



The
STEPHEN S. FULLER INSTITUTE
for Research on the Washington Region's Economic Future



Demographic and Economic Factors Affecting the Upcoming Home Sales Market in the Washington Region

Jeannette Chapman
Deputy Director and Senior Research Associate
The Stephen S. Fuller Institute for
Research on the Washington Region's Economic Future
Schar School of Policy and Government, George Mason University

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Executive Summary

Baby Boomers and older adults, in general, are the dominant force among the region's and the nation's home owners. Nationally, discussion in the popular press about the "Baby Boomer Sell-Off" began in 2013¹ but this trend has not yet come to fruition, in part because of economic trends including delayed retirement as a result of the Recession and remaining years left on home mortgages.² Home owners in the Washington region have followed a similar pattern.

This report examines the recent and near-term trends that may affect the upcoming housing market and the potential for a Baby Boomer sell-off in the Washington region. The post-Recession housing market performance has been uneven both in terms of volume and price growth. Low inventory has not resulted in larger-than-average price increases. Key factors suggest a continuation of these prior trends in the future:

- The average wage in the Washington region was slow to return to its 2010 peak and, while wages are projected to have stronger gains going forward, growth is forecasted at about one percent per year.
- Economic growth and demographic patterns suggest subdued population growth in the near-term as a result of continued net domestic out-migration.

However, there is a significant number of older owners living in homes that may no longer suit their needs:

- More than forty (41.6) percent of home owners in the Near-In Washington region were between 52 and 70 during the 2014-2016 period. In 2000, this share was just 30.1 percent.
- More than 273,540 households headed by someone 50 years old or older had at least two more bedrooms than people in their home during the 2014-2016 period. This accounts for more than one-quarter (25.8%) of all owners during this period.

As these owners downsize or move elsewhere in the nation, supply would increase. Especially in certain neighborhoods, the potential for increased supply is large enough to moderate price gains. But the factors that may have prevented older owners from selling may continue to do so in the future. A smaller share of older owners owned their homes free and clear compared to 2000 and mobility rates for people of all age groups are lower and trending downwards.

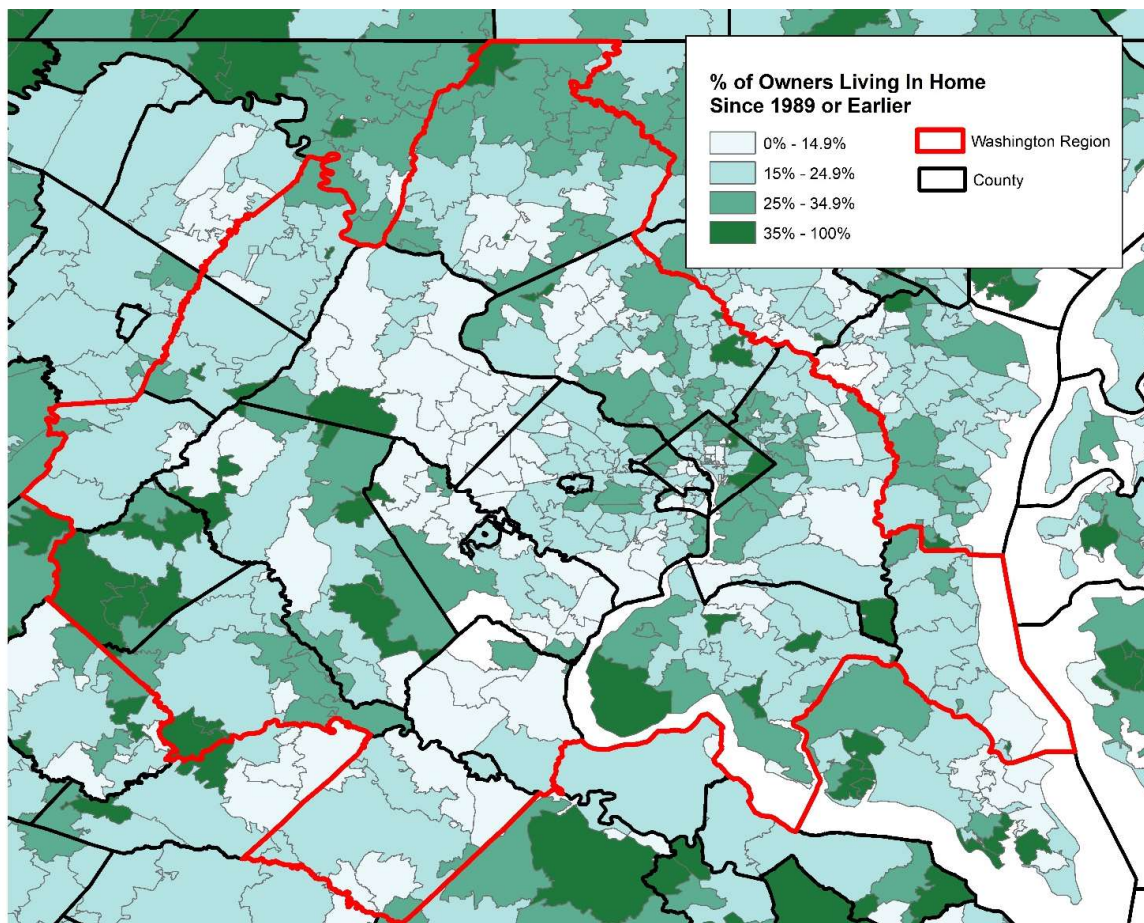
¹ For an example, see <https://www.citylab.com/equity/2013/03/aging-baby-boomers-and-next-housing-crisis/4863/>. Academics began examining this trend much earlier, with research being published as early as 2008. For an example, see Dowell Myers and SungHo Ryu, "Aging Baby Boomers and the Generational Housing Bubble: Foresight and Mitigation of an Epic Transition," *Journal of the American Planning Association* 74, no. 1 (January 31, 2008): 17–33. *This footnote and the sentence it references was updated on July 30, 2018.*

² <http://www.jchs.harvard.edu/housing-a-growing-population-older-adults>

The Washington region's housing market is facing several headwinds. Key trends that have shaped the recent housing market, modest economic growth and slowing population growth, are expected to continue in the near-term. However, inventory may increase as these longtime home owners, primarily Baby Boomers, downsize or trade product types. In combination with rising interest rates and high levels of student debt among potential buyers, the housing market may be on less stable footing going forward.

Nevertheless, there may be potential buyers waiting in the wings, including a large number of high-income renters and owners who may wish to trade-up. These potential buyers are likely to be highly discerning and willing to live in their current housing situation, either as renters or in too-small homes, until the right unit comes along for the right value. As a result, the near-term housing market has the potential to be more dynamic than in past years.

Share of Longtime Owners in the Washington Region, 2012-2016 Average



Source: U.S. Census Bureau (2012-2016 ACS); The Stephen S. Fuller Institute at the Schar School, GMU

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Demographic and Economic Factors Affecting the Upcoming Home Sales Market in the Washington Region

In the Washington region, the housing market's performance has been affected by below-average economic growth and slowing population growth in recent years. In spite of low inventory, the housing market has not had outsized price growth since 2010 and the market has not returned to pre-Recession peak volume or pricing. The near-term economic and population projections suggest a continuation of the modest growth pattern of the prior years.

However, the significant number of older owners in relatively large homes may portend a "Baby Boomer sell-off" both in the Washington region and in the nation. National research suggests that a minority of Baby Boomers plan to sell but their dominance in the housing market, especially within some neighborhoods, could increase supply, potentially moderating prices.

As a result, the near-term housing market has the potential to be more dynamic than in past years. Some longtime owners who wish to sell may have difficulty attaining the price gains they witnessed in their neighborhoods during recent years, when inventory was limited, especially if their neighborhood has a large number of longtime owners who put their homes on the market at once. Some owners may be willing to sacrifice some resale value in exchange for the well-being they may attain through moving to their more desired home type and size; some research shows that older movers generally express a higher degree of overall psychological well-being compared to those that have not moved.³ Others may decide not to sell.

Conversely, potential buyers may continue to be patient and highly selective. Homes that fit their criteria, driven both by location and the features of the property, will likely sell quickly and potentially gain in pricing. Altogether, the sales patterns and pricing in upcoming years will be highly spot- and unit-specific. Neighborhoods with a large share of longtime owners will have the most volatility in the upcoming years.

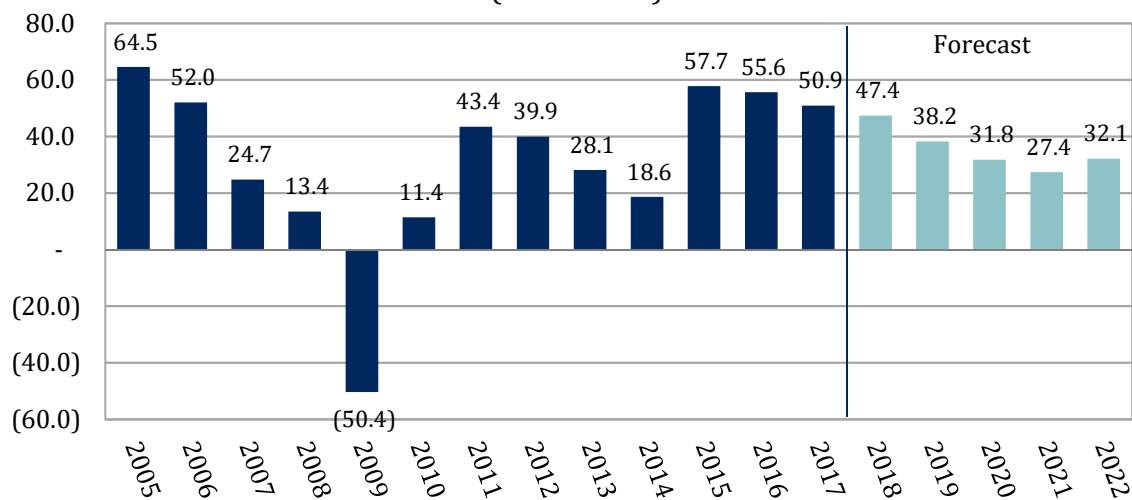
³ Calvo, Estaban, Kelly Haverstick, and Natalia Zhivan (2009), "Determinants and Consequences of Moving Decisions for Older Americans," 11th Annual Joint Conference of the Retirement Research Consortium.

I. Economic Trends

Economic growth in the Washington region slowed in 2013, largely as a result of sequestration. While job growth returned in 2015, the types of jobs being gained contributed to slowing wage growth. The slower wage growth, in turn, has moderated median household income. Over the next five years, economic growth is projected to be more stable but modest. As a result, median household income is projected to rise at about one-half the rate of the recent five-year trend.

Job growth returned to the Washington region quickly after the Recession and in 2011 the region added nearly as many jobs as it had prior to the Recession (Figure 1). However, the trend reversed in 2012 and the region had three consecutive years of moderating job growth. The slowdown was largely the result of changes in the federal government. After the Recession, the federal government increased spending and bolstered growth in the Washington region. By 2012, the stimulus had lessened and the groundwork had been laid for sequestration. The Sequester went into effect in 2013 and job growth in the Washington region slowed as a result of the decreases to federal employment and contracting.

Figure 1. Job Change in the Washington Region
(Thousands)



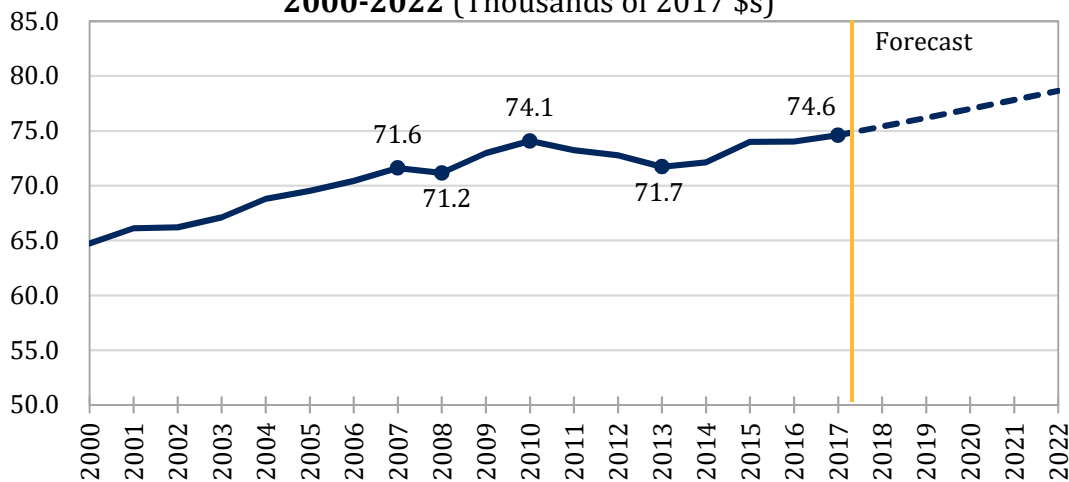
Sources: U.S. Bureau of Labor Statistics; The Stephen S. Fuller Institute at the Schar School, GMU

Since 2015, the total number of jobs gained in the Washington region has been relatively strong. But this total includes a disproportionately large number of lower wage jobs, primarily those in the Leisure & Hospitality and Education & Health Services sectors. As a result of the mix of jobs being added, the average wage in the Washington region has not fully recovered to its 2010 peak after adjusting for inflation (Figure 2).

The average wage peaked in 2010 at \$74,075 in 2010, surpassing its pre-Recession peak from 2007. Between 2010 and 2013, the average wage of a job in the region decreased 3.2 percent to \$71,730. While many workers did have modest pay cuts or decreased hours during this period, the majority of this decrease was the result of the wage distribution of new workers and the types of jobs that were being added during this period. Between 2013 and 2017, the average wage increased 4.0 percent, surpassing its 2010 peak in 2017 by 0.7 percent.

The slow wage growth during this period was also the result of the types of net new jobs being added to the region; 42 percent of the job growth during this period was in the Leisure & Hospitality and Education & Health Services sectors, although these sectors accounted for just 22 percent of the jobs base. The average wage in these sectors (combined) was \$42,990 in 2017, well below the average wage for all jobs. As the region added these lower wages jobs at a faster rate during the 2013-2017 period, the average wage growth also moderated.

**Figure 2. Average Wage in the Washington Region
2000-2022 (Thousands of 2017 \$s)**



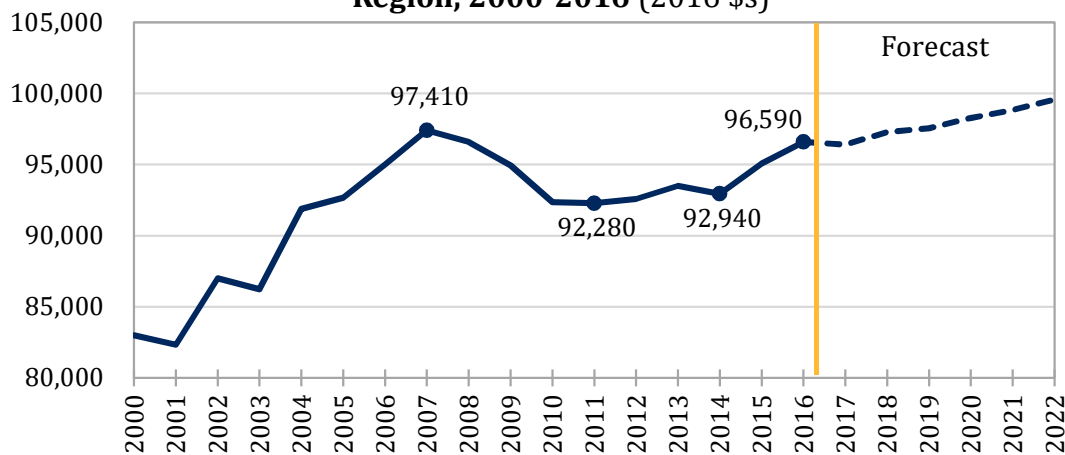
Source: U.S. Bureau of Labor Statistics; IHS Markit; The Stephen S. Fuller Institute, the Schar School at GMU

As illustrated by Figures 1 and 2 above, job growth in the Washington region is projected to slow in the upcoming years. However, the mix of jobs is projected to be more favorable and include a larger share of higher wage, higher value-add jobs. Over the next five years, average wage growth is projected to be about 1.0 percent per year. This relatively large growth rate is the result of faster growth in the high-wage Professional & Business Service jobs.

Changes in average wages play a role in household incomes, but the trends have differed somewhat in recent years (Figure 3). The median household income in the Washington region peaked in 2007 at \$97,410. Between 2007 and 2010, the median household income decreased 5.3 percent to \$92,280. The median household income

changed little between reaching its trough in 2010 until 2014; altogether the region had seven consecutive years without substantial gains in the median household income. Between 2014 and 2016, the household income rose 3.9 percent. Despite the recent gain, the median household income in 2016 was still 0.8 percent lower than it was in 2007. After 2017, modest growth is projected to return, largely due to rising wages. Even with the consistent annual gains, the overall growth rate is projected to be modest, averaging 0.6 percent per year between 2018 and 2022. By comparison, the median household income increased an average of 0.9 percent between 2011 and 2016.

Figure 3. Median Household Income in the Washington Region, 2000-2016 (2016 \$s)



Source: U.S. Census Bureau; IHS Markit; The Stephen S. Fuller Institute, the Schar School at GMU

While the Washington region remains relatively wealthy, other metropolitan areas and counties have fared better during recent years. In both 2010 and 2014, the Washington region had the highest median household income of its 15 peer metros.⁴ In 2016, the region had fallen to second, behind San Francisco-Oakland, CA.

Additionally, the number of counties that ranked in the top 15 of all U.S. counties decreased. In 2010, eight of the top “richest” 15 large counties in the U.S., ranked by their median value of household income, were part of Washington region (Figure 4). However, by 2016, the Washington region only had three counties on this list: Loudoun County, Fairfax County, and Arlington County. In 2016, the median household incomes in Stafford County, Prince William County, Montgomery County, Calvert County, and Charles County no longer placed them among the top fifteen counties nationally.

⁴ The largest employment metropolitan areas according to Gross Regional Product

Figure 4. Median Household Income: Top 15 U.S. Counties

Rank	2010	2016
1	Loudoun, VA	Loudoun, VA
2	Fairfax, VA	Howard, MD
3	Howard, MD	Fairfax, VA
4	Hunterdon, NJ	Hunterdon, NJ
5	Arlington, VA	Santa Clara, CA
6	Douglas, CO	Arlington VA
7	Stafford, VA	Douglas, CO
8	Somerset, NJ	San Mateo, CA
9	Prince William, VA	Morris, NJ
10	Morris, NJ	Williamson, TN
11	Nassau, NY	Nassau, NY
12	Montgomery, MD	Somerset, NJ
13	Calvert, MD	Marin, CA
14	St. Mary's, MD	San Francisco, CA
15	Charles, MD	Delaware, OH
In the Washington Region		

Source: American Community Survey (2010 1-Year and 2016 1-Year surveys); The Stephen S. Fuller Institute for Research on the Washington Region's Economic Future at the Schar School, GMU

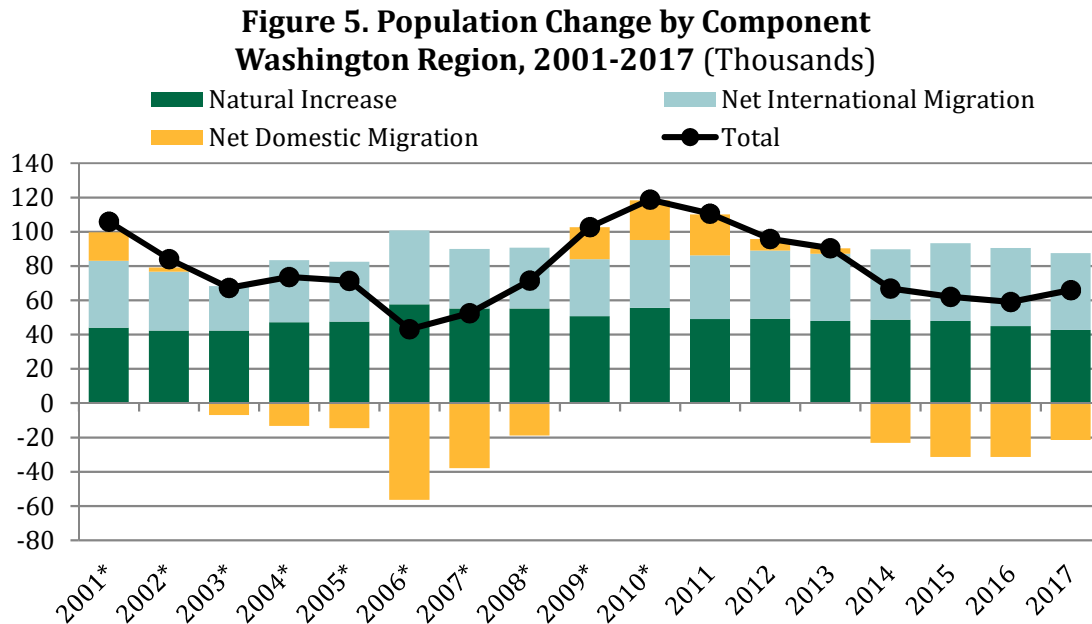
The overall performance of the Washington region's economy was relatively weak during the 2010-2017 period. In 2013, the region had a minor recession as its economy (as measured by Gross Regional Product) shrank by 0.8 percent. As a result of this weaker economic growth, both the average wage and the median household income were lower in 2016 when compared to their prior peak. Similarly, the region's peer metropolitan areas have outperformed the Washington region. Over the next five years, economic growth is projected to stabilize but result in relatively modest gains.

II. Demographic Trends

Similar to the economy, population growth peaked in 2010 and slowed during the post-stimulus years. The strong growth between 2009 and 2012 was the result of population gains from net domestic migration; the Washington region lost fewer residents to other parts of the U.S. than it attracted. Net domestic migration patterns in the Washington region are strongly tied to national economic trends. As the national economy continues to improve over the upcoming years, net domestic migration in the Washington region is likely to continue to slow, resulting in subdued population growth.

Population growth in the Washington region peaked in 2010 at 2.1 percent but growth pulled back each year through 2016. The population increased just 0.97

percent in 2016, the smallest gain since 2007. Population growth in 2017 was modestly stronger, at 1.1 percent. As shown in Figure 5, the slowing population growth is the result of net domestic migration patterns. Both the natural increase (births minus deaths) and net foreign migration have been steady sources of population growth for the Washington region.



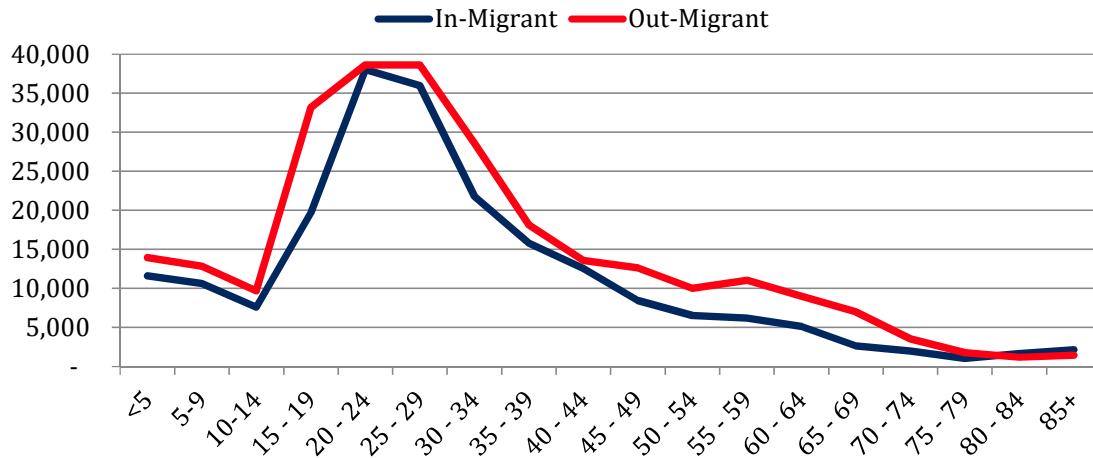
Source: U.S. Census (Vintage 2009, Intercensal, and Vintage 2016 Population Estimates);
The Stephen S. Fuller Institute at the Schar School, GMU *Estimate

Net domestic migration, on the other hand, tends to accelerate when the national economy is performing poorly as it was during the Recession. When the national economy began to improve in 2011, net domestic migration the Washington region also subsided. In particular, the Washington region was less able to retain its current residents, who moved to other parts of the U.S. at a greater rate than in the past.

As shown in Figure 6, the Washington region lost residents in every age group except those over 85 years old in recent years as a result of net domestic migration. The highest rates of domestic out-migration occur for people aged 65 to 69 years old and relatively high rates occur for all people aged 55 through 79 years old. As of 2016, the Washington region was home to 1.6 million people between 50 and 69 years old (approximately the Baby Boomer generation),⁵ including 846,400 people aged 50-59 and 604,880 people aged 60-69. As these age groups enter the historic peak out-migration years, net domestic out-migration will likely continue.

⁵ Baby Boomers were born between 1946 and 1964 and were between 52 and 70 years old in 2016.

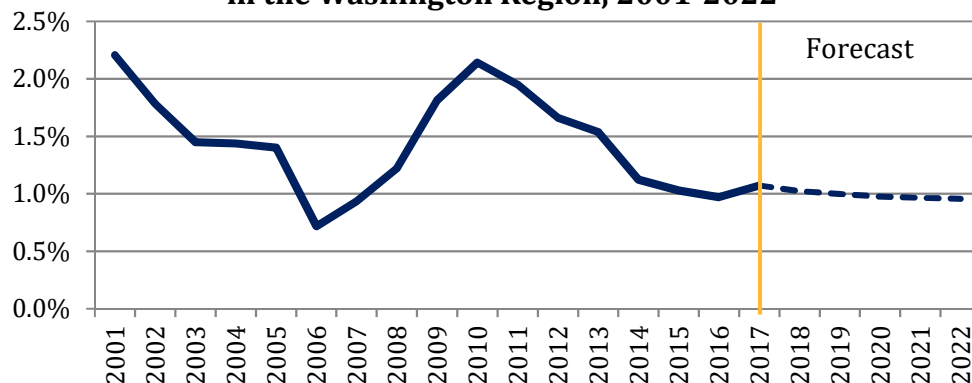
**Figure 6. Domestic Migration by Age Group
Greater Washington Region, 2013-2015 Average**



Source: American Community Survey (2013, 2014 and 2015 microdata, average);
The Stephen S. Fuller Institute at the Schar School, GMU

Economic growth and demographic patterns suggest subdued population growth in the near-term in the Washington region. Continued net domestic out-migration, driven by the retirement of the Baby Boomers, is unlikely to be counterbalanced by higher in-migration rates of younger Millennials. Since 2000, neither economic conditions nor changes in the size of generations has resulted in significantly increased domestic inflows to the Washington region. Instead, variations in domestic outflows have been most responsive, accelerating during periods of national economic strength. Near-term economic forecasts suggest that the recent net out-migration trends will continue.

**Figure 7. Population Growth Rate
in the Washington Region, 2001-2022**



Source: U.S. Census Bureau; IHS Markit; The Stephen S. Fuller Institute at the Schar School, GMU

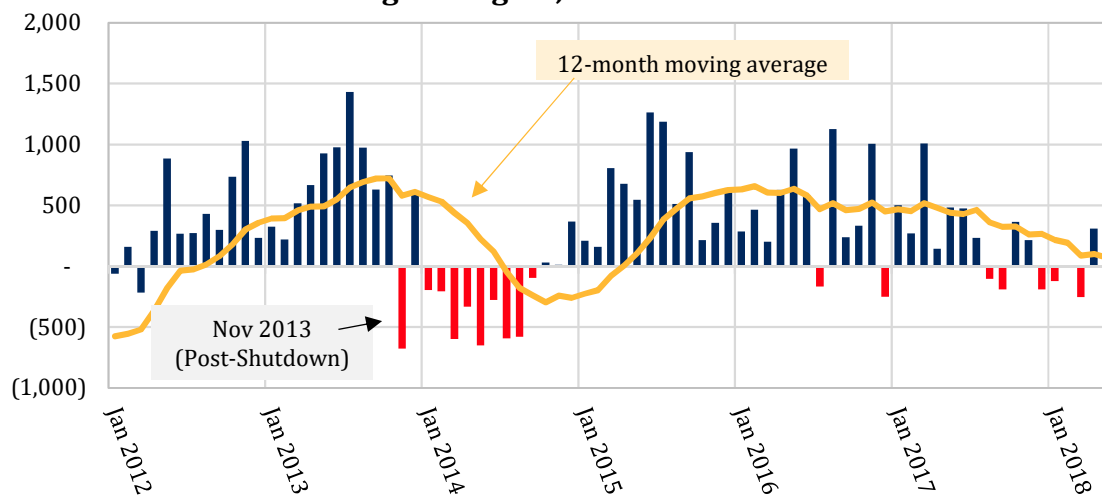
As a result, population growth in the Washington region will be driven by the natural increase and net foreign migration. Without net domestic out-migration, these components typically increase the region's population between +1.4 percent and +1.9 percent each year. Including net domestic migration will likely reduce growth by between one-half and one percentage point, leading to an average annual increase of 1.0 percent per year in the upcoming years (Figure 7).

III. Existing Home Sales Trends

The housing market's performance in the Washington region was uneven after the Recession. Both the number of closed sales and the median price had started to recover during the 2010-2013 period but the weakness in economic growth and overall uncertainty that resulted paused these gains in 2014. Modest gains returned in 2015, although the region has not yet returned to its pre-Recession peak metrics. Since 2000, home prices have also been compressed for all but the very top-end of the market; housing that had been relatively more affordable (condos, smaller homes) had sharper rates of growth, decreasing the differences between housing at the lower price-points and the housing that had historically been the next step up.

Existing homes sales in the Washington region have been uneven since the Recession. The region's initial recovery was more robust than that in other areas, but sales faltered after the 2013 shutdown and this weakness continued into 2014 (Figure 8). In 2015, the housing market rebounded and this expansion continued into 2016. However, the unevenness returned in late 2016 and culminated in year-over-year decreases beginning in summer 2017.

**Figure 8. Change in Existing Home Sales
Washington Region, Month Over-the Year**

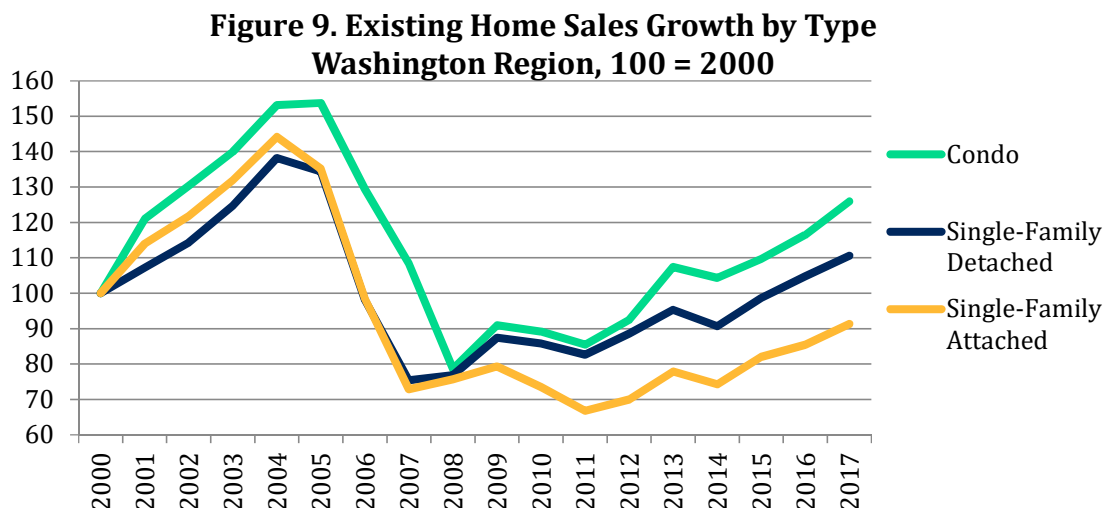


Sources: RealEstate Business Intelligence, LLC; The Stephen S. Fuller Institute at the Schar School, GMU

Of the home types, condo sales were the most robust between 2000 and 2017 (Figure 9). The number of condo sales peaked in 2005 at 22,223 sales. Condo sales hit their trough just three years later in 2008, falling 48.8 percent. Between 2008 and 2017, condo sales climbed 60.1 percent and were just 18.1 percent below their peak 2008-level.

Single-family detached homes followed a similar pattern, peaking in 2004 at 59,999 sales before decreasing by 45.4 percent between 2004 and 2007. Since 2007, single-family detached home sales increased a total of 46.5 percent bringing the number of sales to 80.0 percent of their peak 2007-level.

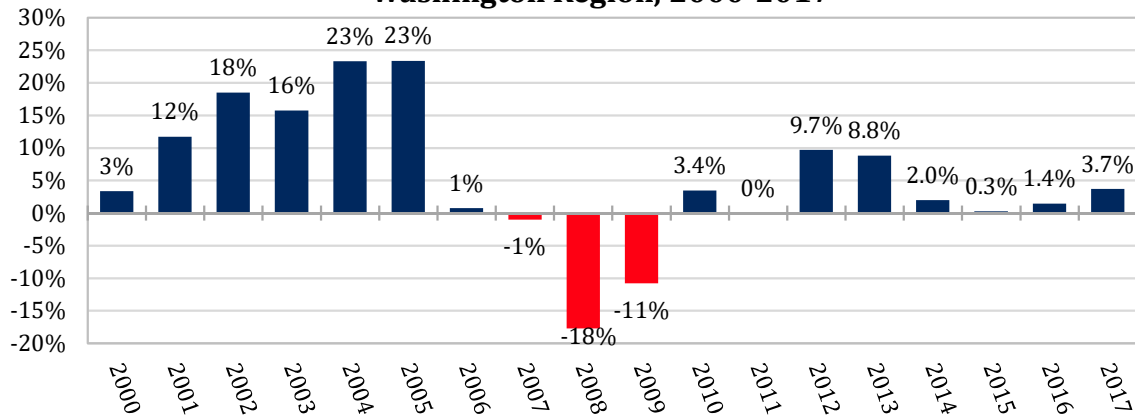
The number of single-family attached sales recovered more slowly. Sales peaked in 2004 at 35,995 sales and decreased sharply through 2007. The number of sales rose between 2007 and 2009, but this trend reversed between 2009 and 2011. As a result, single-family attached sales reached their lowest level in 2011 and were 53.7 percent below their peak 2004-level. Between 2011 and 2017, the number of closed sales of single-family attached homes increased 36.8 percent. As a result of the sharper losses and weaker gains, sales of existing single-family attached homes in 2017 were 63.4 percent of their peak, the lowest of all home types.



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

The median home price in the region has also had an uneven recovery since 2010 (Figure 10). The median home sales price peaked at \$399,000 in 2006. Between 2006 and 2009, the median price decreased to \$290,000, a 27.3 percent decline. Price growth did not return in earnest until 2012 and 2013. However, this recovery was reversed by the weaker economy and prices increased a total of 7.5 percent between 2013 and 2017, or just 1.8 percent per year. The median price in the region has yet to reach its pre-Recession peak and was 96.5 percent recovered in 2017.

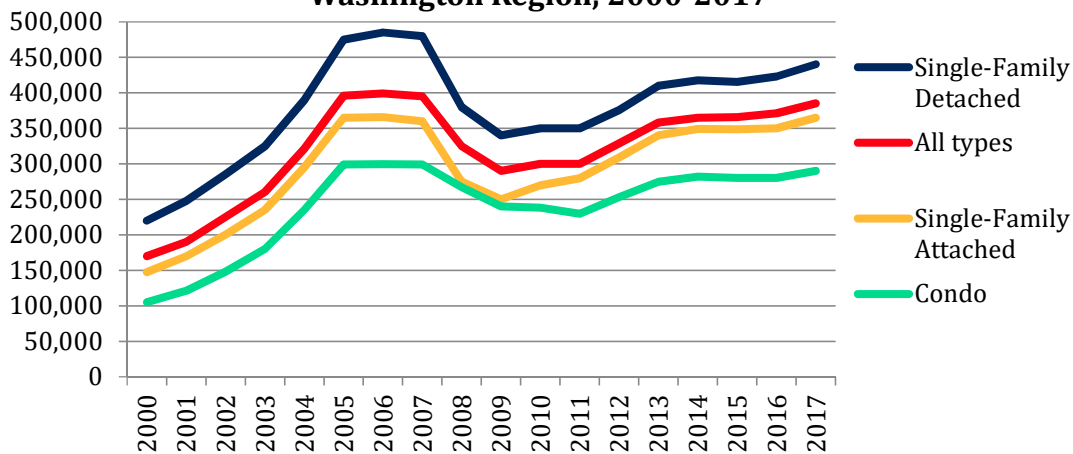
**Figure 10. Change in Median Sales Price,
Washington Region, 2000-2017**



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

Each of the home types followed the same pattern and none had fully recovered as of 2017 (Figure 11). The median price of a single-family attached homes was 99.7 percent of its 2006 peak, the highest of any home type. Condos reached 96.8 percent of their peak pricing in 2017. The median price of a single-family detached home in 2017 was just 90.7 percent of its peak level and was the least recovered of all home types.

**Figure 11. Median Home Sales Price by Type
Washington Region, 2000-2017**



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

Additionally, the difference between the pricing of the different home types has decreased, resulting in price compression. In 2000, the median price of a single-family detached home was 43.2 percent higher than the median price of a single-family attached home. By 2017, this difference had shrunk to just 20.6 percent. A similar level of price compression occurred between single-family attached and

condo homes. In 2000, the median single-family attached home sold for 37.4 percent more than a condo. In 2017, this difference was 25.9 percent.

This price compression also occurred for single-family homes by size: homes with two and three bedrooms had faster gains compared to 2000 than those with five or six bedrooms (Figure 12). As a result, the price premium for the extra bedroom has decreased, unless households are able to spend more than \$1 million for a large home with more than seven bedrooms. These households are the minority; in 2017, only 335 homes with seven or more bedrooms sold, accounting for 0.7 percent of all sales.

**Figure 12. Median Sales Price of Single-Family Detached Homes
by Number of Bedrooms, Washington Region**

	2000	2017	Percent Change
0/1 Bedrooms	145,000	240,000	65.5%
2 Bedrooms	122,000	235,000	92.6%
3 Bedrooms	169,000	325,000	92.3%
4 Bedrooms	249,900	460,000	84.1%
5 Bedrooms	324,900	590,000	81.6%
6 Bedrooms	465,000	795,000	71.0%
7+ Bedrooms	430,000	1,070,000	148.8%

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

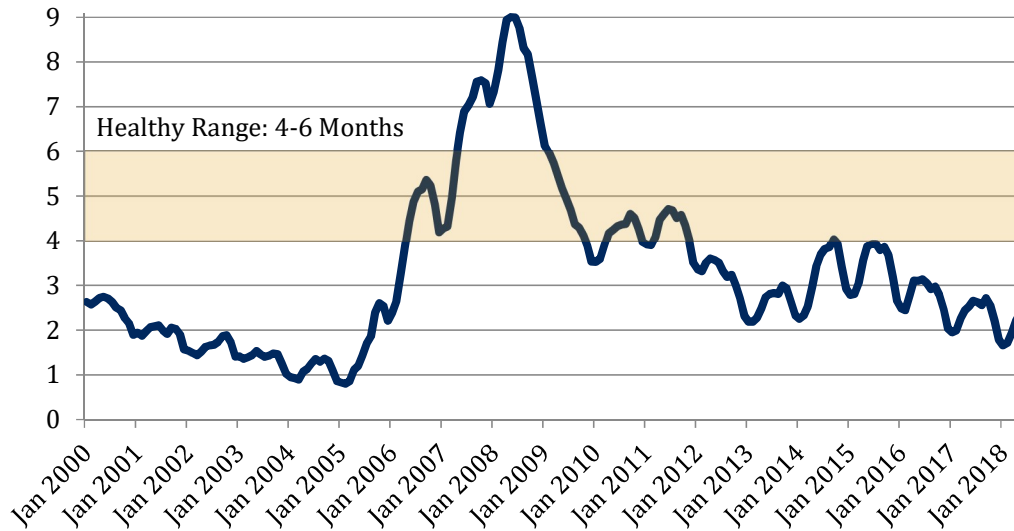
In general, potential home buyers and sellers postpone their buying and selling decisions in response to economic uncertainty. In the Washington region, that uncertainty has been the result of the federal government, first with the 2013 shutdown and sequestration in 2014 and, more recently, the general uncertainty resulting from the Trump Administration. This uncertainty is unlikely to subside through the next election cycle, resulting in a continuation of the past year's trends.

IV. Home Supply Trends

Inventory in the Washington region has been tight since the Recession. The number of active listings remains low and continues to decrease. New home permits have also been subdued and consist of a larger share of multifamily units, which are likely rental units. An increasing number of homes have also had a single owner for more than 20 years, further diminishing the stock of homes available for potential buyers.

The Washington region has had fewer than four months of supply, the minimum level typically considered to be healthy, since 2012 (Figure 13). Supply has also been trending downwards, reaching a 13-year low in January 2018 of 1.7 months. The Washington region has historically had relatively low supply, but the recent downward trend is exacerbated by subdued home sales, which are used to calculate the supply needed each month, and overall population growth.

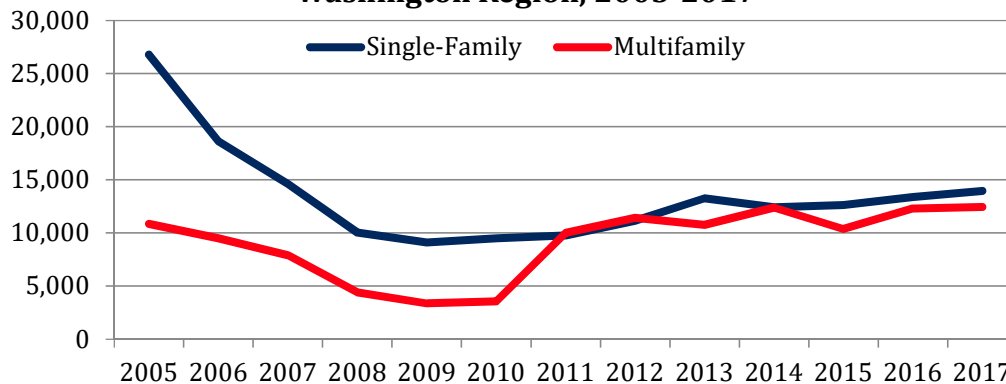
**Figure 13. Months of Supply
Washington Region, 2000 - May 2018**



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

The Washington region has also added relatively few new homes in recent years (Figure 14). Since 2011, units in multifamily buildings have accounted for nearly one-half (47.9%) of all new permits. By contrast, during the 2005-2010 period, multifamily units accounted for 30.9 percent of all new permits. Because multifamily buildings are far more likely to be rental units, the recent pace of new construction for ownership is likely to be 2-8 percent less than the 2005-2010 average, a period in which builders of all types were pulling back from the pre-Recession build-up.

**Figure 14. New Home Permits
Washington Region, 2005-2017**



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

Another compounding factor has been the large share of homes that have not been on the market for more than 20 years. In 2000, 19.3 percent of all single-family detached had been owned by the same household for the past 20 years. By 2015, this share had increased to 23.3 percent. So even though the total number of single-family detached homes increased during this period, a larger share have not been in the home sales inventory, further reducing the options available to potential home buyers.

Altogether, the number of unsold active listings, new home permits and limited stock of homes on the market have resulted in a tight supply of homes for new potential buyers. This limited supply has not translated to increased price growth for the region overall, as shown on page 9. The lackluster gains, in aggregate, most likely reflect the economic trends discussed in pages 1 through 4.

V. Home Ownership Trends and an Upcoming Baby Boomer Sell-Off?

Baby Boomers and older adults, in general, are the dominant force among the region's and the nation's home owners. Nationally, discussion in the popular press about the "Baby Boomer Sell-Off" began in 2013⁶ but this trend has not yet come to fruition, in part because of economic trends including delayed retirement as a result of the Recession and remaining years left on home mortgages.⁷ Home owners in the Washington region have followed a similar pattern.

Nationally, some experts predict that the sell-off will begin in the mid-2020s.⁸ At first glance, this conflicts somewhat with how Baby Boomers respond in surveys. A Demand Institute survey of Baby Boomers in 2013 showed that only 37 percent planned to move from their current home.⁹ A survey of owners aged 55 years and older conducted by Freddie Mac in 2016 had a similar finding: 63 percent preferred to age in place. Because of the large presence of Baby Boomer owners, even if only 20-30 percent of Baby Boomers decide to sell in the upcoming years, the effect on the nation's and region's housing market would be significant.

⁶ For an example, see <https://www.citylab.com/equity/2013/03/aging-baby-boomers-and-next-housing-crisis/4863/>. Academics began examining this trend much earlier, with research being published as early as 2008. For an example, see Dowell Myers and SungHo Ryu, "Aging Baby Boomers and the Generational Housing Bubble: Foresight and Mitigation of an Epic Transition," *Journal of the American Planning Association* 74, no. 1 (January 31, 2008): 17–33. *This footnote and the sentence it references was updated on July 30, 2018.*

⁷ <http://www.jchs.harvard.edu/housing-a-growing-population-older-adults>

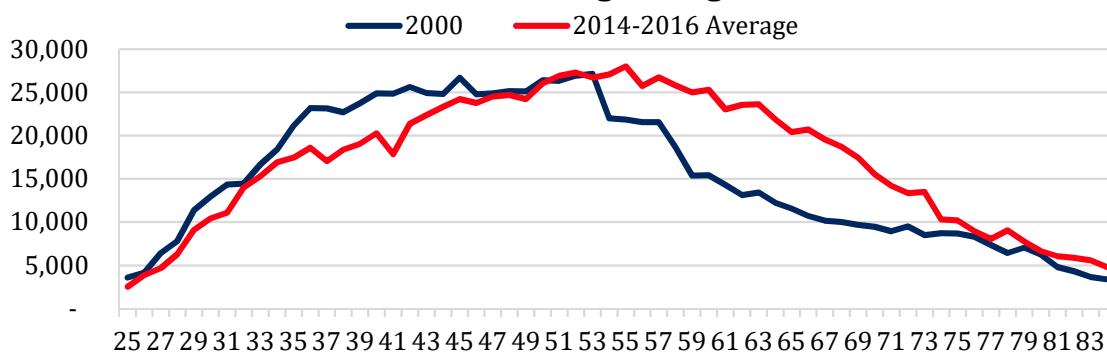
⁸ <http://realtormag.realtor.org/daily-news/2017/04/20/big-boomer-sell-coming-in-2020s>

⁹ <http://demandinstitute.org/baby-boomers-and-their-homes/>

Home owners in the Near-In Washington region¹⁰ were far more likely to be headed by someone between 52 and 70 years old during recent years, and this age group accounted for 41.6 percent of all owners during the 2014-2016 period. For comparison, in 2000 householders in this age range accounted for just 32.0 percent of all owners.

In absolute terms, 442,355 households who owned were headed by an adult between 52 and 70 years old during the 2014-2016 period (Figure 15). Compared to 2000, this number increased 44.9 percent. The total number of home owners increased just 11.5 percent during this period.

**Figure 15. Home Owners by Age of Householder
Near-In Washington Region**

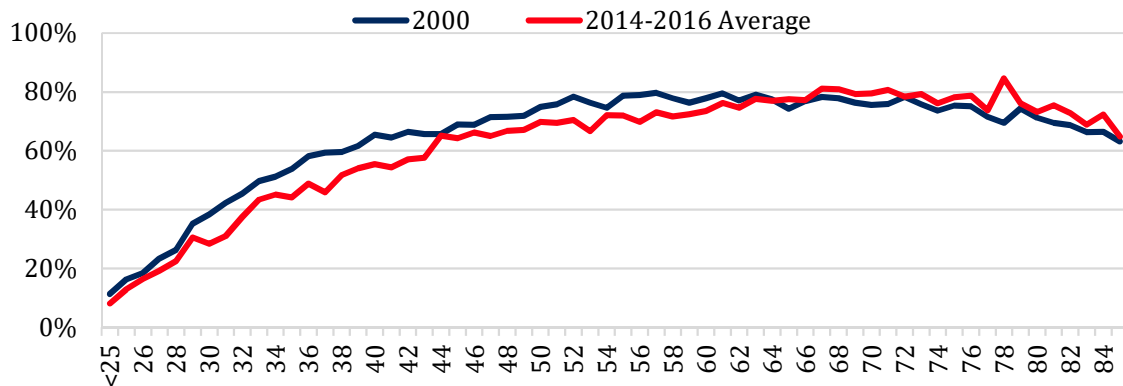


Source: U.S. Census Bureau (American Community Survey, 2000 and 2014-2016 Microdata);
The Stephen S. Fuller Institute at the Schar School, GMU

This trend is primarily due to demographics, not significant changes in housing preferences (Figure 16). A larger share of the region's population was older than 50 years old during the recent period compared to 2000, a difference driven by significant presence of the Baby Boomer generation in the region. Home ownership rates for much of this age group differed little in the recent period when compared to 2000. Householders aged 65 years old and over were somewhat more likely to be owners than in 2000 and had an ownership rate of about 3.2 percent higher (76.5% in 2014-2016 vs 73.3% in 2000). This may reflect improved health and technology that allow for adults to remain in their homes for longer.

¹⁰ Frederick, Montgomery and Prince George's counties in Maryland, the District of Columbia, and Arlington, Fairfax and Prince William counties and the cities of Alexandria, Falls Church, Fairfax, Manassas and Manassas Park in Virginia

**Figure 16. Home Ownership Rate by Age of Householder
Near-In Washington Region**

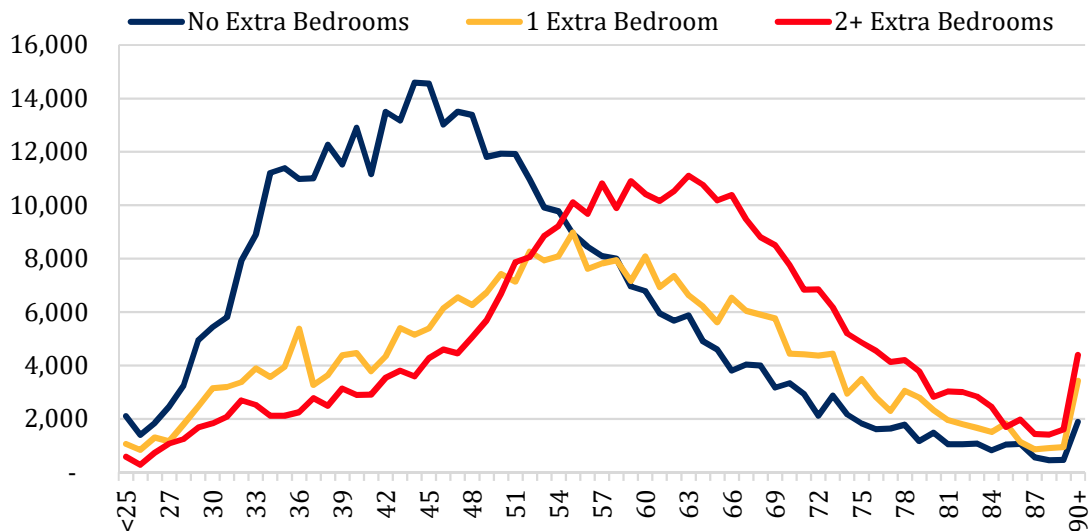


Source: U.S. Census Bureau (American Community Survey, 2000 and 2014-2016 Microdata);
The Stephen S. Fuller Institute at the Schar School, GMU

The home owner rates of all other adults decreased between 2000 and the 2014-2016 period. The decline was sharpest for adults younger than 45 years old: in 2000, 47.4 percent of householders in this age group owned; in 2014-2016, just 40.7 percent did. Similarly, the ownership rate for householders between 45 and 64 decreased modestly, from 75.2 percent to 70.6 percent.

As households age, they are more likely to become empty nesters with more bedrooms than people living in the home (Figure 17). For married couples sharing a bedroom, this calculation will underestimate the number of extra bedrooms. For example, a two-person married couple who lives in a home with three bedrooms will have one more bedroom than people and be shown as having just one “extra” bedroom in the graph below. Even with this conservative estimate, more than 273,540 households headed by someone 50 years old or older had two more bedrooms than people in their home during the 2014-2016 period. This accounts for more than one-quarter (25.8%) of all owners during this period.

**Figure 17. Home Owners by Age of Householder and Number* of Bedrooms, Near-In Washington Region
2014-2016 Average**

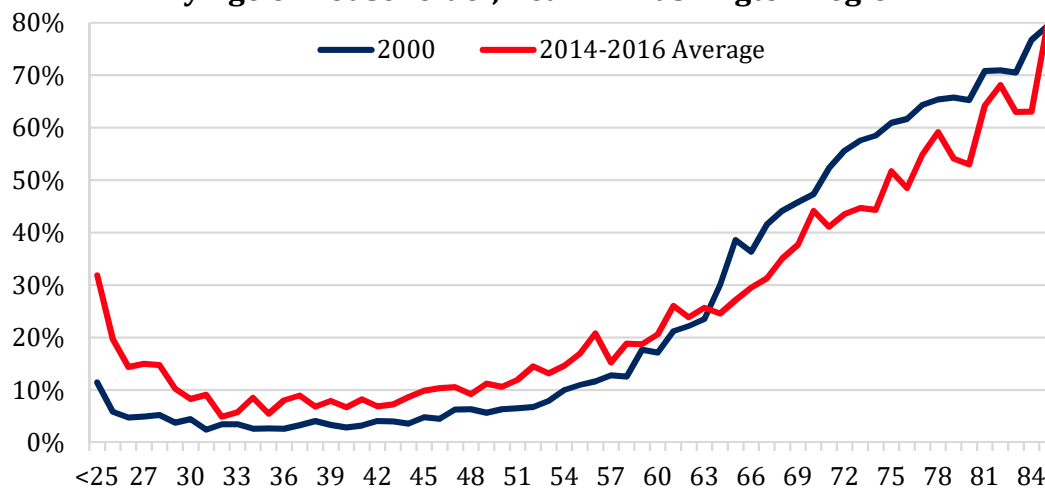


Source: U.S. Census Bureau (American Community Survey, 2000 and 2014-2016 Microdata);
The Stephen S. Fuller Institute at the Schar School, GMU *Bedrooms minus people

The significant number of older home owners in larger homes means that even a modest shift in preferences could have an outsized impact on the housing market. If even three percent of owners aged 50+ with two or more extra bedrooms decided to sell, an additional 8,210 homes would be put on the market, the equivalent of 12.4 percent of all the homes sold in the Near-In Washington region in 2017. In other words, a change in behavior of a small share of a very specific type of older owners would still result in a 5-10 percent increase in the supply of homes for sale during a single year.

There are two potential moderating factors: a smaller share of homes owned free and clear, and lower mobility rates. As shown in Figure 18, younger adults who owned were less likely to have a mortgage during the recent period when compared to 2000. For adults aged 63 years old and older, the reverse was true. This data source does not include any information about the mortgage (length left, interest rate etc.), but it seems likely that the presence of a mortgage may alter a potential mover's decision, especially if a low interest rate was locked-in during the past several years.

**Figure 18. Percent of Owners without a Mortgage
By Age of Householder, Near-In Washington Region**

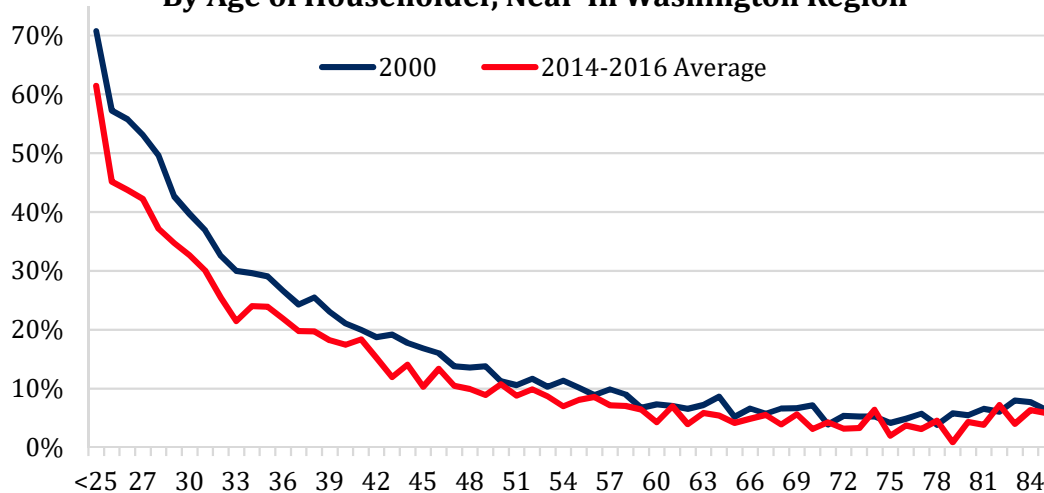


Source: U.S. Census Bureau (American Community Survey, 2000 and 2014-2016 Microdata);
The Stephen S. Fuller Institute at the Schar School, GMU

A second complicating factor is the overall decrease in mobility rates, both in the Near-In Washington region and the nation.¹¹ As shown in Figure 19, people of every age living the region moved less frequently during the 2014-2016 period when compared to 2000. Because mobility rates have been decreasing since the late 1980s nationally, it seems unlikely that this trend will reverse in the upcoming years. For the Near-In Washington region, the lower mobility rates may continue to contribute to a less dynamic housing market.

¹¹ See <https://www.census.gov/newsroom/blogs/random-samplings/2017/01/mover-rate.html>

**Figure 19. Share of Households Who Moved in the Past Year
By Age of Householder, Near-In Washington Region**



Source: U.S. Census Bureau (American Community Survey, 2000 and 2014-2016 Microdata);
The Stephen S. Fuller Institute at the Schar School, GMU

Over the next five to ten years, it seems increasingly likely that a portion of older home owners will want to transition from their current homes into ones that better suit their needs, both in the Washington region and in the nation. Just like any other home seller, their ability to do so will be highly contingent upon finding the right unit type to purchase and being able to sell their current home. As shown in Section I, the near-term economic forecast is for average growth. Population growth is also likely to slow (Section II). In the past five years, these factors have played a role in the modest home price appreciation, despite tight inventory. Based on these prior trends, an increase in homes on the market could create some volatility in the housing market, especially at the neighborhood-level.

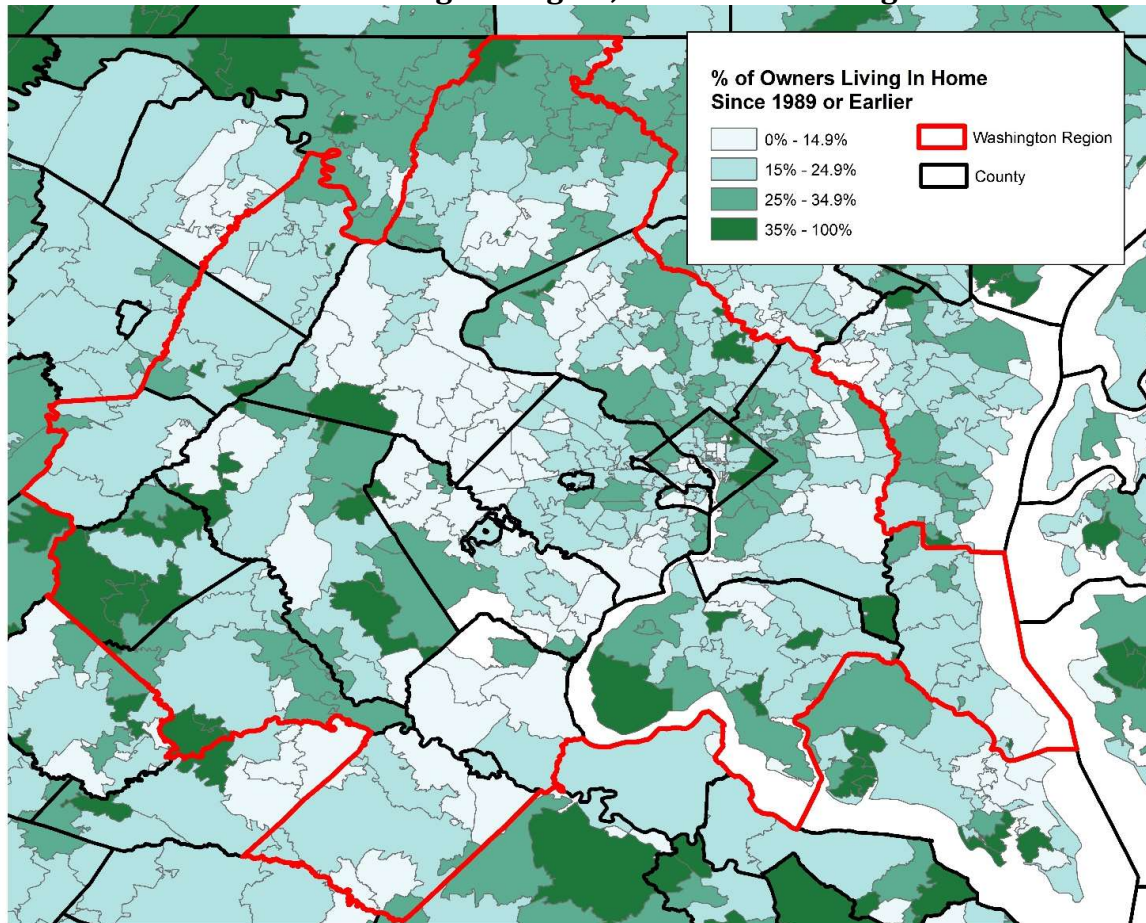
VI. Implications for the Upcoming Housing Market by Neighborhood

Baby Boomers and longtime owners are more concentrated in some neighborhoods; ZIP codes are used here as the proxy for a neighborhood. These neighborhoods have had a smaller stock of homes available for new purchasers, which has likely played a role in larger-than-average price increases. These neighborhoods are also the most likely to have increase supply in the upcoming years, perhaps moderating price growth going forward.

Of owners in the Washington region during the 2012-2016 period, 18.9 percent moved into their homes prior to 1989 and had lived in their homes for more than 23-27 years (referred to hereafter as longtime owners). As shown in Figure 20, the share of longtime owners varied considerably by ZIP code, with a larger share of longtime owners in most ZIP codes inside the Beltway. The ZIP codes with a high concentration of longtime owners have the most potential for higher turn-over rates

in the upcoming years, if Baby Boomers do decide to downsize (or trade product types). See the appendix for detailed information by ZIP code.

**Figure 20. Share of Longtime Owners
in the Washington Region, 2012-2016 Average**

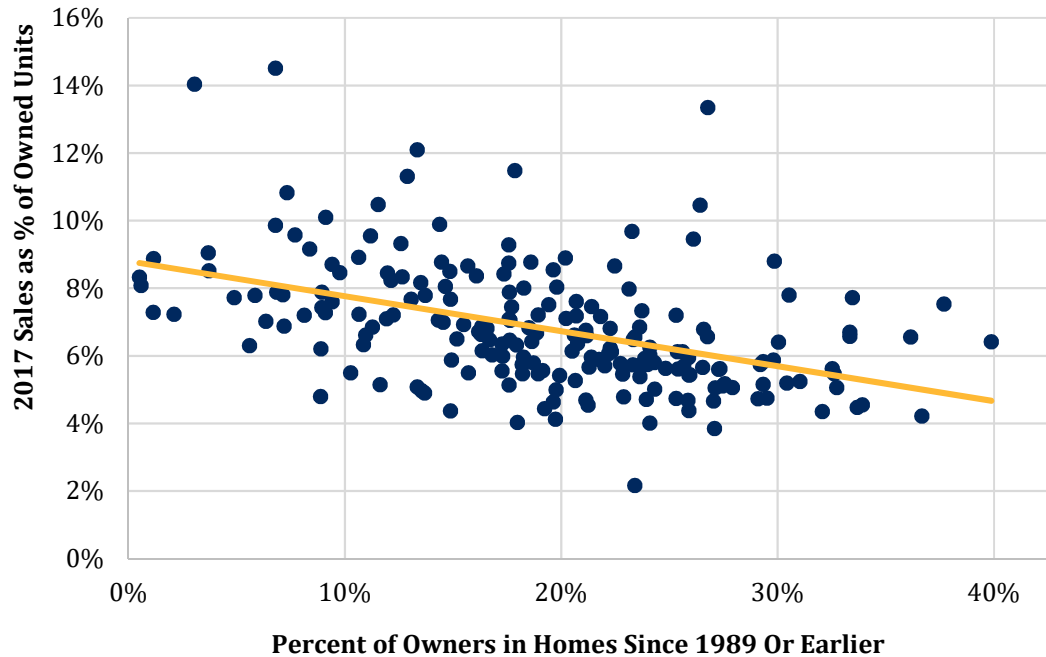


Source: U.S. Census Bureau (2012-2016 ACS); The Stephen S. Fuller Institute at the Schar School, GMU

Unsurprisingly, neighborhoods with a large share of longtime home owners had lower turn-over rates. Figure 21 shows each ZIP code in the Washington region that had at least 100 sales in 2017 and its characteristics. The horizontal axis shows the share of longtime home owners (those who bought more than 23-27 years ago). The vertical axis shows the turn-over rate in 2017: the number of homes sold compared to the number of owners during the 2012-2016 period. A clear downward trend emerges, with lower turn-over rates in ZIP codes with a large share of longtime owners.

Figure 21. Time in Home vs Turn-Over of Units
Washington Region

Each dot is a ZIP code with more than 100 sales in 2017



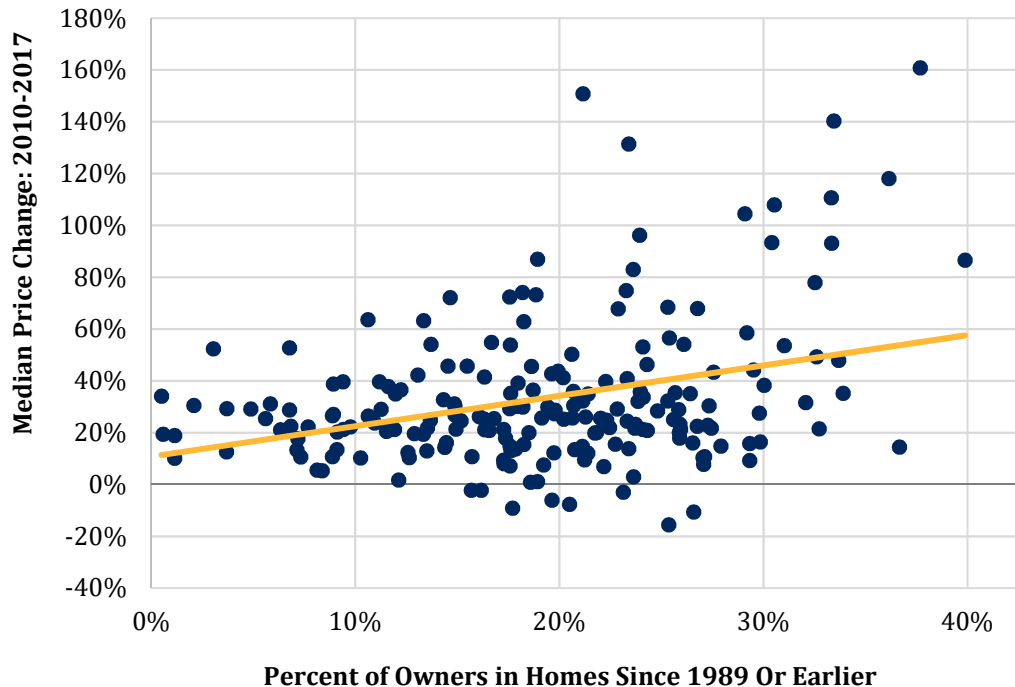
Source: MRIS, The Stephen S. Fuller Institute at the Schar School, GMU

As a result, the inventory in neighborhoods with a large share of longtime owners has been more constrained. This reduced availability of homes appears to have put increased price pressure on the units that have sold. Figure 22 shows the share of longtime owners on the horizontal axis and the percentage change in the median home sales price between 2010 and 2017 for each ZIP code with more than 100 sales in 2017. An upward trend emerges, with ZIP codes with a higher share of longtime owners, on average, having larger increases in median prices. Overall, a one percentage increase in the share of longtime owners correlates with a 9.5 percent increase in the rate of median price growth.¹²

¹² Significant at the 99.9% level

Figure 22. Time in Home vs Sales Price Growth
Washington Region

Each dot is a ZIP code with more than 100 sales in 2017



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

Neighborhoods with a large share of longtime owners are also likely to be in more established areas, which may have contributed to the price appreciation. However, the small share of turn-over, which restricts the inventory beyond the number of active listings, is also likely playing a significant role in the sale price growth in these areas. When the longtime owners do decide to move, the increase in supply may have a secondary effect on housing prices in these areas. The recent growth in sales prices has reflected, in part, a broader lack of supply in these ZIP codes and as the inventory increases, the growth may moderate.

VII. Conclusion

The Washington region's housing market is facing several headwinds. Key trends that have shaped the recent housing market, modest economic growth and slowing population growth, are expected to continue in the near-term. However, inventory may increase as longtime home owners, primarily Baby Boomers, downsize or trade product types. In combination with rising interest rates and high levels of student debt among potential buyers, the housing market may be on less stable footing going forward.

However, there may be potential buyers waiting in the wings. In 2016, more than 69,300 renter households headed by someone younger than 50 years old earned at least \$150,000. Many of these households wish to buy. Another 151,500 households own homes that have no extra bedrooms, earn more than \$150,000 and are headed by someone younger than 50 years old; this total includes 28,100 households earning more than \$300,000. These households may wish to trade-up, but have been unable to do so because of limited stock. These potential buyers are likely to be highly discerning and willing to live in their current housing situation, either as renters or in too-small homes, until the right unit comes along for the right value. Potential buyers appear to have learned their lessons from the housing bubble and seem to be more unwilling to purchase for the sake of ownership.

As a result, the near-term housing market has the potential to be more dynamic than in past years. Some longtime owners who wish to sell may have difficulty attaining the price gains they witnessed in their neighborhoods during recent years, when inventory was limited, especially if their neighborhood has a large number of longtime owners who put their homes on the market at once. Some owners may be willing to sacrifice some upfront value for increased happiness they may attain through moving; some research shows that older movers generally express a higher degree of overall psychological well-being compared to those that have not moved.¹³ Others may decide to postpone their move.

Potential buyers are likely to continue to be patient and highly selective. Homes that fit their criteria, driven both by location and the features of the property, will likely sell quickly and potentially gain in pricing. Altogether, the sales patterns and pricing in upcoming years will be highly spot- and unit-specific. Neighborhoods with a large share of longtime owners will have the most volatility in the upcoming years.

¹³ Calvo, Estaban, Kelly Haverstick, and Natalia Zhivan (2009), "Determinants and Consequences of Moving Decisions for Older Americans," 11th Annual Joint Conference of the Retirement Research Consortium.

Appendix

Figure A1. The Washington Region

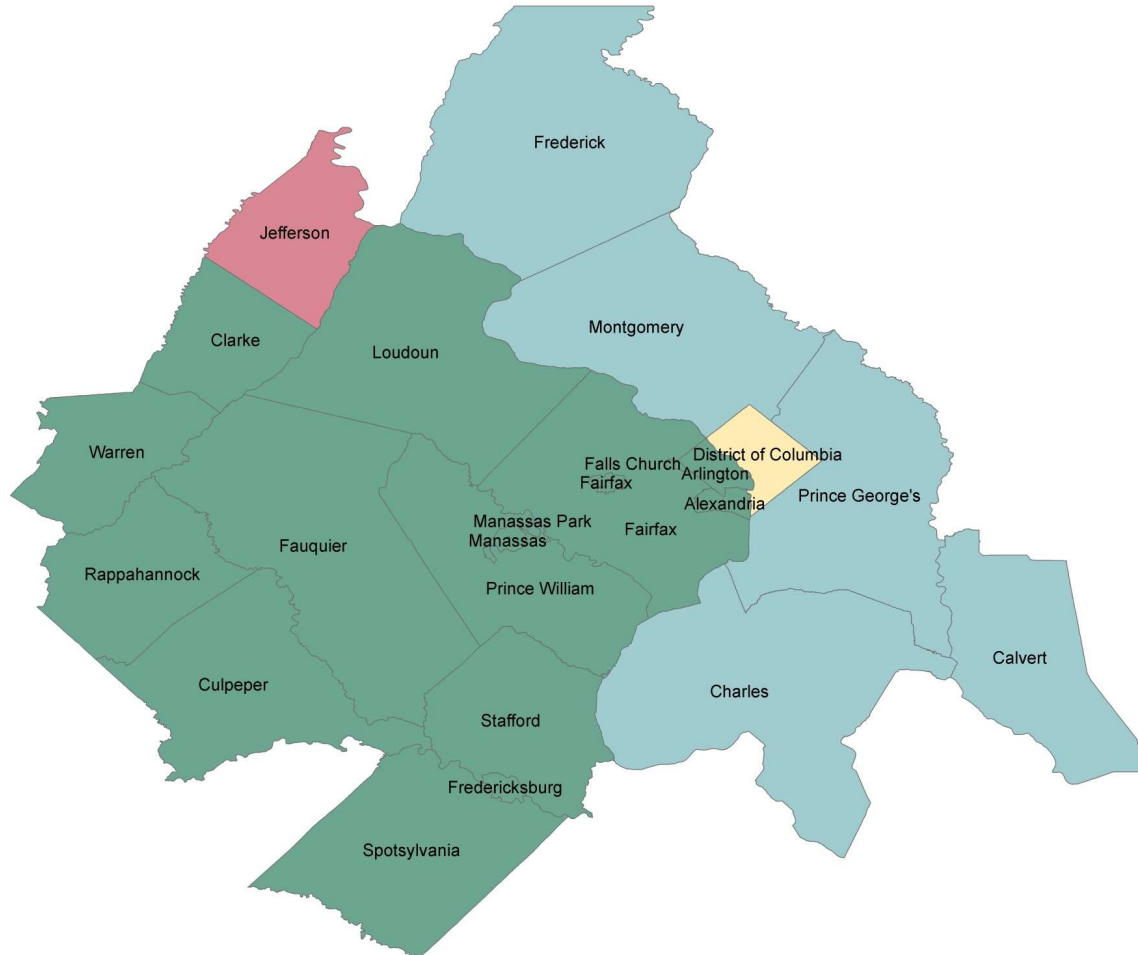


Figure A2. The Near-In Washington Region

