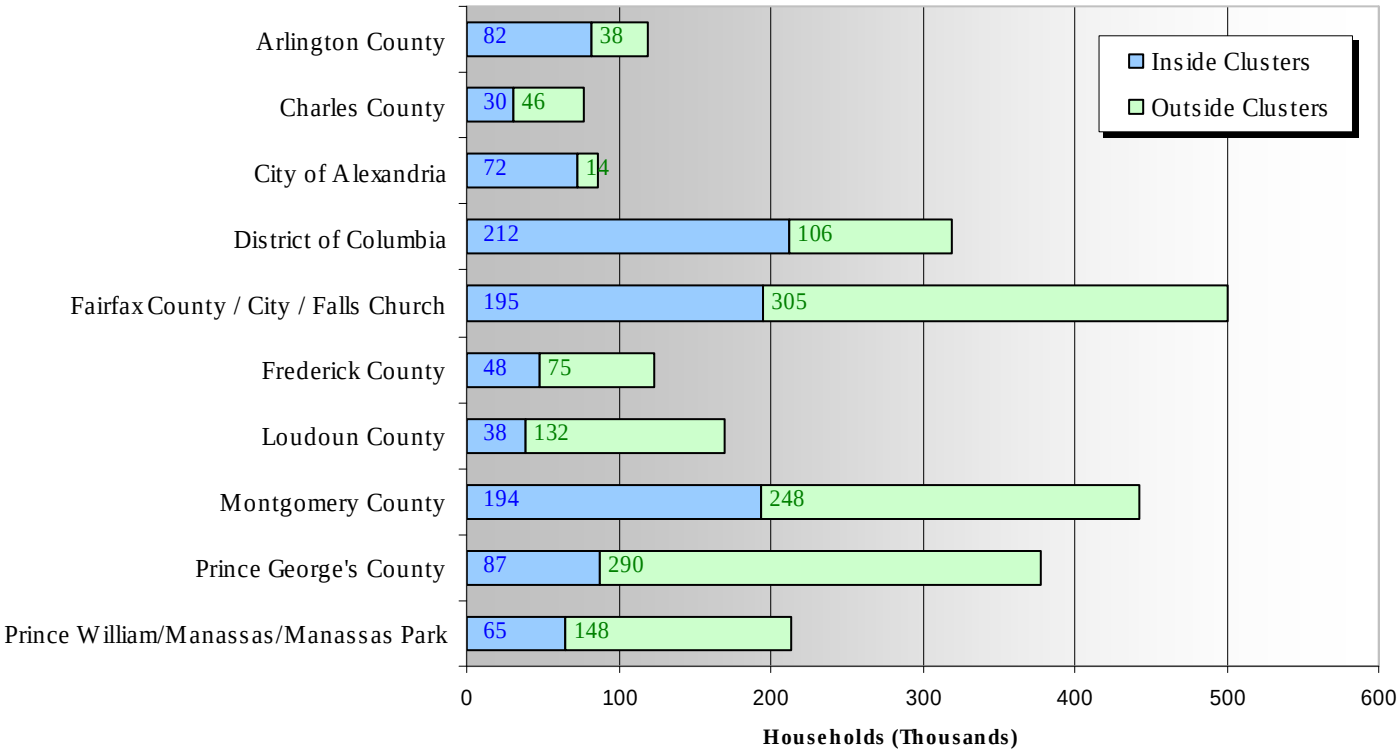
Percent Household Growth by Jurisdiction
Forecast 2005 - 2030



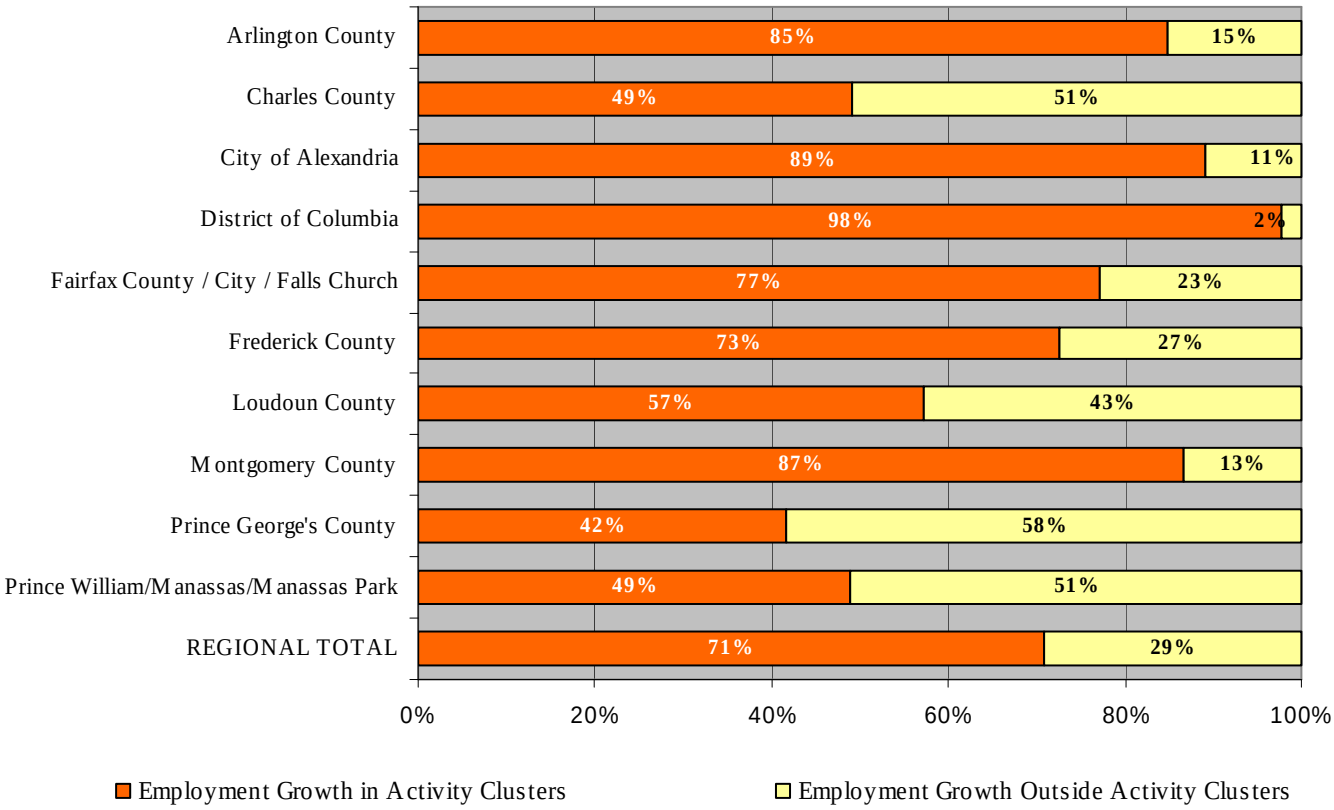
Round 7.0a Employment in Activity Clusters by Jurisdiction in 2030



Round 7.0a Households in Activity Clusters by Jurisdiction in 2030



Round 7.0a Percent of Employment Growth Between 2005 and 2030 Occurring in Activity Clusters



Regional Activity Clusters

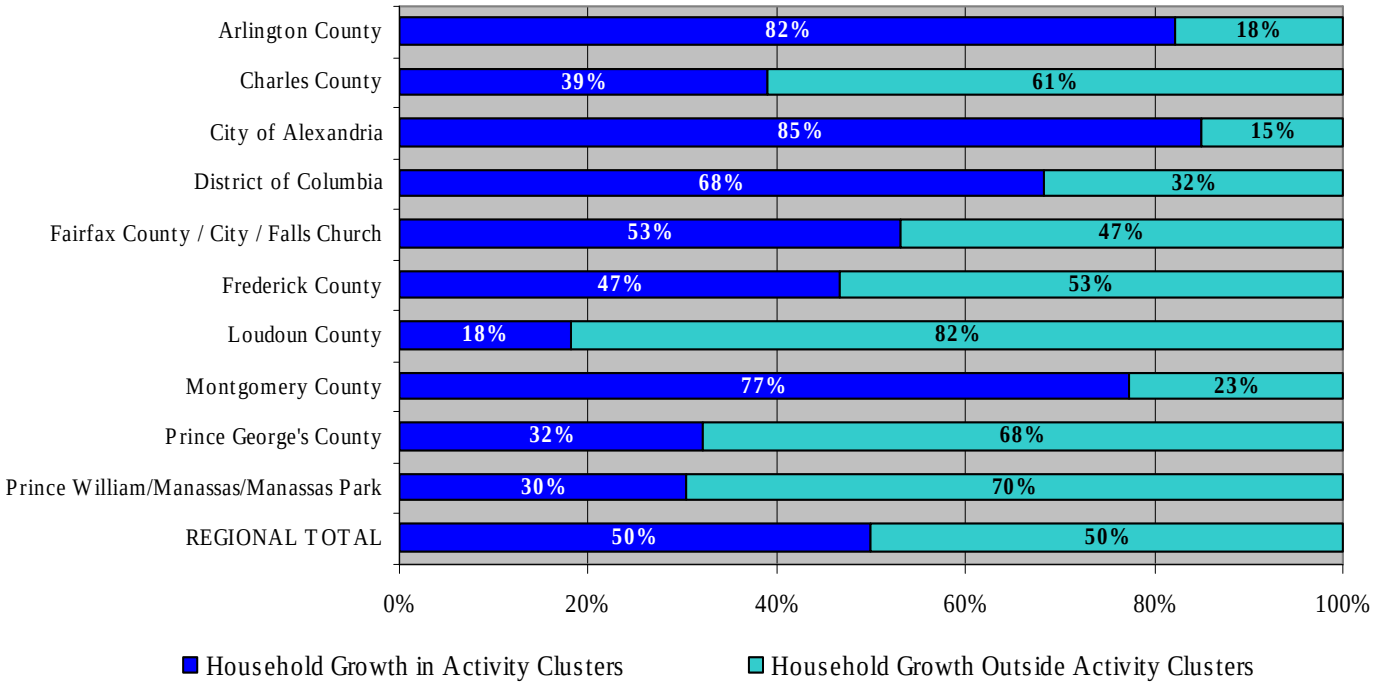
Regional activity clusters are based on aggregated regional activity centers that were delineated to both simplify the regional activity center map and to describe the related or companion areas within the major transportation corridors. Clusters were created by selecting the Traffic Analysis Zones (TAZ) that are directly adjacent to the activity centers with special consideration given to those TAZs that follow major transportation corridors.

In 2005, 72 percent of the region's jobs were located in regional activity clusters. This percentage will be the same for the horizon forecast year of 2030. The highest percentages of jobs located in regional activity clusters in 2030 will be found in the Central Jurisdictions; the District of Columbia (98 percent), the City of Alexandria (89 percent), and Arlington County (85 percent).

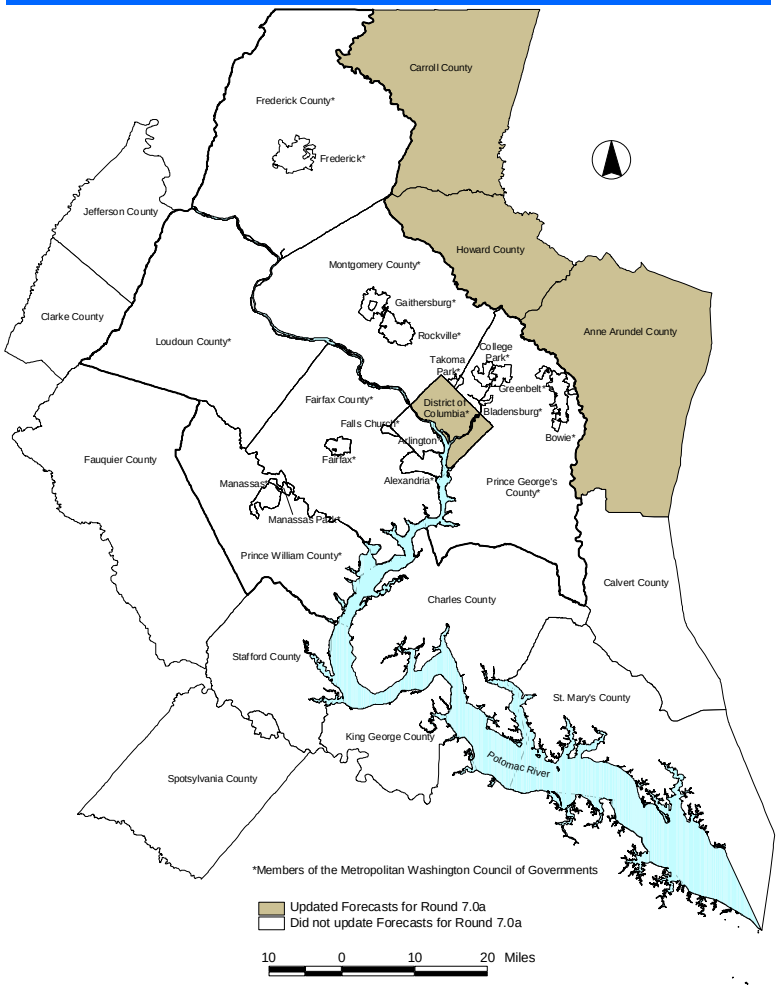
Households in regional activity clusters account for approximately 40 percent of the region's total households in 2005. By 2030 households in regional activity clusters are projected to increase to 42 percent. The highest percentages of households located in regional activity clusters in 2030 will be the Central Jurisdictions; City of Alexandria (85 percent), Arlington County (82 percent), and Montgomery County (77 percent).

Note: Regional Activity Clusters analysis is based on cluster boundaries from the Round 6.1/6.2 Regional Activity Centers (July 2002.) For more information on regional activity centers and clusters go to http://www.mwcog.org/planning/planning/activitycenters/.

Round 7.0a Percent of Household Growth Between 2005 and 2030 Occurring in Regional Activity Clusters



Jurisdictions Updating Their Forecasts for Round 7.0a



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 problems 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.

The Cooperative Forecasting "Round 7.0 Technical Report," published by COG, contains more detailed information about the Cooperative Forecasts, including the assumptions and methodologies employed by each jurisdiction. For more information contact the Information Center, Metropolitan Washington Council of Governments, 777 North Capitol Street, N.E. Suite 300, Washington, D.C. 20002-4226; (202) 962-3256.

This publication is available in PDF format at http://www.mwcog.org/planning/planning/trends/.

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