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

% Change in GDP

Quarters After Trough

1991-Q1
1982-Q3**
2009-Q2
2001-Q4***

*in 1992 or 2009 Chained Dollars; ** 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. Coincident Index
Month-Over-Year Percent Change

U.S. Consumer Confidence
November 2011 – November 2018

Sources: The Conference Board, The Stephen S. Fuller Institute at the Schar School, GMU
U.S. Interest Rates
Average Annual, 2001 - 2022

Sources: IHS Markit (November 2018), The Stephen S. Fuller Institute at the Schar School, GMU

U.S. New and Existing Home Sales

Sources: U.S. Census (New), National Association of Realtors (Existing), The Stephen S. Fuller Institute at the Schar School, GMU
The Washington Region’s Economy: Current Trends and Outlook
Average Annual GRP Change in the Largest Metros 2010-2017 (inflation-adjusted)

Federal Government Jobs
Washington MSA

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

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
Federal Procurement in the Washington Region, 1980-2017

TOTAL = $1,384.0 Billion

Job Change in the Washington Region
2000 – 2018 (in thousands)

2000-2017 Avg: +38,790

Sources: U.S. Bureau of Labor Statistics (Not Seasonally Adjusted), The Stephen S. Fuller Institute at the Schar School, GMU
*First ten months
2017 GRP Change in the Largest Metros (inflation-adjusted)

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

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

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

Average Day-On-Market
Washington Region, September of Each 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, September of Each Year

Sources: Real Estate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU
**Months of Supply**

Washington Region, September of Each Year


<table>
<thead>
<tr>
<th>Year</th>
<th>Months of Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>6.1</td>
</tr>
<tr>
<td>1999</td>
<td>3.6</td>
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<tr>
<td>2000</td>
<td>2.4</td>
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<tr>
<td>2001</td>
<td>2.1</td>
</tr>
<tr>
<td>2002</td>
<td>1.9</td>
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<td>2003</td>
<td>1.5</td>
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<td>2004</td>
<td>1.4</td>
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<td>2005</td>
<td>2.4</td>
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<td>5.4</td>
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<td>2008</td>
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<td>2015</td>
<td>3.9</td>
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<tr>
<td>2016</td>
<td>3.0</td>
</tr>
<tr>
<td>2017</td>
<td>2.7</td>
</tr>
<tr>
<td>2018</td>
<td>2.6</td>
</tr>
</tbody>
</table>

4-6 Mo: Typical Healthy Range

**Change in Average Sales Price**

Washington Region, Month Over-the-Year

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

**12-mo moving average**

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

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

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

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
The Washington Region’s Housing Market: Factors Affecting Upcoming Years
Average Wage in the Washington Region
(000s of 2017 $s)

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

Population Growth by Sub-State Area
Washington Region, 2010 to 2017

Sources: U.S. Census Bureau (v2017 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU
Population Distribution by Age
Washington Region

Sources: U.S. Census Bureau (1980 Census and 2016 Population Estimates); The Stephen S. Fuller Institute at the Schar School, GMU

“New” Existing Inventory?

19% of owners last moved 23+ years ago

Source: U.S. Census Bureau (2012-2016 ACS); The Stephen S. Fuller Institute at the Schar School, GMU
Amazon: Net New Owners in Select Jurisdictions
(assumes 50k HQ2 employees)

<table>
<thead>
<tr>
<th></th>
<th>Owners at Full Build-Out</th>
<th>Number of Sales in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arlington County</td>
<td>2,740</td>
<td>3,030</td>
</tr>
<tr>
<td>Alexandria City</td>
<td>1,430</td>
<td>2,580</td>
</tr>
<tr>
<td>Fairfax County, Falls Church City &amp; Fairfax City</td>
<td>18,090</td>
<td>16,300</td>
</tr>
<tr>
<td>Prince William County, Manassas City, &amp; Manassas Park City</td>
<td>5,300</td>
<td>8,330</td>
</tr>
<tr>
<td>Loudoun County</td>
<td>4,840</td>
<td>6,630</td>
</tr>
</tbody>
</table>

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

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

sfullerinstitute.gmu.edu