

COMMUNITY PROFILE

This section of the Plan provides a general overview of the Northern Virginia region. It consists of the following four subsections:

- Geography, Hydrology, and Climate
- Population, Demographics, & Economic Growth
- Transportation
- Housing

Geography, Hydrology, and Climate

The Northern Virginia Planning District (Virginia Planning District #8) is located at the north-east corner of the Commonwealth of Virginia, lies across the Potomac River from the Nation's Capital, Washington, DC and is part of Washington, DC-MD-VA-WV Primary Metropolitan Statistical Area (PMSA). **Figure 3.1** provides an orientation map for the Northern Virginia Region including all counties, cities and towns within the region as well as the region's neighboring jurisdictions.

Northern Virginia is made up of the counties of Arlington, Fairfax, Loudoun, and Prince William; the independent cities of Alexandria, Falls Church, Fairfax, Manassas, and Manassas Park; the major towns of Dumfries (Prince William County), Herndon and Vienna (Fairfax County), and Leesburg and Purcellville (Loudoun County); and the smaller towns of Clifton (Fairfax County), Hamilton, Hillsboro, Lovettsville, Middleburg, and Round Hill (Loudoun County), and Haymarket, Occoquan, and Quantico (Prince William County). **Figure 3.2** illustrates a base map overview of the Northern Virginia region including all participating county, city and town jurisdictions as well as the identification of interstate highways, major roads, major water bodies and lands outside the authority of participating jurisdictions such as Dulles Airport and U.S. government property.

Northern Virginia is home to numerous U.S. government facilities such as the Pentagon, CIA, and USGS. Historic and cultural resources include George Washington's historic home on the Potomac, Mount Vernon, Arlington National Cemetery, and the Udvar-Hazy Center of the Smithsonian Institution's National Air and Space Museum at Washington-Dulles International Airport.

The Northern Virginia Planning District is divided by three physiographic provinces of Virginia; the Coastal Plain, the Northern Piedmont, and the Blue Ridge (**Figure 3.3**). The Coastal Plain lies roughly east of Interstate Highway-95/395 including the eastern portions of the city of Alexandria, and the counties of Fairfax, and Prince William. The Northern Piedmont province lies roughly between I-95 and US Highway 15 in central Loudoun and western Prince William counties. It is bounded by Blue Ridge Mountains on the west with ridges and foothills and hollows rolling down to the Potomac River in the east. Elevations range from more than 1,950 feet above sea level in the Blue Ridge Mountains in western Loudoun County to sea level in eastern Prince William County on the Potomac River. Total land area is 1,304 square miles.

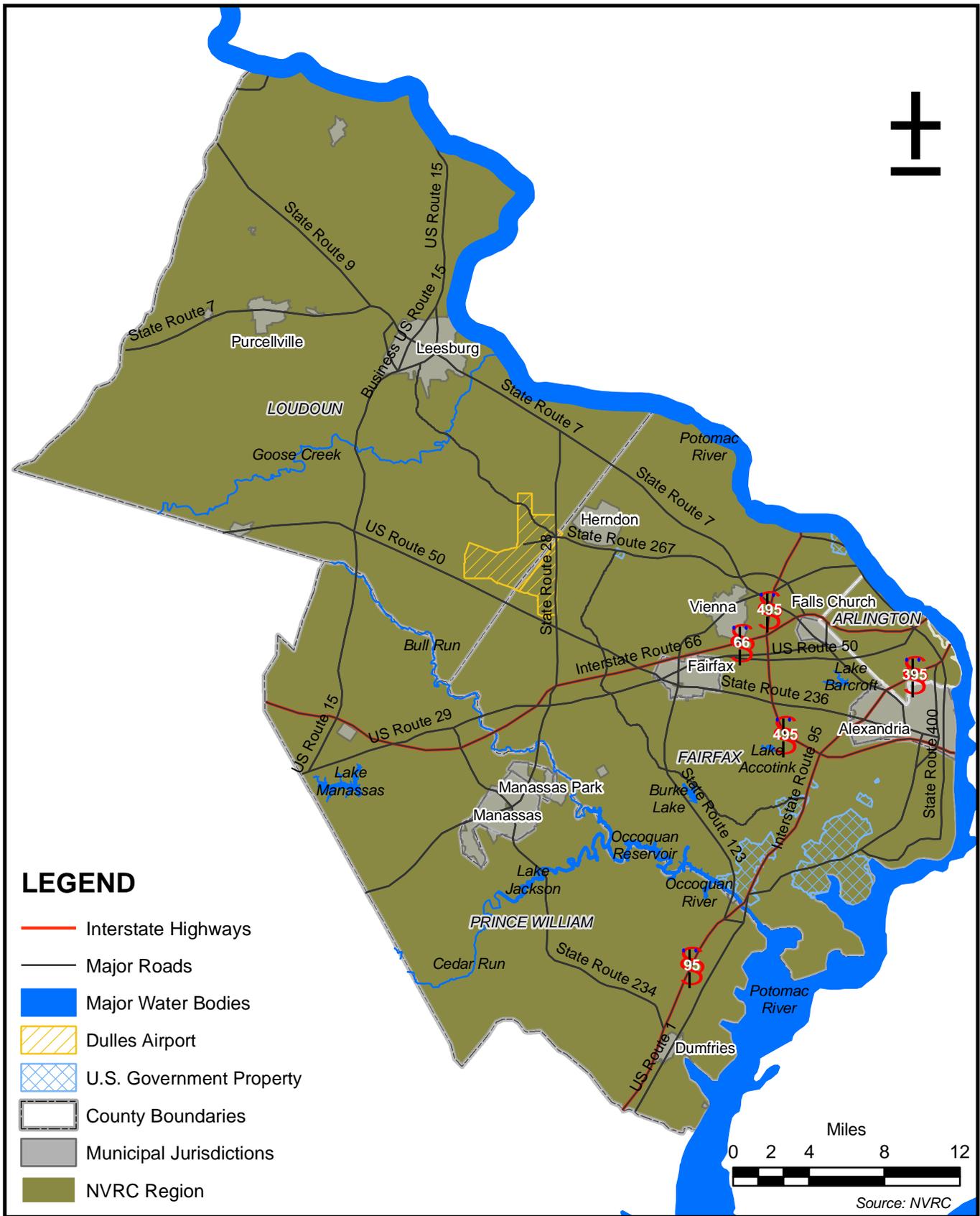
Northern Virginia lies entirely within the Potomac River watershed. After passing Harper's Ferry, WV, the Potomac forms the border between Maryland and Virginia, flowing in a southeasterly direction. The topography of the upper reaches of the basin is characterized by gently sloping hills and valleys. At Great Falls, the stream elevation rapidly descends from over 200 feet to sea level. Eastward of Great Falls, the Basin enters into the Coastal Plain physiographic province.



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Figure 3.1
Orientation Map



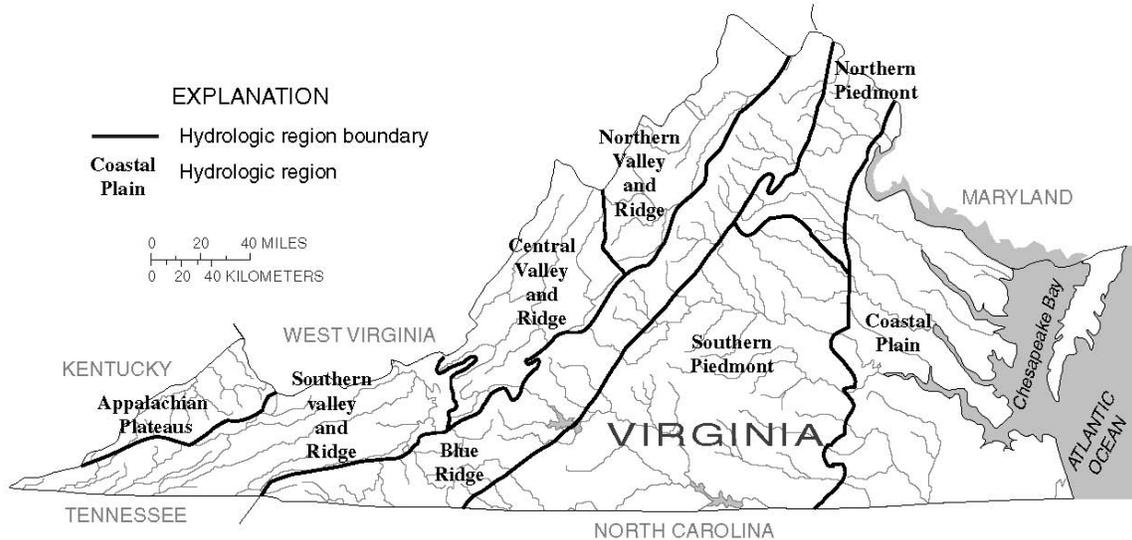


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Figure 3.2
Northern Virginia Region - Base Map

The area has a moderate climate. Average temperatures are approximately 50 degrees, and range from January lows in the mid-20s to July highs in the high-80s. Annual rainfall averages above 40 inches and is supplemented with approximately 14 inches of snow.

Figure 3.3
Hydrologic Regions of Virginia



Source: U.S. Department of the Interior, U.S. Geological Survey, Fact Sheet 023-01

Population, Demographics, & Economic Growth

A Populous Region that Continues to Grow and Change

Proximity to the nation's capital has been fueling population growth in Northern Virginia for more than 60 years. Since the mid-1930's when large numbers of federal workers brought to Washington, D.C. during the New Deal first began spilling out into adjoining suburbs, people have been moving into Northern Virginia at an accelerated rate. Like a water faucet turned on and left running, the flow of people has remained vigorous and constant for most of the post-war period.

Today, Northern Virginia is home to two million people. As seen in **Table 3.1**, demographers are projecting a half million more residents will be added this decade, — on average, 50,000 newcomers per year, the largest increase in the region's history — and another 275,000 the decade after. By 2020, the population should reach 2.6 million.

**Table 3.1
Projected Population Growth in Northern Virginia, 2004-2020 (in millions)**

Jurisdiction	2004	2010	2020	2004-2020
Alexandria	134.2	143.9	152.6	18.4
Arlington County	193.2	212.2	233.1	39.9
City of Fairfax	23.3	23.9	26.0	2.7
Fairfax County	1,007.4	1,133.0	1,193.4	186.0
Falls Church	11.2	12.3	14.7	3.5
Loudoun County	241.8	318.1	422.9	181.1
Manassas	37.0	38.0	40.2	3.2
Manassas Park	12.4	15.0	16.5	4.1
Prince William County	344.0	415.3	488.2	144.2
Northern Virginia	2,004.5	2,311.7	2,587.6	583.1

Source: Metropolitan Washington Council of Governments, Cooperative Forecasts, Draft Round 7.0

The locus of population growth, inexorably pushing outward, is now sweeping across the broad expanse of the outer rim of the Northern Virginia region. This is where the pressure to absorb new metropolitan growth is most intense, where it will remain concentrated for decades to come. More than 60 percent of the three-quarter million plus newcomers projected from 2000 to 2020 will settle in Prince William and Loudoun Counties.

When the decade of the 1960's began, Northern Virginia was a suburban bedroom community of predominantly white, middle-class families with children, not dissimilar demographically from hundreds of other places. By the end of the century, it had evolved into a complex blend of urban and suburban influences, an intricate demographic composite formed by the economic growth, transformation and prosperity of the Washington metropolitan economy, by a rising tide of immigration, by aging of the baby boom generation and by other powerful agents of social and demographic change.

What are the salient features of Northern Virginia's demographic profile, the characteristics that best define the region and distinguish it from other places in the United States?

Complex Blend of Urban and Suburban

A second salient feature of Northern Virginia's demography is the degree of urbanization etched in locality profiles.

In many ways, American suburbs have become more urban, as traffic congestion, overcrowding, immigrants, and more diverse homes and lifestyles work their way into suburbia. But urban pressures and forms, while present everywhere, have not impacted suburbia equally. The pressures are more intense, as a general rule, in neighborhoods settled by the first wave of post-war suburbanization, as they age and become part of an expanding urban core.

In Northern Virginia, impacts of urbanization can be observed in the contrasting demographic profiles of close-in and outer-fringe localities. The differences can be traced, primarily, to variations in the affordability, age and composition of local housing inventories. As types of housing are unevenly distributed across regional and local landscapes, so too is the flow of different population streams as they seek a home in a location and at a price range suitable to their lifestyle, thereby stamping sections of the region with a distinctive demographic coloration.

Listed below are some of the major demographic differences found in the close-in and outer-ring suburbs of Northern Virginia.

Contrasting Demographic Profiles Close-in and Outer-Ring Suburbs of Northern Virginia

I. Close-in suburbs of Northern Virginia...

(primarily, in Alexandria, Arlington County and some inside-the-beltway Fairfax neighborhoods)

- are communities that have morphed over the past three decades from conventional family-centered suburbs into new-urban enclaves that, demographically, have become similar to what you find today in downtown Manhattan, San Francisco, and other U.S. cities
- have become “first-stop” immigrant gateways
- are approaching minority-majority status
- are distinctive and stand out nationally for their high percentage of non-family households, single-person households, childless households, renters, and multi-unit apartment and hi-rise housing (of 50 or more units)
- have among the smallest percentage of school age children, and among the largest percentage of young adults (20 to 35 year old), found anywhere in the U.S.
- average household sizes also are among the smallest in the country
- have high population turnover, people continually moving in and out, with about half of the population replaced every five years
- exhibit evidence of a widening gap between have and have-nots, a Tale of Two Cities, with large numbers, mainly whites, at the high end of the income ladder; and large numbers, mainly immigrants and minorities, at the low; few in the middle.

II. Outer-ring suburbs of Northern Virginia...

(in Prince William and Loudoun Counties and parts of Fairfax County)

- are communities that are more traditionally suburban in character.
- have lots of families, school-age children, and homeowners who are living in detached single-family houses and townhouses
- have large average household sizes
- have growing foreign-born populations but immigrants with socio-economic backgrounds different from those pouring into the inner core. Outer suburban immigrants, generally, have lived in the U.S. longer, are better educated, are more affluent and are more likely to live in homes they own
- have fewer poor people, less evidence of a have, have-not divide; mainly a Tale of One city, many affluent, well educated homes and people; with depressed pockets and low income people to be sure, but not on the scale found closer-in

More Job Growth Projected

With a gross regional product of nearly \$288 billion dollars, the Greater Washington economy is the fourth largest metro market in the United States, the seventeen largest in the world. A few quick facts underscore the strength, performance and unique structure of its economy, of which Northern Virginia is an important sub-component. Greater Washington ...

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- is home to the federal government, the largest purchaser of goods and services in the world. Total value of federal procurement outlays received by businesses in the National Capital region during fiscal year 2004 was 42.2 billion, up from 12.5 billion in 1990.
- leads the nation in job growth over the past twenty years, averaging 52,000 new jobs per year, with job growth over the past five years substantially surpassing numbers achieved by other metropolitan areas in the United States. During this time period, the Washington area generated a total of 305,000 new jobs. The next closest metro was Las Vegas, NV with 150,000 new jobs (about the same number added in Northern Virginia).
- has been significantly outperforming the national economy on most basic indicators of economic activity, (i.e.. GRP growth, job growth, unemployment rates).
- has one of the lowest unemployment rates in the country (3.1% in 2004). Last year, its monthly unemployment rate was the lowest in the nation, among metro areas, for 11 of 12 months
- is the nation's third-largest center of bio-science companies; is home to 5,367 associations, the largest concentration in the nation; and employs more people in technology occupations (76,000) than any other location.
- is a top U.S. tourist destination, serving as host to 18.6 million domestic and international visitors in 2002.
- is home to a growing list of industries and advanced technologies on the vanguard of innovation. Many of the people and companies building the global communications network, for example, are located here, companies such as America ONLINE, UUNET Technologies Inc., PSINet Inc, Lockheed Martin, SPRINT, Comsat, Intelsat, GTE Spacenet and others.

Northern Virginia is a strong sub-regional component of the larger Washington economy, as are suburban Maryland and the District of Columbia. While all of the sub-regional markets are experiencing job growth, Northern Virginia is significantly outpacing the other two. During the 1990's, for each new job added in Suburban Maryland, Northern Virginia gained 2. This decade, the ratio has widened to 2.3 to 1.

Dr. Stephen Fuller, George Mason University, expects 2005 to record strong economic growth, adding more than 80,000 new jobs through out the metropolitan area. This will be followed by a "long-term trend of slower annual growth going forward to the end of the decade". The table below contains employment projections to 2020 developed by the Cooperative Forecasting Program of the Washington Metropolitan Council of Governments (COG).

**Table 3.1
Projected Job Growth in Northern Virginia, 2000-2020**

Jurisdiction	2000	2010	2220	2000-2020
Alexandria	91.4	113.3	132.5	41.1
Arlington County	188.4	217.8	254.4	66.0
City of Fairfax	27.3	31.3	5.3	8.0
Fairfax County	550.3	683.9	784.1	233.8
Falls Church	9.4	11.8	17.8	8.4
Loudoun County	87.0	153.7	212.9	125.9
Manassas	19.9	24.6	26.3	6.4
Manassas Park	2.7	4.5	4.7	2.0
Prince William County	86.8	120.3	156.8	0.0
Northern Virginia	1,063.2	1,361.2	1,624.8	561.6

Source: Metropolitan Washington Council of Governments, Cooperative Forecasts, Draft Round 7.0

Transportation

Northern Virginia and the Washington DC metropolitan area is served by an extensive transportation network. Transportation within the Northern Virginia is primarily dependent upon an network on major highways (VA Rt. 7, I-66, US50, US29/211, I-95/395, and US1) that radiate out from the urban core (Washington, DC, Arlington and Alexandria), one major circumferential highway (I-495/95, the Capital Beltway), and other primary cross-county roads such the Fairfax County Parkway and the Prince William Parkway. The Washington area's Metro primarily serves the inner localities with eleven stations in Arlington County, four stations in the City of Alexandria, and five stations in Fairfax County. The Virginia Railway Express (VRE) commuter rail system serves communities to west cutting through central Fairfax County to the cities of Manassas and Manassas Park and to the south in eastern Prince William County continuing to the City of Fredericksburg. Several bus systems (Metrobus, Alexandria's DASH, Arlington's ART, Falls Church's George, Fairfax County's Connector, Fairfax City's CUE, and Prince William's PRTC/Omniride) provide serve through out the region.

Nevertheless, these transportation systems are being strained by the growing population, housing, and employment patterns. From 1982 to 1997, population increased by 28.3 percent but vehicle miles traveled grew by 81.5 percent, according to the Texas Transportation Institute. Between 1990 and 2000, the length of the average one-way, home-to-work commute increased from 28.2 minutes to 31.7 minutes, and this number has risen further since 2000. Workers are leaving home earlier and coming home later to make up the time that it takes to get where they need to go.

The Texas Transportation Institute 2005 Urban Mobility Report shows the Metropolitan Washington region ranks as follows:

- Number 3 in average hours lost sitting in traffic (69 – 3 hours more than previous year).
- Number 3 in congestion cost per commuter (\$1669 – \$80 more than previous year).
- Number 4 in excess fuel consumed per commuter due to congestion (42 gallons/year – 2 gallons more than previous year).

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- Number 5 in total excess gallons of fuel consumed due to congestion (88 million gallons – 4 million more than previous year)#7 Total regional congestion cost (\$2.465 billion/year – \$209 million more than previous year).
- Number 7 in total delay due to congestion (145 million hours/year – 9 million more than previous year). Total Delay due to congestion rank changed from #8 to #7 - worsened.

Transportation systems are key in providing effective emergency response, but can also influence the impact of natural disasters. This can be a particularly crucial issue in Northern Virginia due to the high levels of traffic congestion. In addition to more immediate needs, businesses and employees suffer economic consequences when roads are closed due to natural disasters.

Day to day traffic reports frequently report accidents or simply high volume levels that may bring a particular highway to a standstill. The attack on the Pentagon on September 11, 2001, Hurricane Isabel in 2004, and normal winter storms bring the regional highway system to a stop and taxes the transit system to the limits.

Northern Virginia, the State of Virginia, and the metropolitan area as a whole are actively addressing transportation through significant updates in regional plans, expansion of transit to areas such as Tysons Corner, Reston, and Dulles Airport, and introduction of operational measures such as HOT lanes (charging tolls on high occupancy vehicle lanes) to address congestions. However, under present development scenarios, Northern Virginia will still fall short of finding funding for its transportation needs in the tens of billions of dollars in the next twenty-five years.

Housing

A general market inventory of housing in Northern Virginia shows that there is a continual demand for affordable housing, with low vacancy rates throughout the region. Housing demand is being propelled by the highest high job growth in the United States.

A look at regional housing trends reveals the strengths and challenges of Washington's area's extremely strong economy. In 2003, the region's median housing price was \$286,200 according to the National Association of REALTORS, well above that of Atlanta and Chicago but below that of New York, San Francisco, and Los Angeles, putting the Washington area in the middle of the affordability scale among major metropolitan areas. The real estate and construction industries are strong, and homebuyers are realizing outstanding returns on their investments. But the region's economic growth and job creation trends are taking a toll on housing affordability. According to a George Mason University (GMU) Center for Regional Analysis (CRA) study, the area had a deficit of 43,200 housing units in 2003, a number that is expected to grow to 218,000 by 2025. Demand for housing is outpacing availability and, combined with record low interest rates, is pushing prices up beyond the means of many area residents.

As tracked by COG, the median sales price of housing has increased 59 percent over the past six years, from \$166,548 in 1997 to \$265,047 in 2003. Incomes have not been keeping pace with rising housing prices. Between 1998 and 2003, incomes increased by only 17 percent, compared with a housing sales price increase of 59 percent. The Urban Institute estimates that one-quarter of the region's households are carrying unaffordable housing cost burdens. Housing construction has been pushed to outer-ring suburban jurisdictions, where prices still remain somewhat affordable, but savings are counterbalanced to some extent by the increased cost and time of commutes.