Economic and Housing Market Trends and Outlook in the Washington Region

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National Economic Trends Impacting the Housing Market
Recession Recovery Patterns of GDP
Past Four Recessions*

*in 1992 or 2009 Chained Dollars; *Quarters 40+ include the 2001 Recession; ***Quarters 32+ include the 1991 Recession; ****Quarters 25+ include the 2009 Recession

Sources: Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU

U.S. Leading Index
Month-Over-Year Percent Change

Sources: The Conference Board, The Stephen S. Fuller Institute at the Schar School, GMU
U.S. New and Existing Home Sales
Monthly Over-the-Year Percent Change

New  Existing

The Washington Region’s Economy:
Historic Trends
Federal Employment in the Washington Region, 1950-2018

Federal Procurement in the Washington Region, 1980-2018

Federal and Professional & Business Services Jobs
Washington Region, 1980 – 2018 (in 000s)

Sources: The Stephen S. Fuller Institute at the Schar School, GMU

The Changing Structure of the Washington Region Economy

Source: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2019
Job Change in the Washington Region
2000 – 2018 (in thousands)

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*Average Through July

U.S. GDP and Washington MSA GRP
2007 – 2017 (Annual % Change)

Sources: U.S. Bureau of Economic Analysis; The Stephen S. Fuller Institute at the Schar School, GMU
Average Annual GRP Change in the Largest Metros 2007-2017 (inflation-adjusted)

Sources: U.S. Bureau of Economic Analysis, The Stephen S. Fuller Institute at the Schar School, GMU


Sources: U.S. Bureau of Economic Analysis; The Stephen S. Fuller Institute at the Schar School, GMU
The Washington Region’s Economy: Recent Trends & Forecast

Annual Job Change, 2002-2019
Washington Region

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
15 Largest U.S. Job Markets
Job Change: YTD 2019*

Washington: +0.9%

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*Through July

Washington MSA Job Change by Sector
July 2018 – July 2019

Total = 24,400

Ranked by Size in 2018
Professional & Business Services
Education & Health Services
Federal Govt
State & Local Govt
Leisure & Hospitality
Retail Trade
Other Services
Construction
Financial Activities
Information Services
Transportation & Utilities
Wholesale Trade
Manufacturing

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Change in Jobs By Sub-State Area
Monthly Over-the-Year Change (in 000s)


Washington Region Leading Index
Month-Over-The-Year Percent Change

Source: The Stephen S. Fuller Institute at the Schar School, GMU
U.S. GDP and Washington MSA GRP
2007 – 2018 – 2022
(Annual % Change)

Sources: U.S. Bureau of Economic Analysis, IHS Markit (January 2019), The Stephen S. Fuller Institute at the Schar School, GMU
Forecast as of August 2019

U.S. GDP and Washington Region GRP
2007 – 2018 – 2022
(Annual % Change)

Sources: U.S. Bureau of Economic Analysis, IHS Markit (January 2019), The Stephen S. Fuller Institute at the Schar School, GMU
Forecast as of January 2019
Employment Change by Sub-State Area (000s)

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>15.8</td>
<td>13.9</td>
<td>8.7</td>
<td>7.2</td>
<td>4.6</td>
<td>5.0</td>
<td>4.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Sub. MD</td>
<td>10.6</td>
<td>14.2</td>
<td>15.2</td>
<td>3.0</td>
<td>11.0</td>
<td>9.1</td>
<td>7.1</td>
<td>9.3</td>
</tr>
<tr>
<td>No. VA</td>
<td>29.2</td>
<td>30.5</td>
<td>25.9</td>
<td>25.1</td>
<td>22.3</td>
<td>17.6</td>
<td>16.0</td>
<td>17.5</td>
</tr>
<tr>
<td>REGION</td>
<td>55.6</td>
<td>58.6</td>
<td>49.8</td>
<td>35.3</td>
<td>38.2</td>
<td>31.8</td>
<td>27.4</td>
<td>32.1</td>
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Average Annual Change 2000-2017 = 38,800

Source: BLS, IHS Economics, The Stephen S. Fuller Institute at the Schar School, GMU (forecast as of January 2019)

NOTE: The regional totals include Jefferson, WV.; Sub-state areas re-weighted to sum to region-wide total

The Changing Structure of the Washington Region Economy

<table>
<thead>
<tr>
<th>2018</th>
<th>Total Federal 30.9%</th>
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<tbody>
<tr>
<td>Non-Local Serving Business</td>
<td>15.5%</td>
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<tr>
<td>Local Serving Activities</td>
<td>38.0%</td>
</tr>
<tr>
<td>Fed Wages &amp; Salaries</td>
<td>7.4%</td>
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<tr>
<td>Other Federal</td>
<td>9.4%</td>
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<tr>
<td>Procurement</td>
<td>14.1%</td>
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<tr>
<th>2030</th>
<th>Total Federal 26.5%</th>
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<tbody>
<tr>
<td>Non-Local Serving Business</td>
<td>18.5%</td>
</tr>
<tr>
<td>Local Serving Activities</td>
<td>39.3%</td>
</tr>
<tr>
<td>Fed Wages &amp; Salaries</td>
<td>6.2%</td>
</tr>
<tr>
<td>Other Federal</td>
<td>7.8%</td>
</tr>
<tr>
<td>Procurement</td>
<td>12.5%</td>
</tr>
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Source: The Stephen S. Fuller Institute at the Schar School, GMU; Forecast January 2019
Job Growth in the Washington Region
Select Sectors: 2018 - 2030 (Jobs in 000s)

- Prof. & Business Services: 363 to 369
- Edu. & Health Services: 341 to 382
- Federal Govt: 347 to 362
- State & Local Govt: 280 to 362
- Leisure & Hospitality: 210 to 290
- Retail Trade: 210 to 290
- Other Services: 165 to 206
- Construction: 180 to 225
- Financial Activities: 168 to 188
- Information Services: 78 to 78

Total Increase = 378.3

Source: IHS Economics; The Stephen S. Fuller Institute at the Schar School, GMU  * Preliminary

The Washington Region’s Housing Market: Current Trends
Change in Existing Home Sales
Washington Region, Month Over-the-Year

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU

Change in Average Days-On-Market
Washington Region, Month Over-the-Year

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU
Change in Unsold Active Listings
Washington Region, Month Over-the-Year

Unsold Active Listings
Washington Region, August of Each Year

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU
Change in Average Sales Price
Washington Region, Quarter Over-the-Year

2018 1 & 2Q Average: 3.2%

Existing Home Sales Price By Percentile
Washington Region, 1997 – March 2018

Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU

Sources: MRIS; The Stephen S. Fuller Institute at the Schar School, GMU
Home Sales Price Growth By Percentile
Washington Region, 1997 – March 2018
100 = January 1997

Sources: MRIS; The Stephen S. Fuller Institute at the Schar School, GMU
Change in Sales By Price Group
Washington MSA, Month Over-the Year

The Washington Region’s Housing Market: Factors Affecting Upcoming Years
Average Wage in the Washington Region
(000s of 2018 $s)

Sources: Bureau of Labor Statistics; The Stephen S. Fuller Institute

Population Growth by Sub-State Area
Washington Region, 2001 to 2018

Sources: U.S. Census Bureau (Intercensal & v2018 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
Population Growth By Component Change
Washington Region (in 000s)

Sources: U.S. Census Bureau (Interosomal, v2009 and v2017 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU

*Estimate

Population Distribution by Age
Washington Region

Sources: U.S. Census Bureau (1980 Census and v2016 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
"New" Existing Inventory?

19% of owners last moved 23+ years ago

Building Permits
Washington Region, 1990 to 2017

Sources: U.S. Census Bureau, The Stephen S. Fuller Institute at the Schar School, GMU
Amazon-Related Owners in Select Jurisdictions
Assumes 37,850 HQ2 jobs, includes indirect & induced effects

<table>
<thead>
<tr>
<th>Virginia</th>
<th>Owners at Full Build-Out</th>
<th>Closed Sales in 2017</th>
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<tbody>
<tr>
<td>Arlington County</td>
<td>2,071</td>
<td>3,030</td>
</tr>
<tr>
<td>Alexandria City</td>
<td>1,085</td>
<td>2,580</td>
</tr>
<tr>
<td>Fairfax County*</td>
<td>13,698</td>
<td>16,300</td>
</tr>
<tr>
<td>Prince William County**</td>
<td>4,013</td>
<td>8,330</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>3,665</td>
<td>6,630</td>
</tr>
<tr>
<td>D.C.</td>
<td>2,410</td>
<td>8,900</td>
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<th>Maryland</th>
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<tr>
<td>Montgomery County</td>
<td>2,737</td>
<td>12,430</td>
</tr>
<tr>
<td>Prince George’s County</td>
<td>1,886</td>
<td>10,230</td>
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Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU
*Includes the cities of Fairfax and Falls Church  ** Includes the cities of Manassas and Manassas Park

Thank You & Questions

For monthly reports on the Washington region’s economic performance go to:

sfullerinstitute.gmu.edu