

# REGIONAL IMPACTS OF THE COVID-19 PANDEMIC

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Cooperative Forecasting and Data Subcommittee  
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# Overview

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- Numerous actions have been taken to contain the pandemic spread of COVID-19 and to mitigate its threat to personal and public health.
- These actions have restricted socio-economic activities throughout the country, including the metropolitan Washington area.
- Staff from various COG departments are collaborating to develop a snapshot summary of observed impacts on the region from a multisectoral perspective.
- Sectors of analysis include:
  - Health
  - Economy
  - Transportation (Roadways and Public Transportation)
  - Environment

# Overview

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- A multisectoral approach will provide a snapshot summary of impacts from a broader perspective to provide more context.
- Analyses and findings, while empirical, are intended to provide a general contextual understanding of the impacts and are not intended to constitute a comprehensive “deep dive.”
- Analyses will measure what has occurred and will not be predictive in nature due to remaining uncertainties.
- Presentations to be made in two phases:
  - *Near-term Activities*: readily available data that can be presented to stakeholders starting in December 2020.
  - *Longer-term Activities*: data collection and analysis activities that may take longer to complete.

# Health

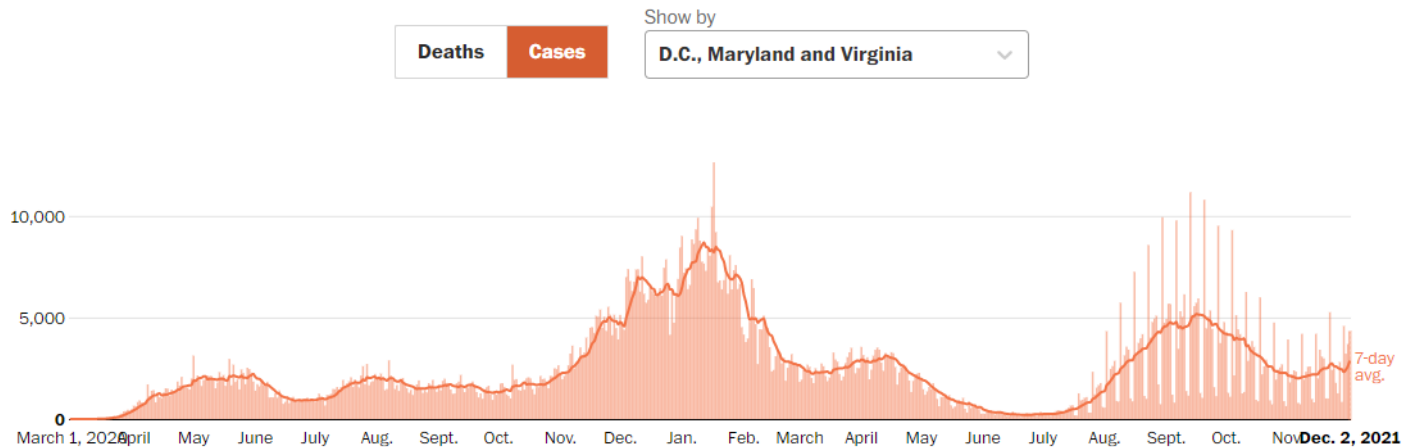


Metropolitan Washington  
**Council of Governments**

# COVID Cases & Deaths in Washington, DC Metro Area

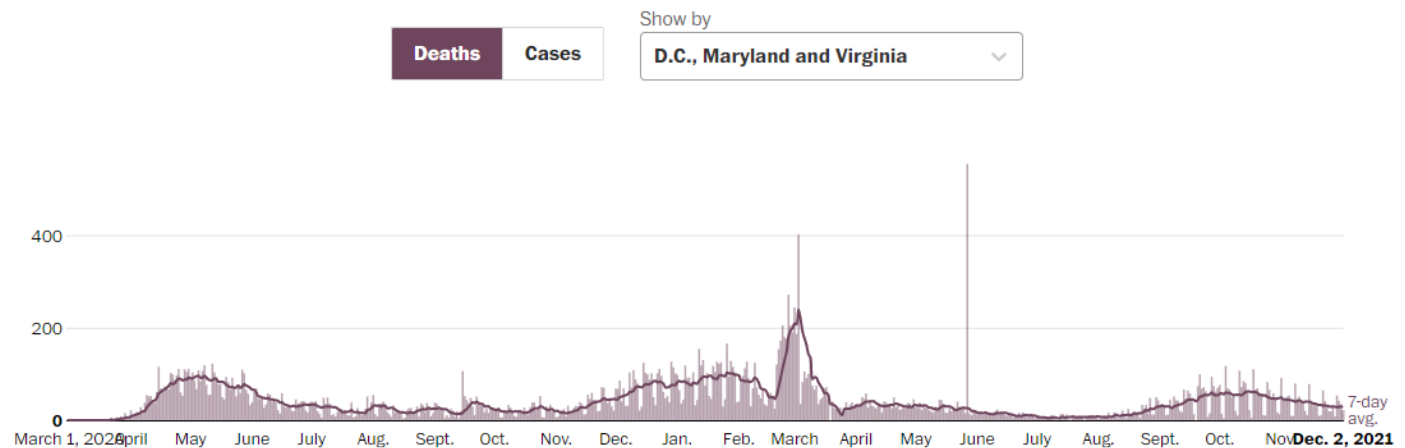
## New daily reported cases in D.C., Maryland and Virginia

At least 1,630,161 have been reported since Feb. 29.



## New daily deaths reported in D.C., Maryland and Virginia

At least 27,166 have been reported since Feb. 29.



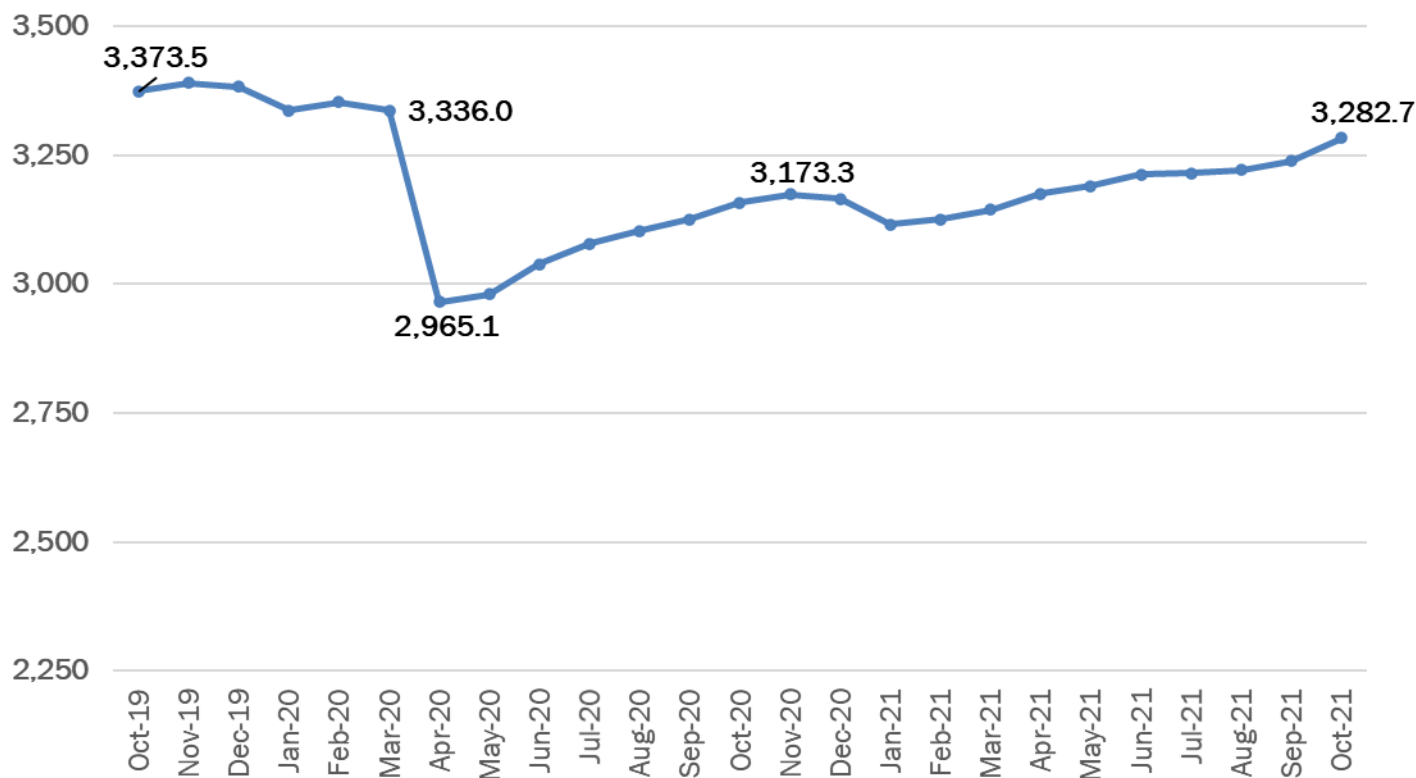
# Economy



# Non-Farm Jobs (000s) - Washington MSA

October 2019 to October 2021

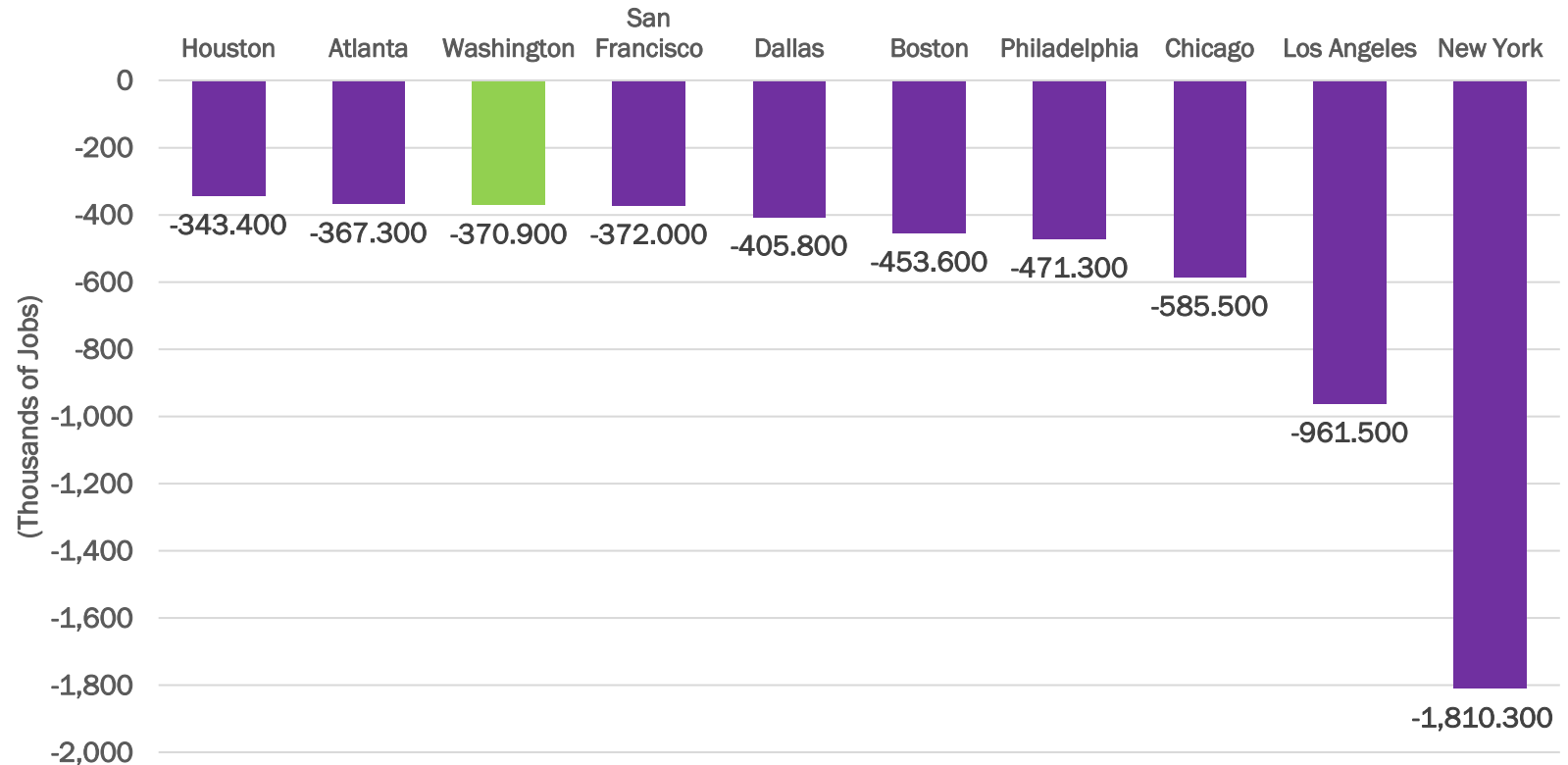
(Bureau of Labor Statistics, Not Seasonally-adjusted, Thousands)



Revised BLS data show the region lost 370,900 jobs between March and April of 2020. Since then, the region has added back 317,600 jobs through October 2021.

# Non-Farm Job Loss March to April 2020 In 10 Largest MSAs

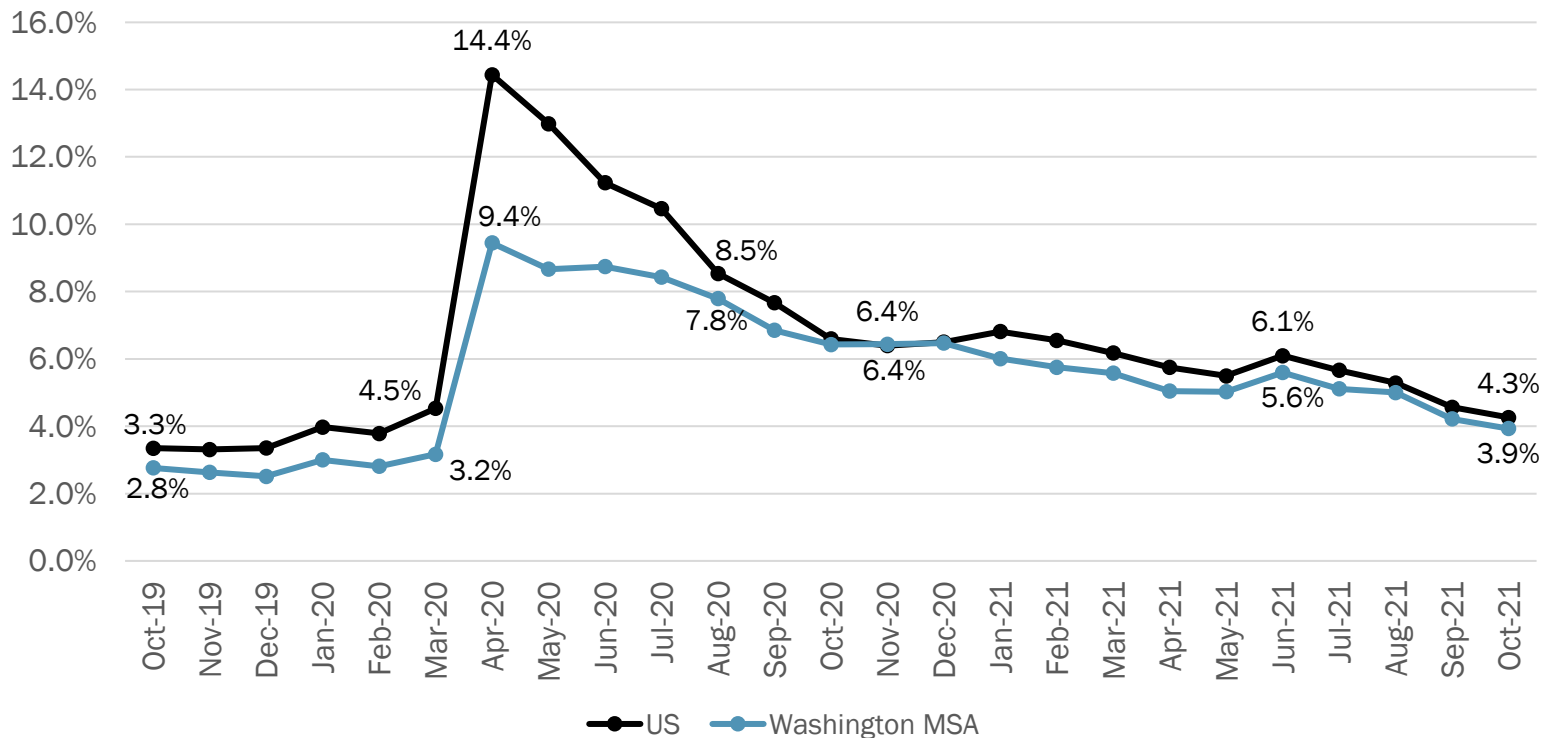
(Source: Bureau of Labor Statistics, Revised Data 3/21)



Our initial job losses were among the lowest when compared to many of our peer regions. New York and Los Angeles experienced the most severe losses.

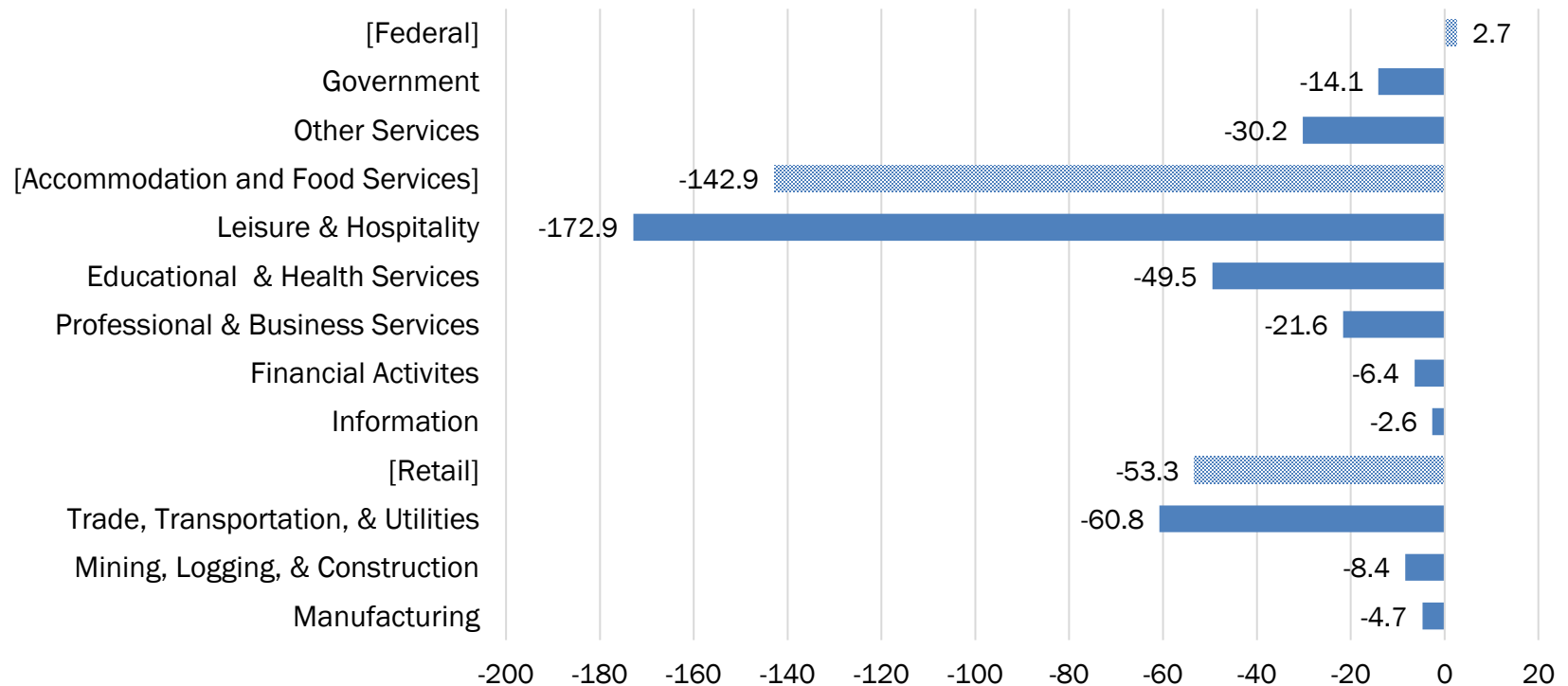


# Unemployment Rate Washington MSA and US



Our unemployment rate nearly tripled with the onset of the pandemic but was still nearly 5 points below the nation. With partial reopening, the national and local rates did converge in late 2020, but the local rate so far in 2021 is again below the national rate.

# Over-the-year Job Change By Sector May 2020 vs May 2019 Washington MSA (Thousands)

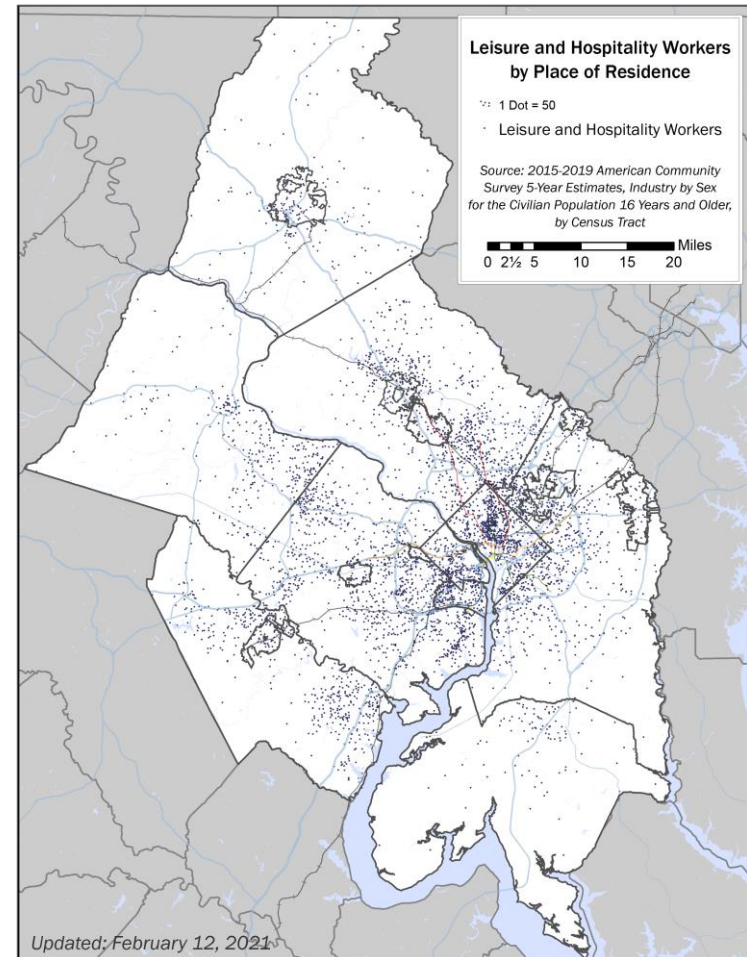


May 2020 employment data (May 2020 – May 2019) shows job losses in nearly every sector especially in hospitality, retail, and several service industry sectors.

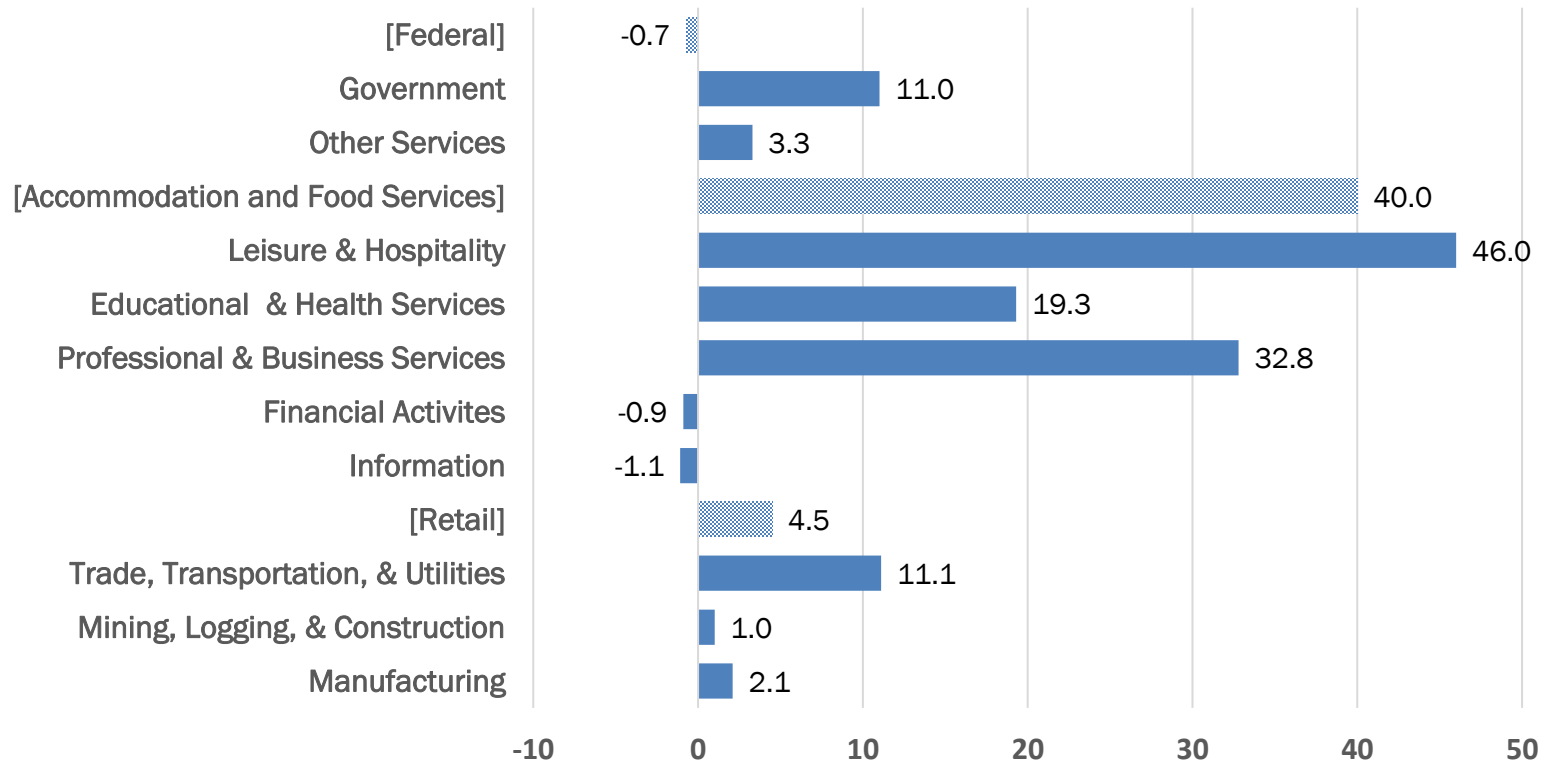
# Place of Residence for Leisure and Hospitality Workers

(Source: Census ACS)

- Leisure and Hospitality workers – the sector most vulnerable to layoffs – live throughout the region.
- Neighborhoods with the highest concentrations of leisure and hospitality workers include east of Rock Creek Park in the District of Columbia, western Alexandria, South Arlington, Herndon and Annandale in Fairfax County, along US 1 in Fairfax and Prince William Counties, and Wheaton and Twinbrook in Montgomery County.

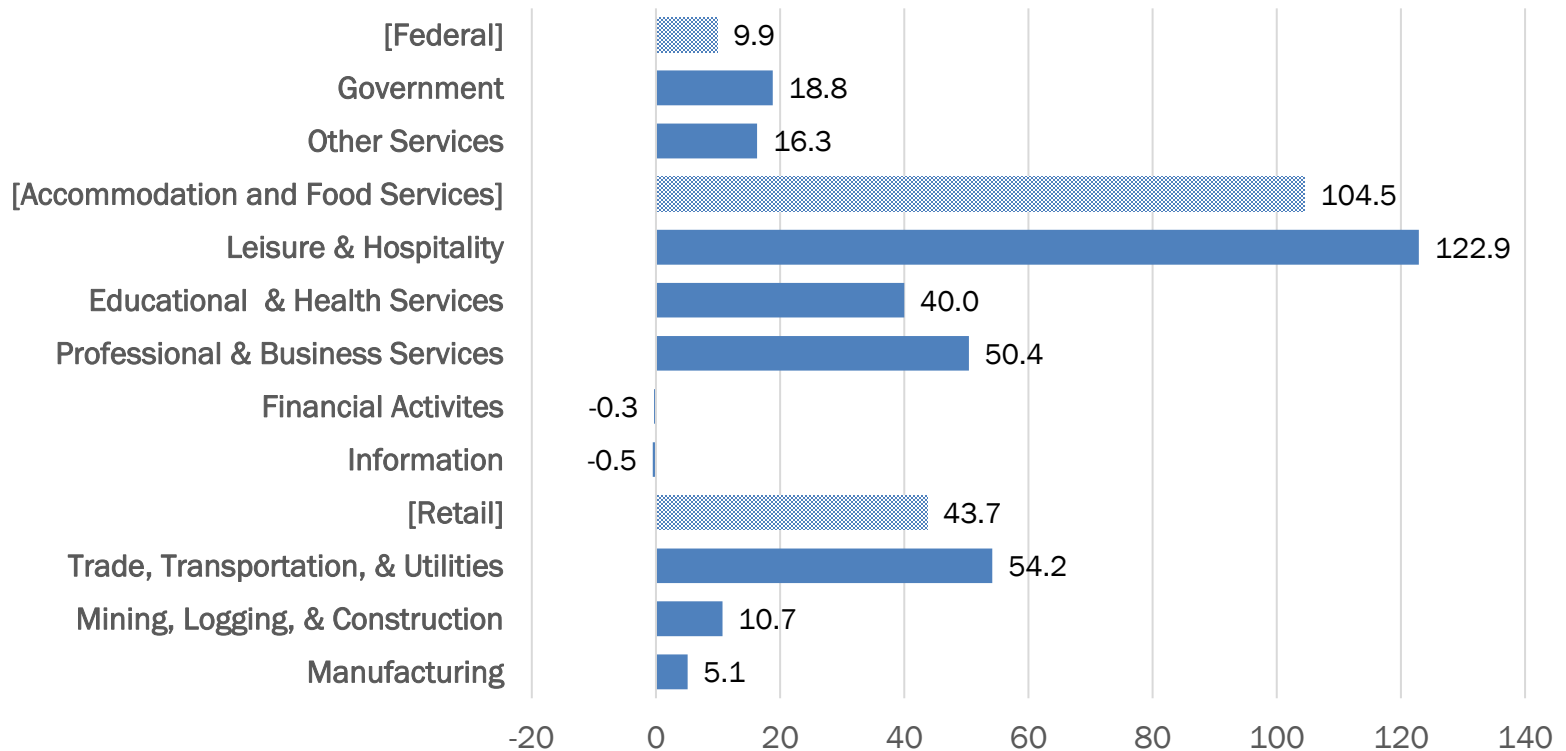


# Over-the-year Job Change By Sector October 2021 vs October 2020 Washington MSA (Thousands)



The most-current employment data shows job gains in hospitality, retail, and several service industry sectors.

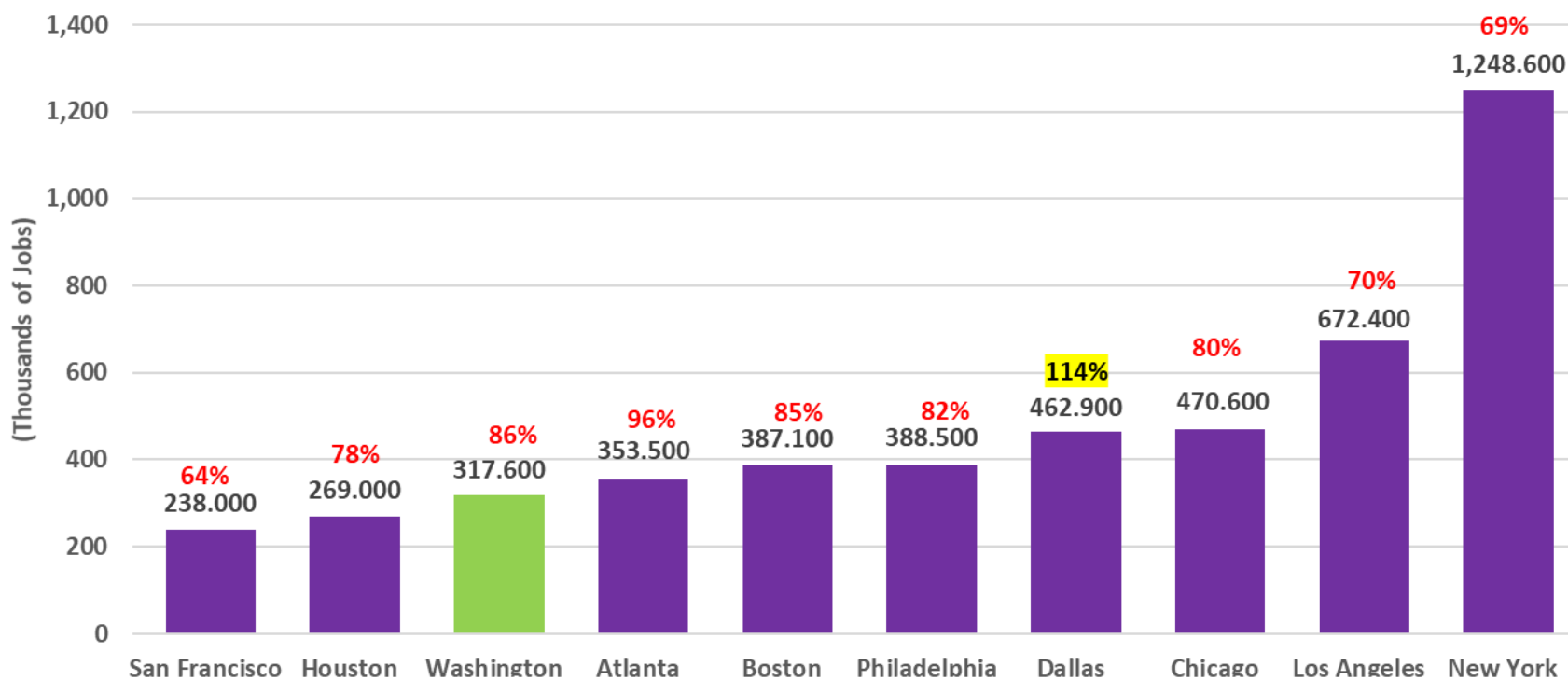
# Job Change By Sector April 2020 to October 2021 Washington MSA (Thousands)



The region has recovered approximately 86 percent of the jobs lost between March 2020 and April 2020, with growth in nearly every sector.

# Non-Farm Job Change In 10 Largest MSAs April 2020 to October 2021 And Share of Jobs Recovered Since April 2020

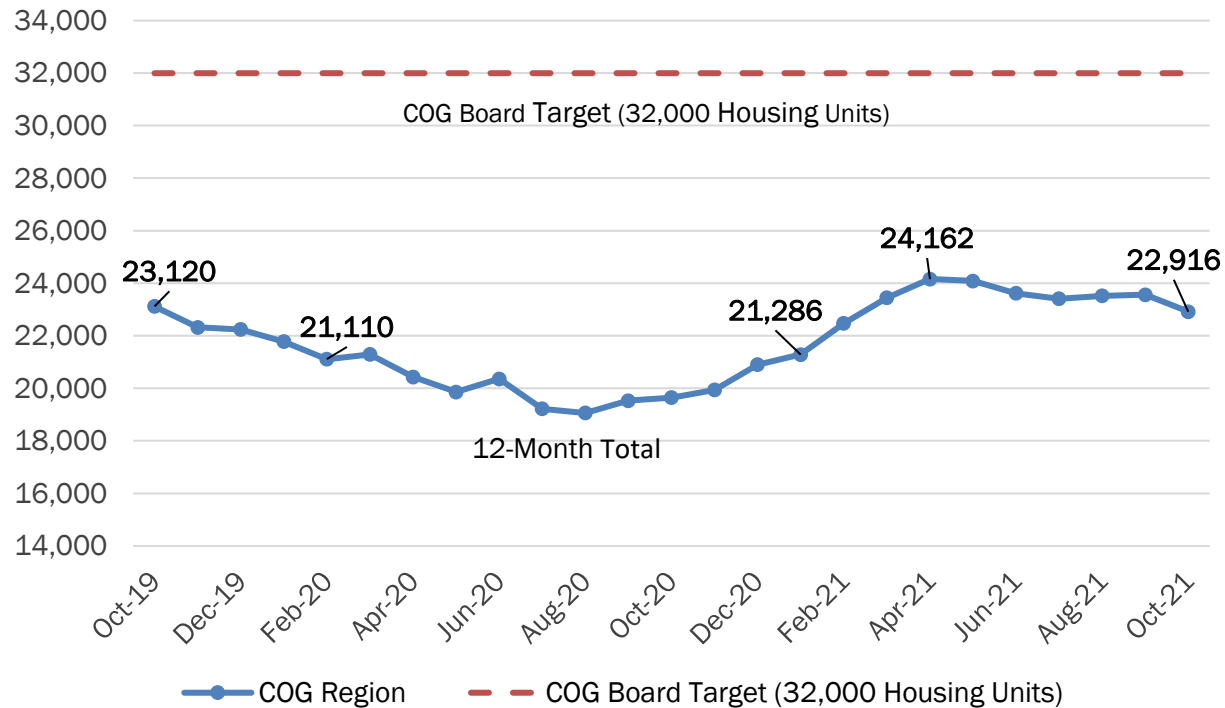
(Source: Bureau of Labor Statistics, Revised Data 3/21)



Most of our peer regions have experienced larger job growth since April 2020, but only Dallas has more jobs now than it had in April 2020

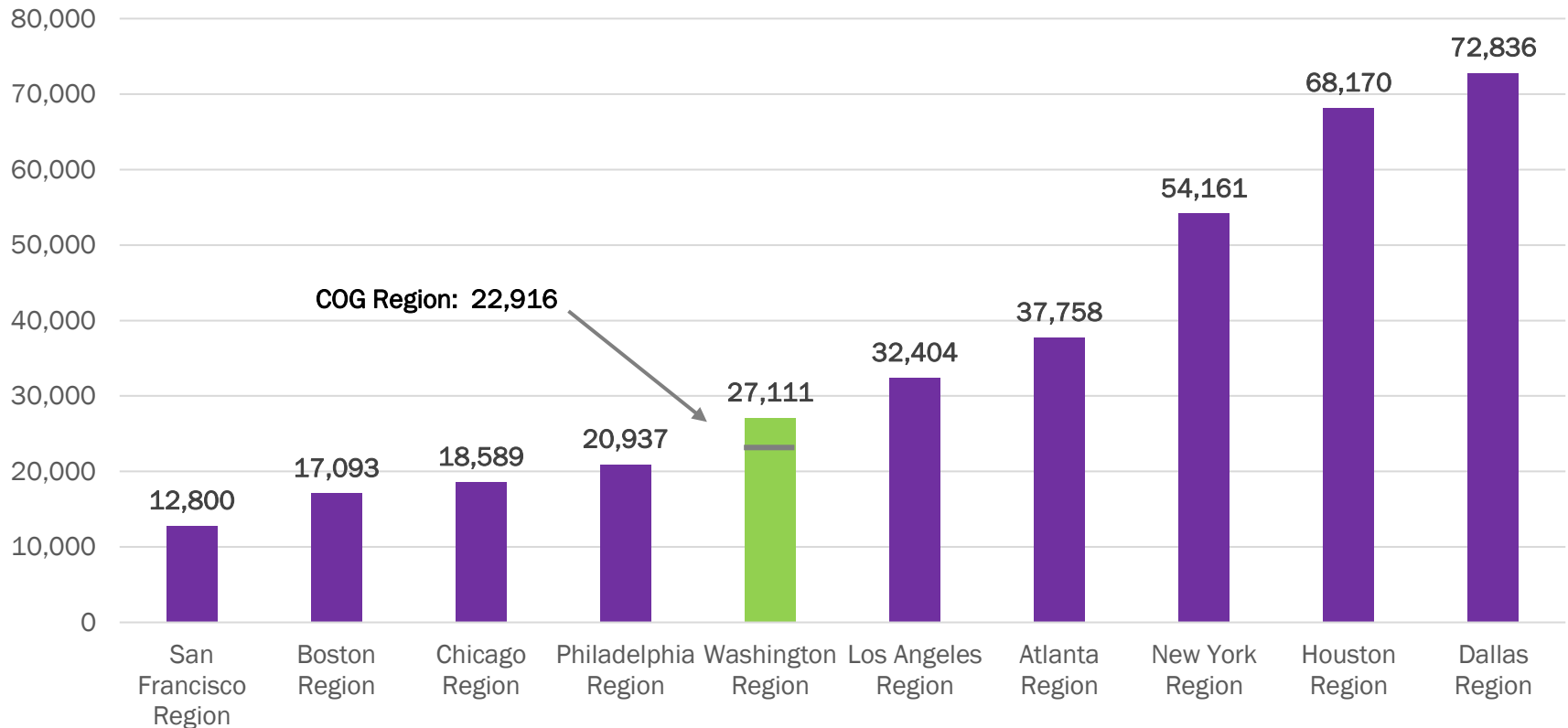
# New Housing Units Authorized 12-month total for COG Region

(Source: US Census C-40 data)



The number of new housing permits declined monthly from October 2019 through mid-2020. This was followed by an upward trend from late 2020 through spring of 2021, but again registered declines in the second through the third quarter of 2021.

# New Housing Units Authorized Issued in 10 Largest MSAs November 2020 to October 2021 (12-Month Total) (Source: Census Bureau)

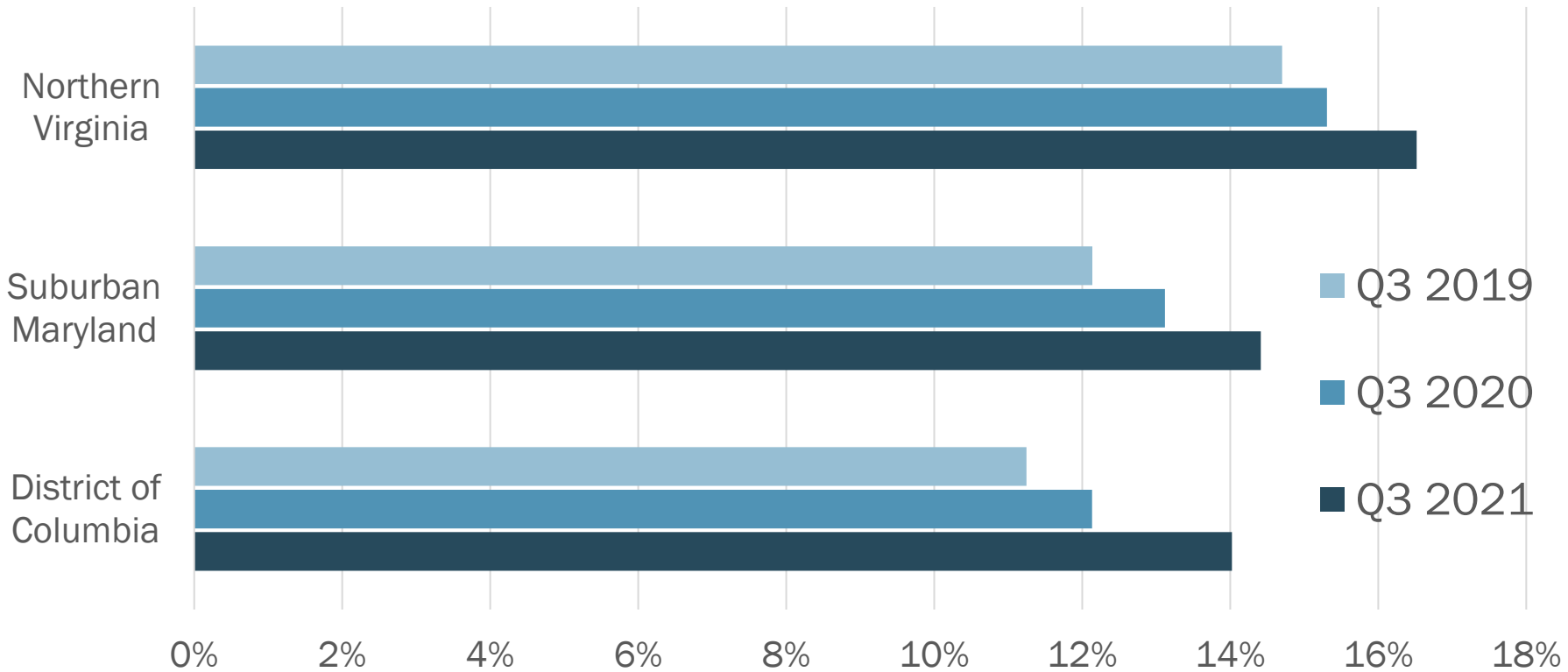


Our region lags behind several large peer MSAs in current permitting activity, most notably Houston, Dallas and New York.



# Change in Office Vacancy Rates Q3 2019 vs Q3 2020 vs Q3 2021

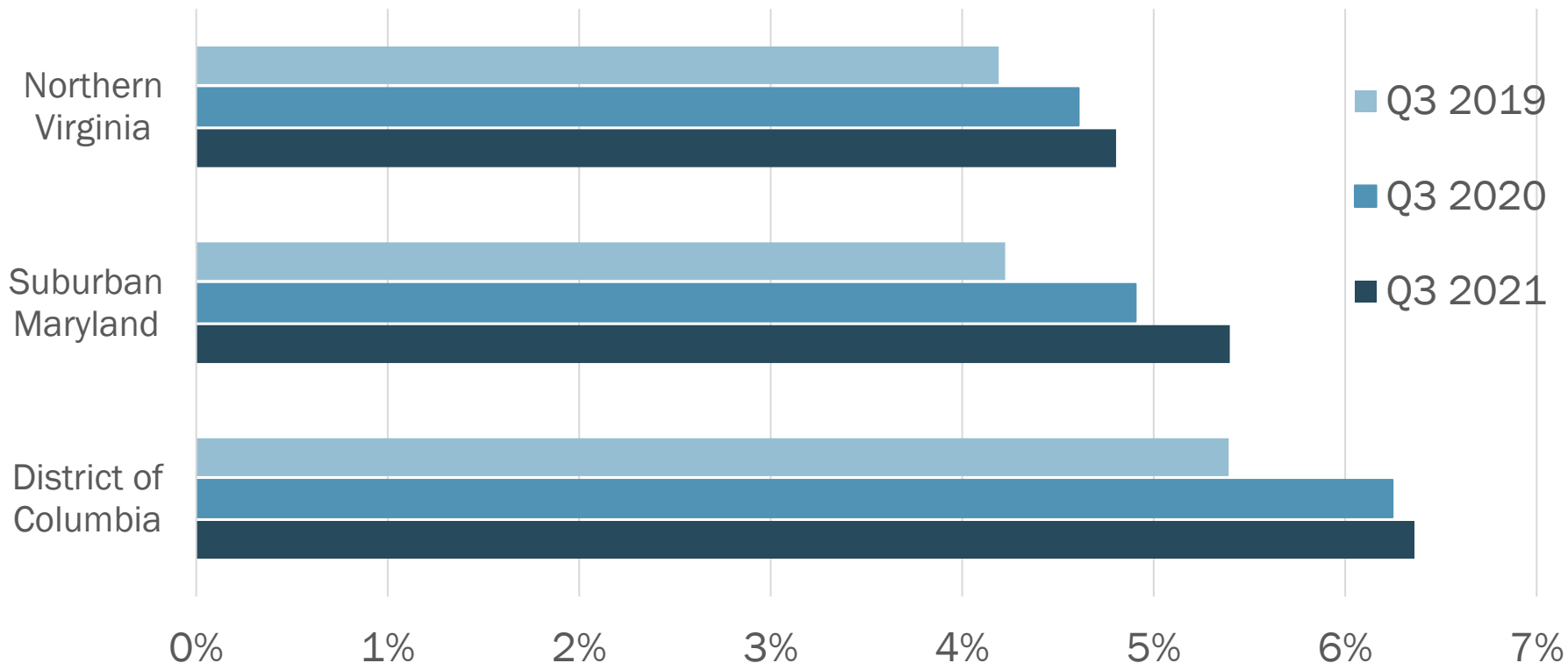
(Source: CoStar)



Office vacancy rates have increased throughout the region, accelerating in the second year of the pandemic.

# Change in Retail Vacancy Rates Q3 2019 vs Q3 2020 vs Q2 2021

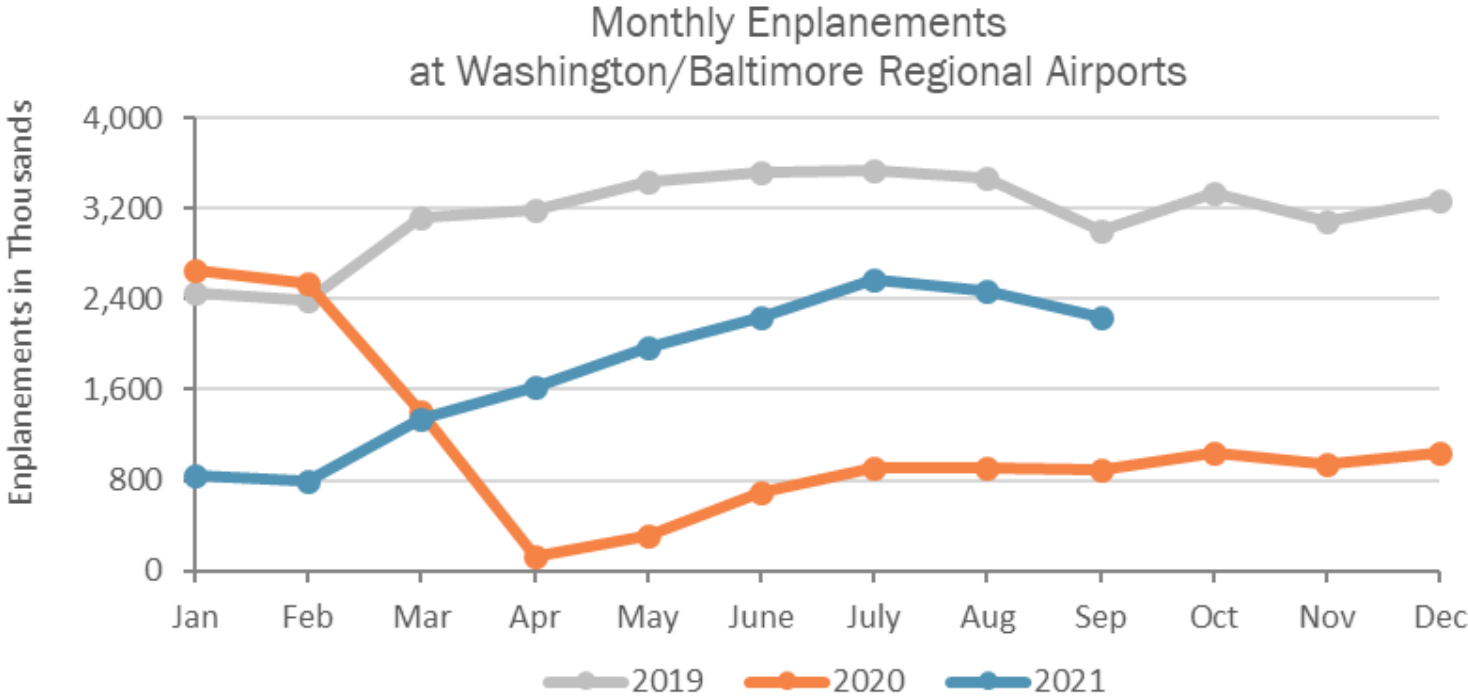
(Source: CoStar)



Retail vacancy rates have also increased throughout the region. The retail vacancy rate grew the most during the first year of the pandemic.



# Air Travel



Source: COG

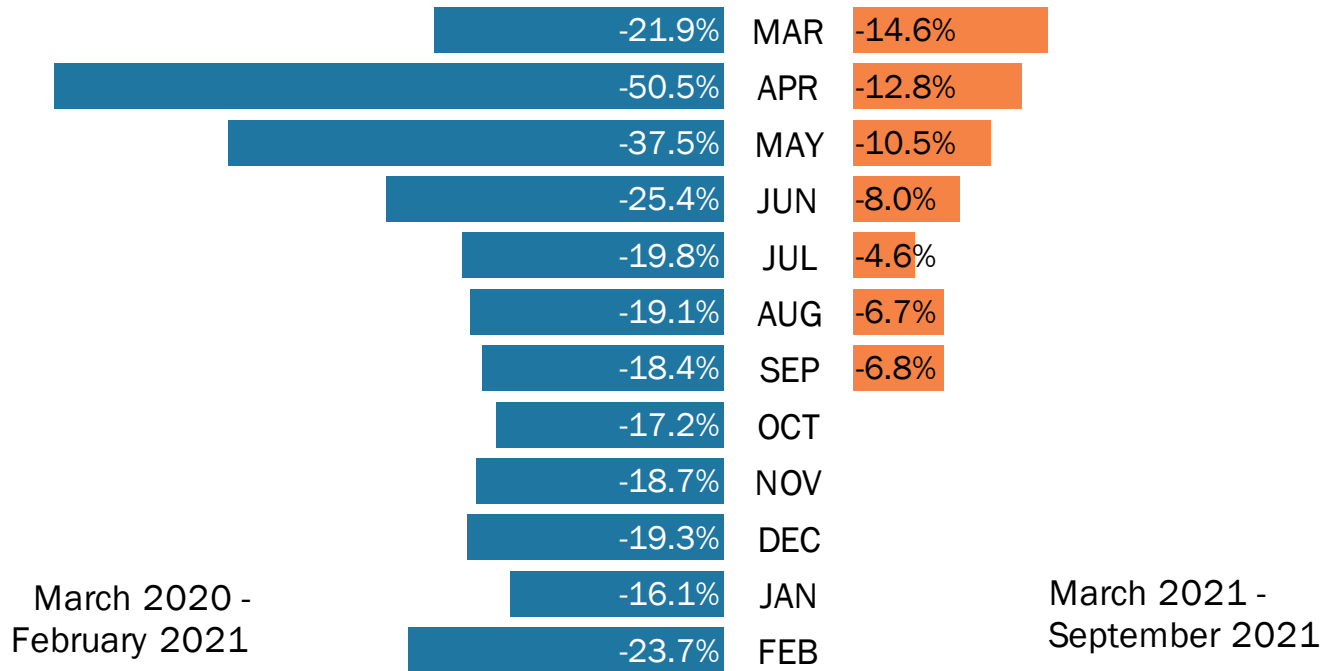
Air travel made notable increases February 2021 and July 2021 at the region’s three major airports; but it dipped slightly in August and September.

# Transportation



# Roadway Traffic Volumes: Region

TPB Region - Average Percent Change from Equivalent 2019 Month

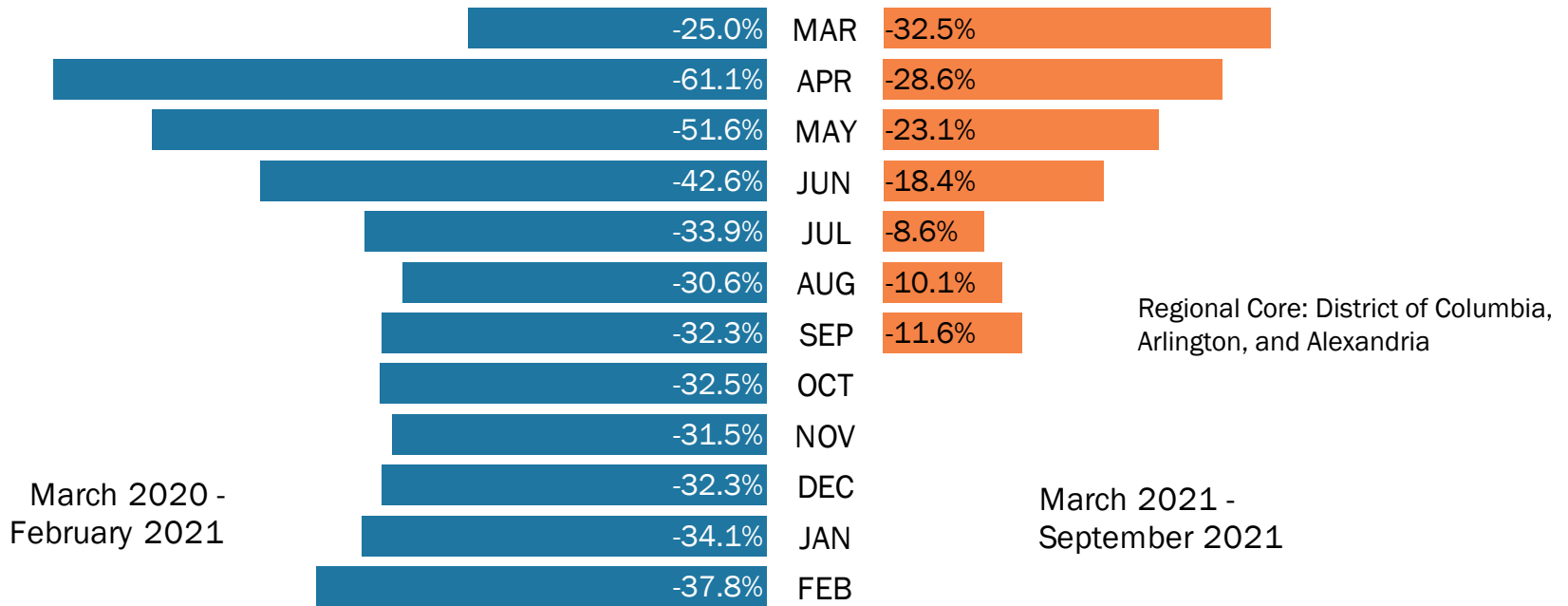


Source: COG/TPB

Regional traffic volumes, which in April 2020 had dipped below 50% of 2019 volumes, had recovered to over 95% of 2019 volumes by July 2021. However, regional volumes slipped back to nearly 93% of pre-pandemic levels in August and September.

# Roadway Traffic Volumes: Regional Core

Regional Core - Average Percent Change from Equivalent Pre-pandemic Month

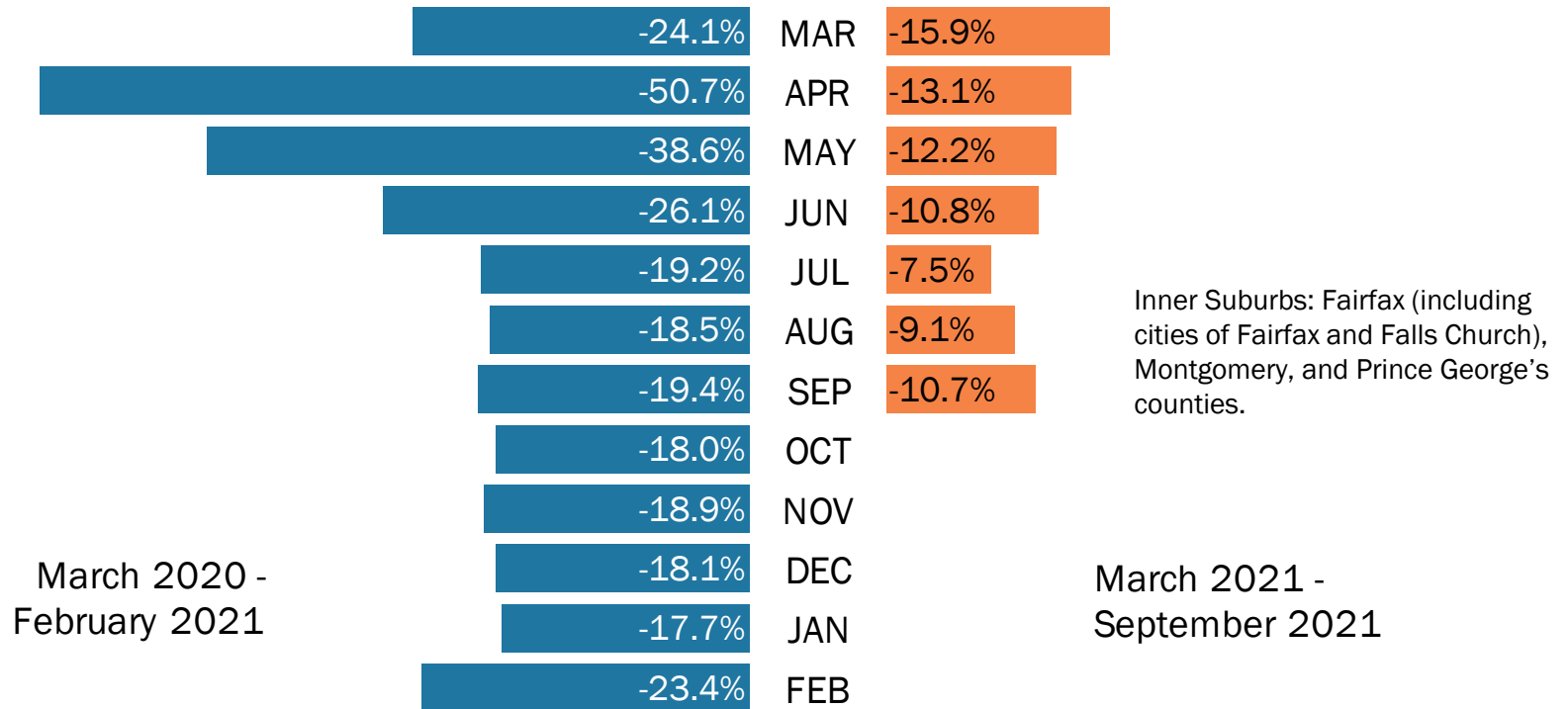


Source: COG/TPB

Traffic Volumes in the Regional Core decreased by more than 60% over the year in April 2020 and have recovered more slowly compared to the region overall. By July 2021, volumes in the core were down 9% compared to May 2019 and dipped again in August and September to over 10%.

# Roadway Traffic Volumes: Inner Suburbs

Inner Ring - Average Percent Change from Equivalent 2019 Month

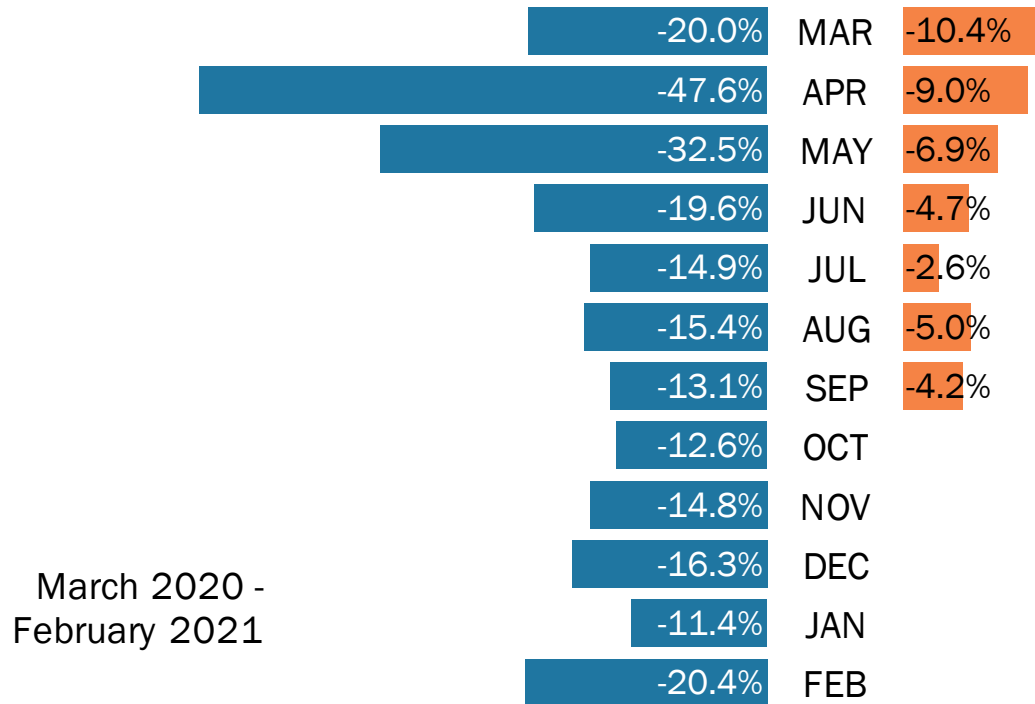


Source: COG/TPB

After decreasing by more than 50% in April 2020 compared to the previous year, traffic volumes in the inner suburbs recovered to 93% of 2019 levels by July 2021 but dipped slightly in August and September.

# Roadway Traffic Volumes: Outer Ring

Outer Ring - Average Percent Change from Equivalent 2019 Month



Outer Ring: Anne Arundel, Calvert, Carroll, Charles, Frederick, Howard, and St. Mary's counties in MD; Clarke, Fauquier, Fredericksburg (city), King George, Loudoun, Prince William (including Manassas and Manassas Park), Spotsylvania (partial), and Stafford counties in VA; Jefferson County WV.

March 2020 -  
February 2021

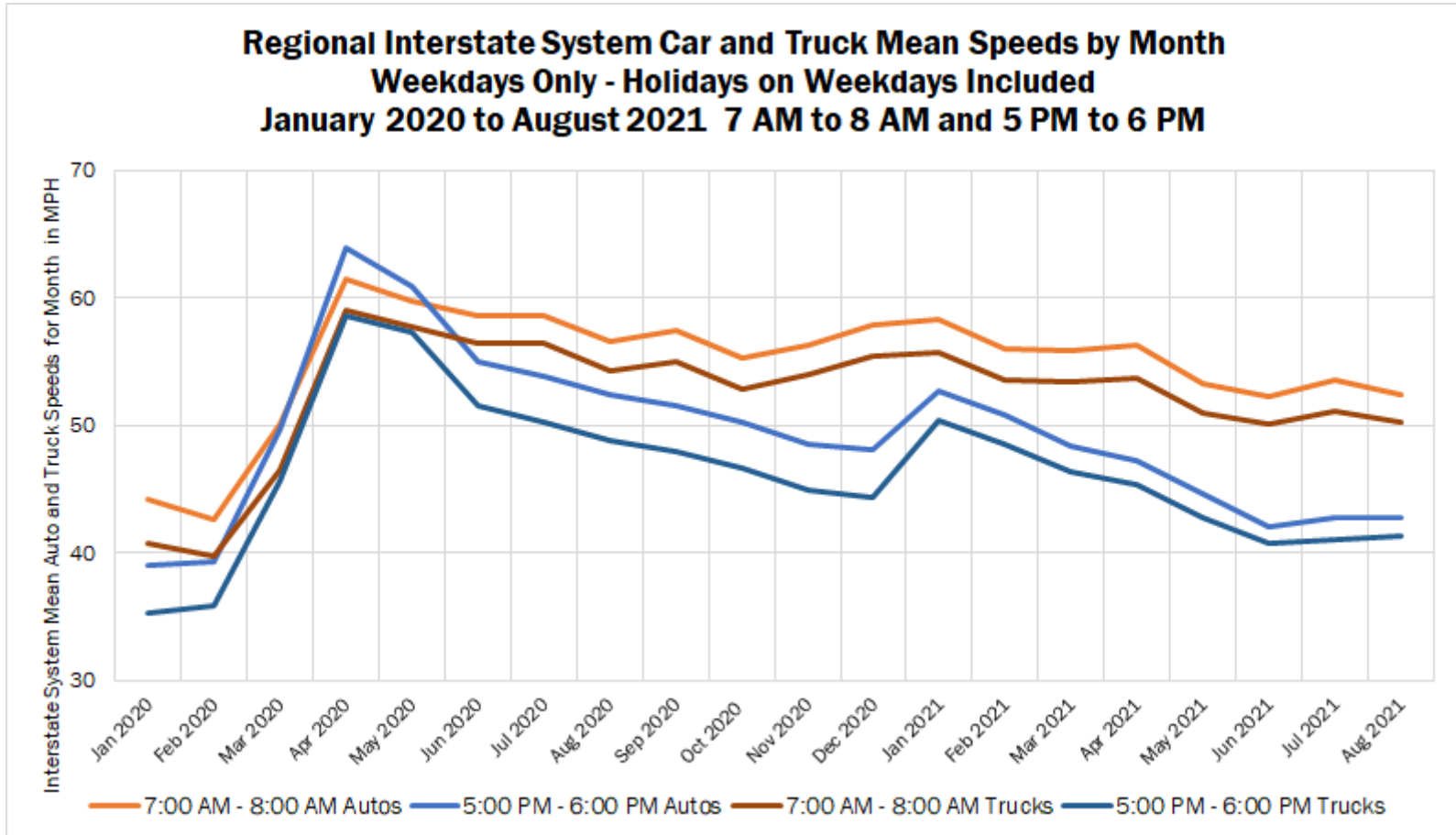
March 2021 -  
September 2021

Source: COG/TPB

Traffic volumes in the outer ring sustained the smallest peak decrease in April 2020 of 47.6% and by July 2021, volumes in the outer ring were nearly 97% of July 2019 levels. Volumes decreased slightly in August and September compared to the same pre-pandemic period in 2019.

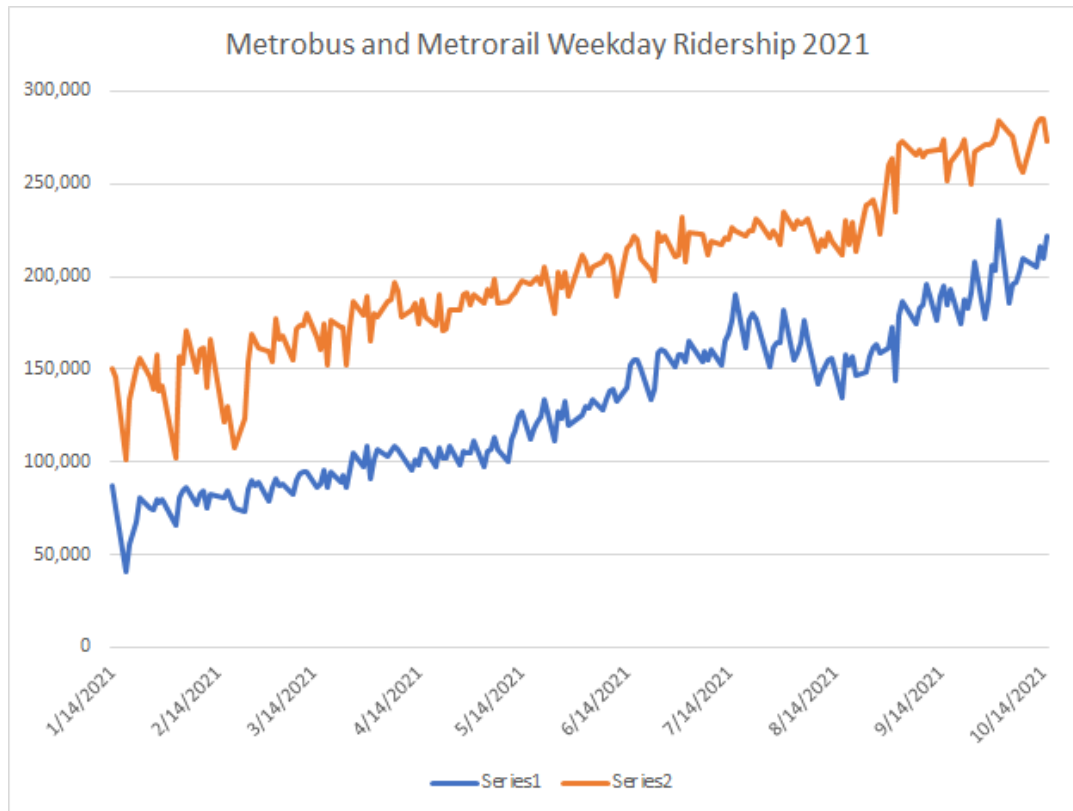


# Interstate Highway Speed Trends



Source: COG/TPB Analysis of the National Performance Management Research Data Set (NPMRDS), National Capital Region. Certain regional Interstate highway segments excluded due to data availability.

# Metrorail and Metrobus Ridership



Ridership up throughout year, but as of October 14:

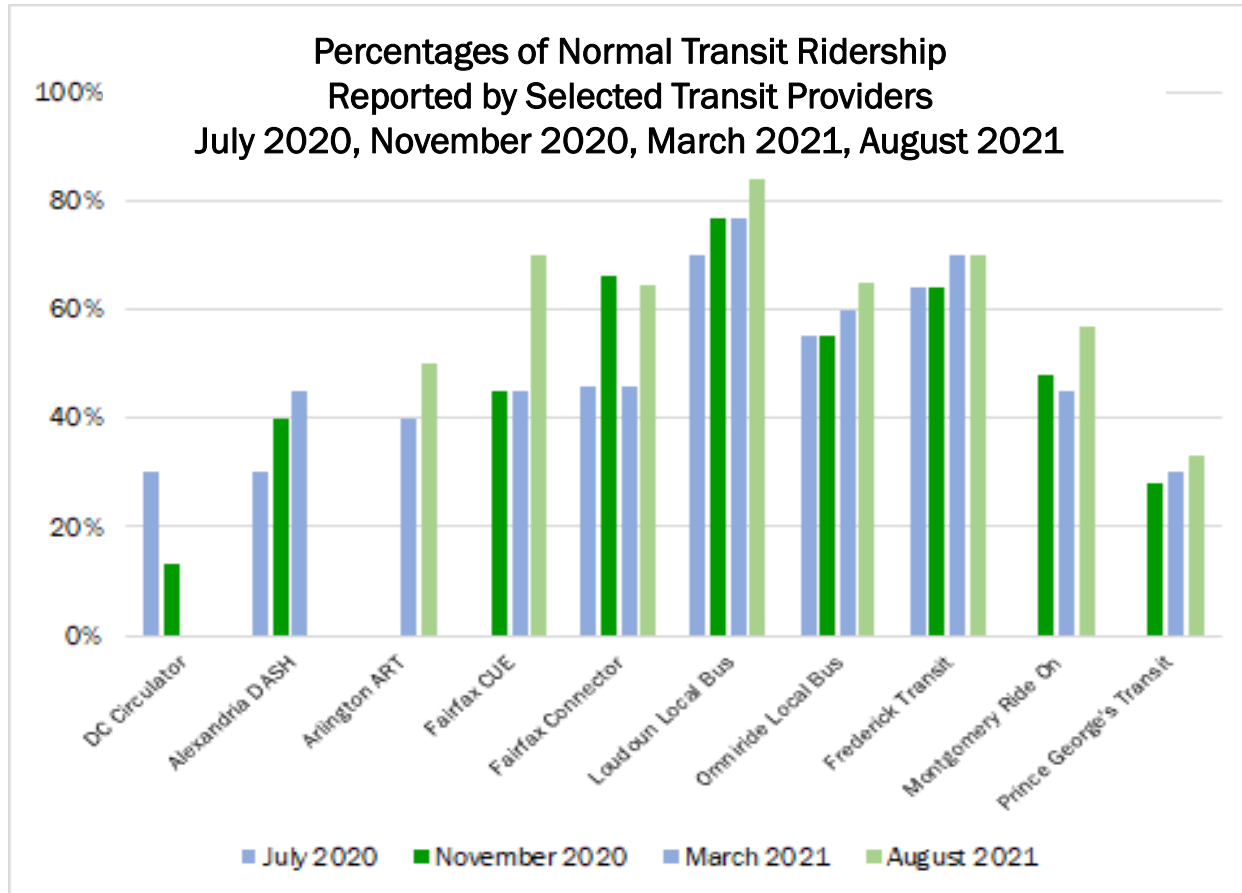
Metrorail ~30%,  
Metrobus ~74%

of 2019 levels

Source: WMATA Covid-19 Public Information Website 10/20/21: <https://www.wmata.com/service/covid19/Covid-19-Public-Information.cfm>.

Ridership decreased in 2019 as a result of both reduced demand and reduced transit capacity, underscoring the complex interrelationship of supply and demand on transit. This contrasts to roadway volume decreases, which resulted from demand reductions.

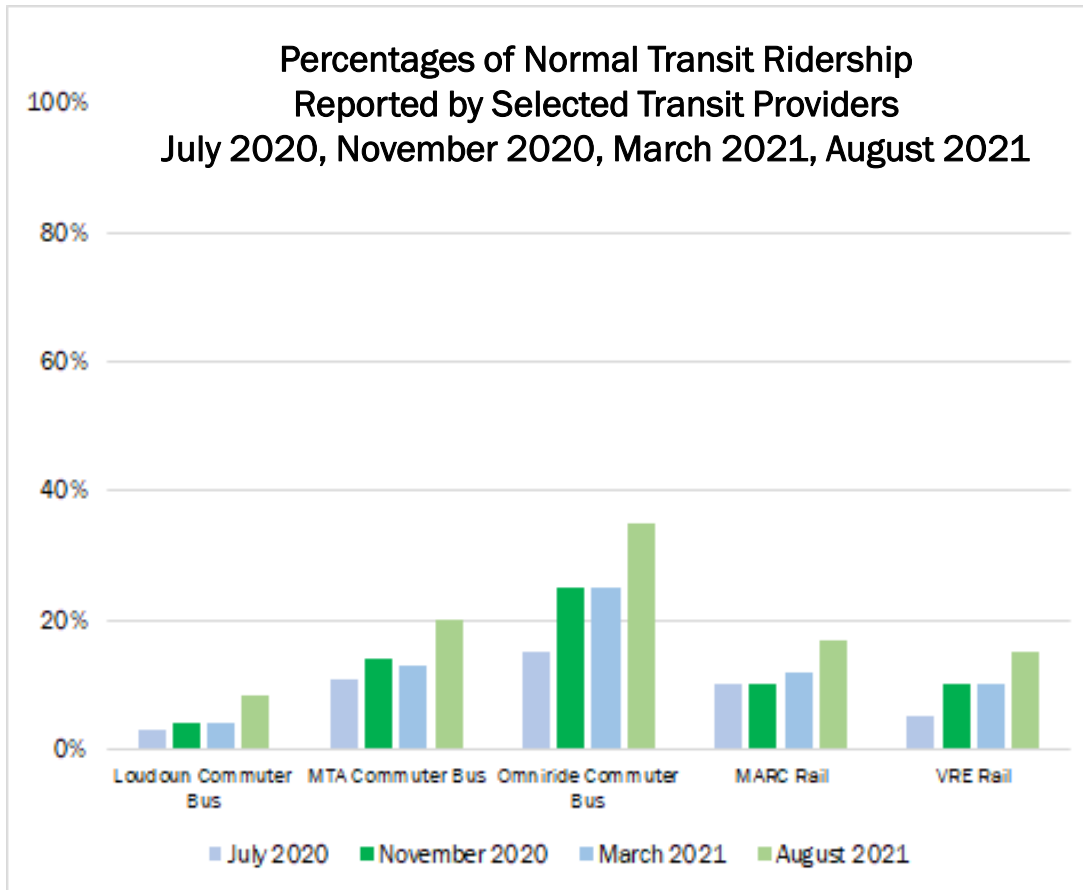
# Local Transit Ridership



- Ridership grew through June, and has generally been stable since

Agency self-reported approximate percentages of ridership vs. typical levels. Source: COG/TPB questionnaires of local (non-WMATA) transit agencies. Providers not shown did not participate in all rounds of the questionnaire.

# Commuter Transit Ridership



- Commuter services ridership has slightly increased over time but remains low

Agency self-reported approximate percentages of ridership vs. typical levels. Source: COG/TPB questionnaires of local (non-WMATA) transit agencies. Providers not shown did not participate in all rounds of the questionnaire.

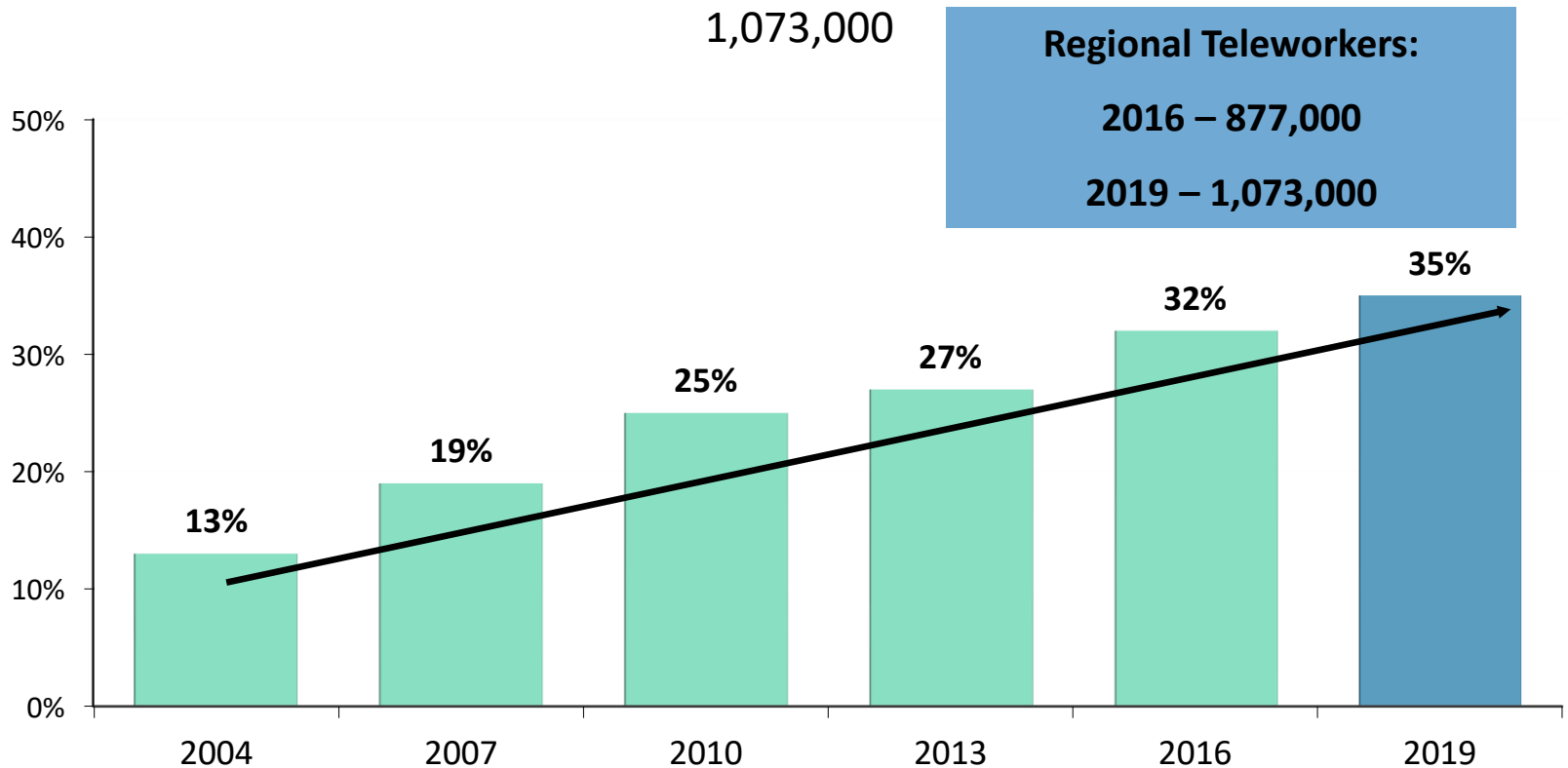
# Teleworking Characteristics



# Historical Teleworking Growth (Pre-Pandemic)

Telework Has Nearly Tripled Since 2004 – 35% of Regional Commuters Teleworked at Least Occasionally in 2019

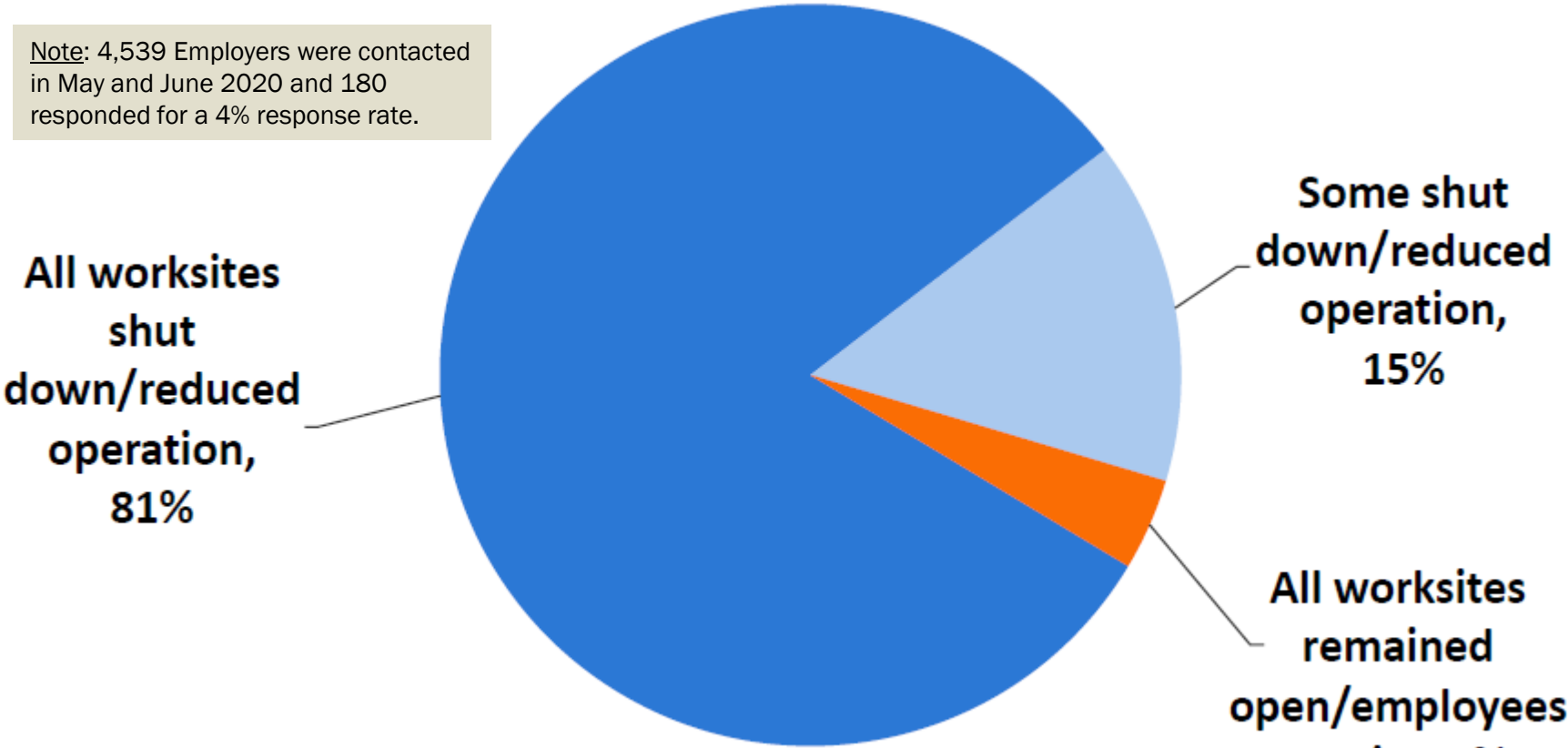
Between 2016 and 2019, the region added 196,000 new teleworkers for a total of 1,073,000



Source: Commuter Connections 2019 State of the Commute Survey

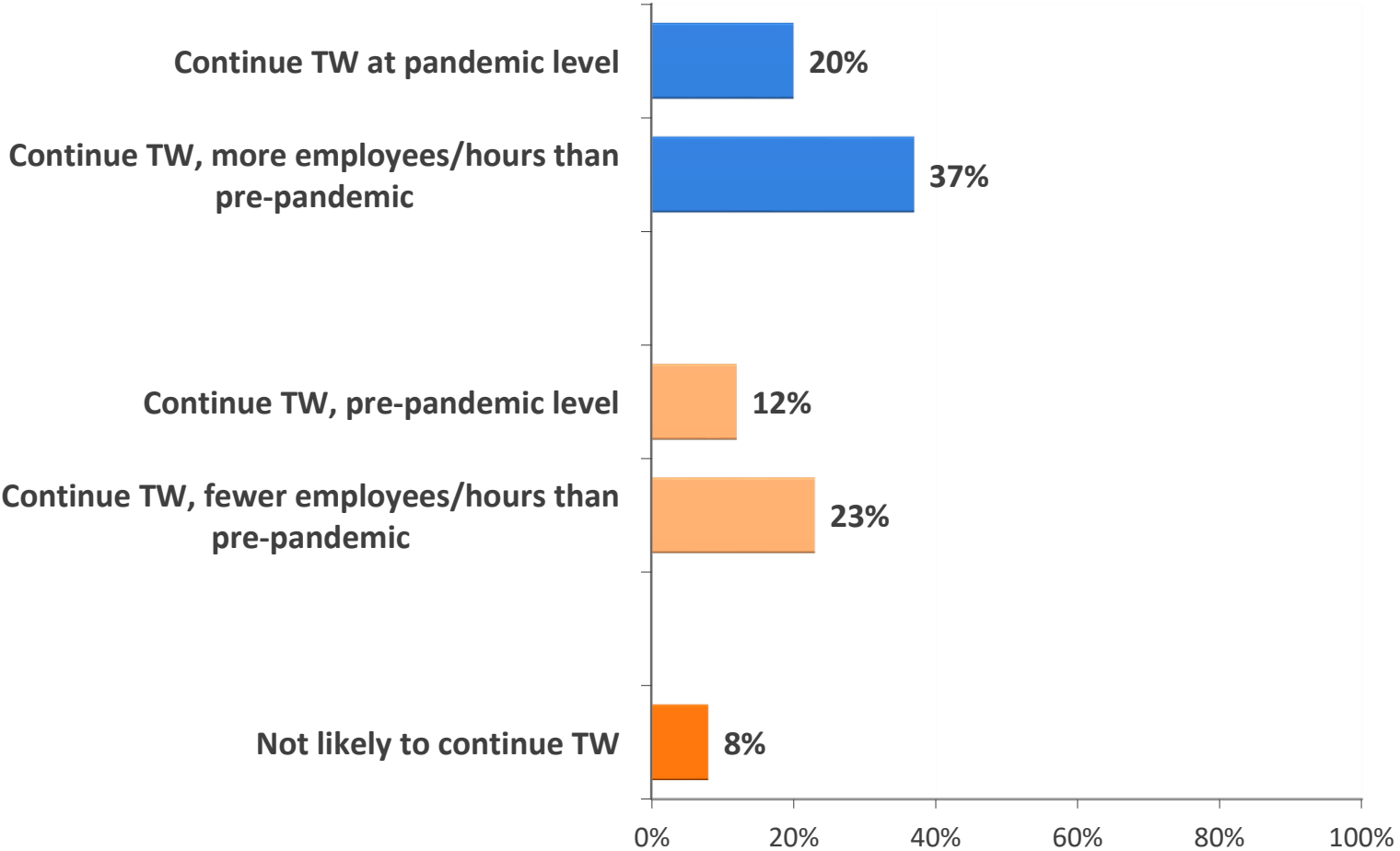
# 96% of Worksites Shut Down or Reduced On-site Operation Either Completely (81%) or Partially (15%) Since the Pandemic Began

Note: 4,539 Employers were contacted in May and June 2020 and 180 responded for a 4% response rate.



Source: Commuter Connections 2020 Employer Telework Survey

# Anticipated Post-Pandemic Teleworking



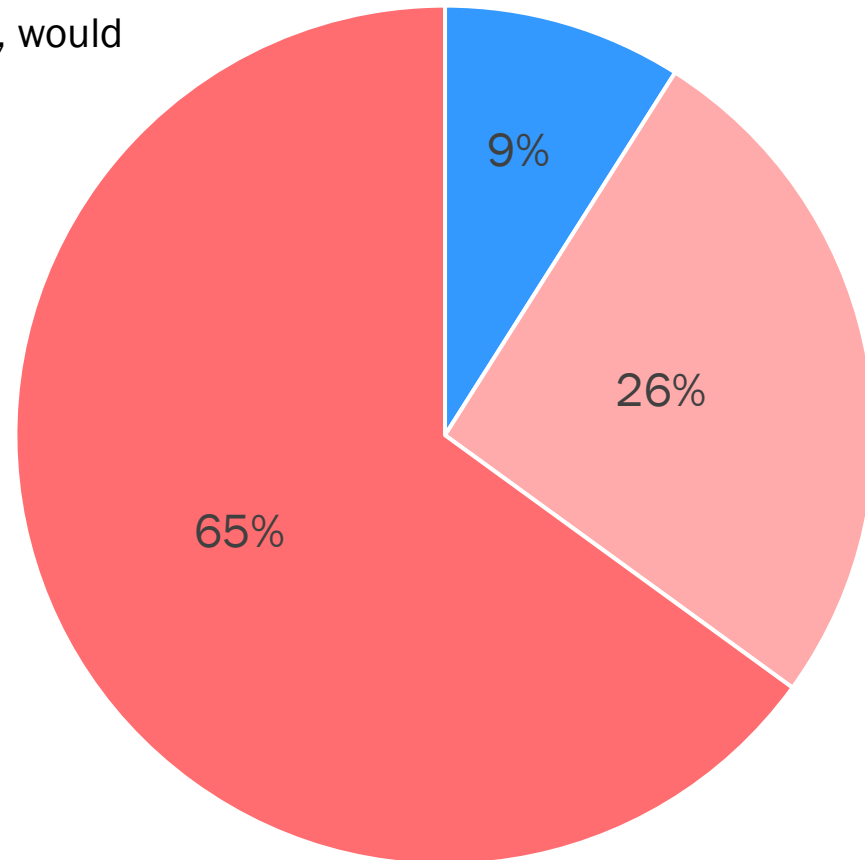
Source: Commuter Connections 2020 Employer Telework Survey



# Preferences of Current Teleworkers

If given the choice to return to a work location once the COVID-19 pandemic is over, would you prefer to...?

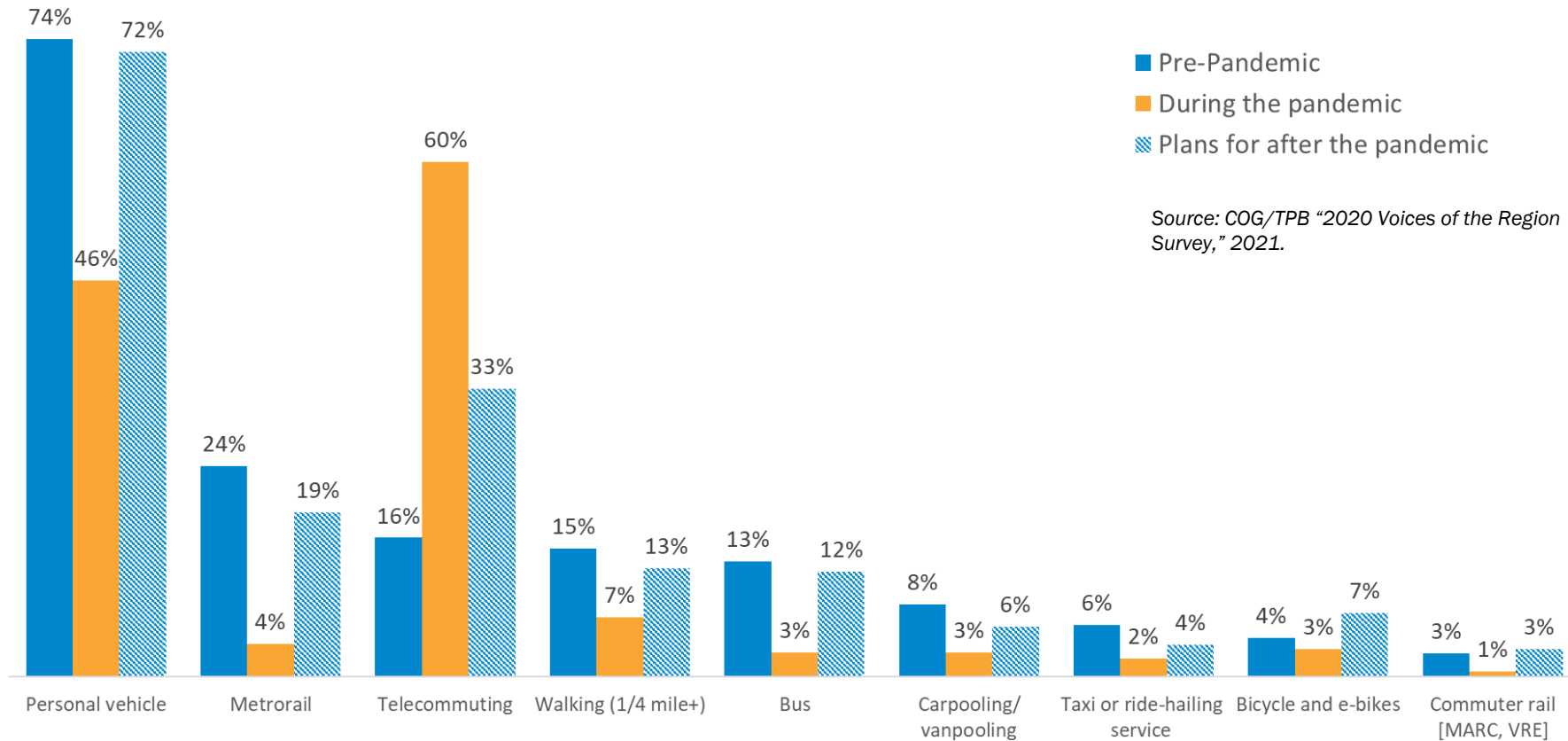
- Return to work location full-time
- Telework full-time
- Telework some days and commute to work location some days



Source: COG/TPB "2020 Voices of the Region Survey," 2021.

# Commute Mode

Commute mode used at least once a week

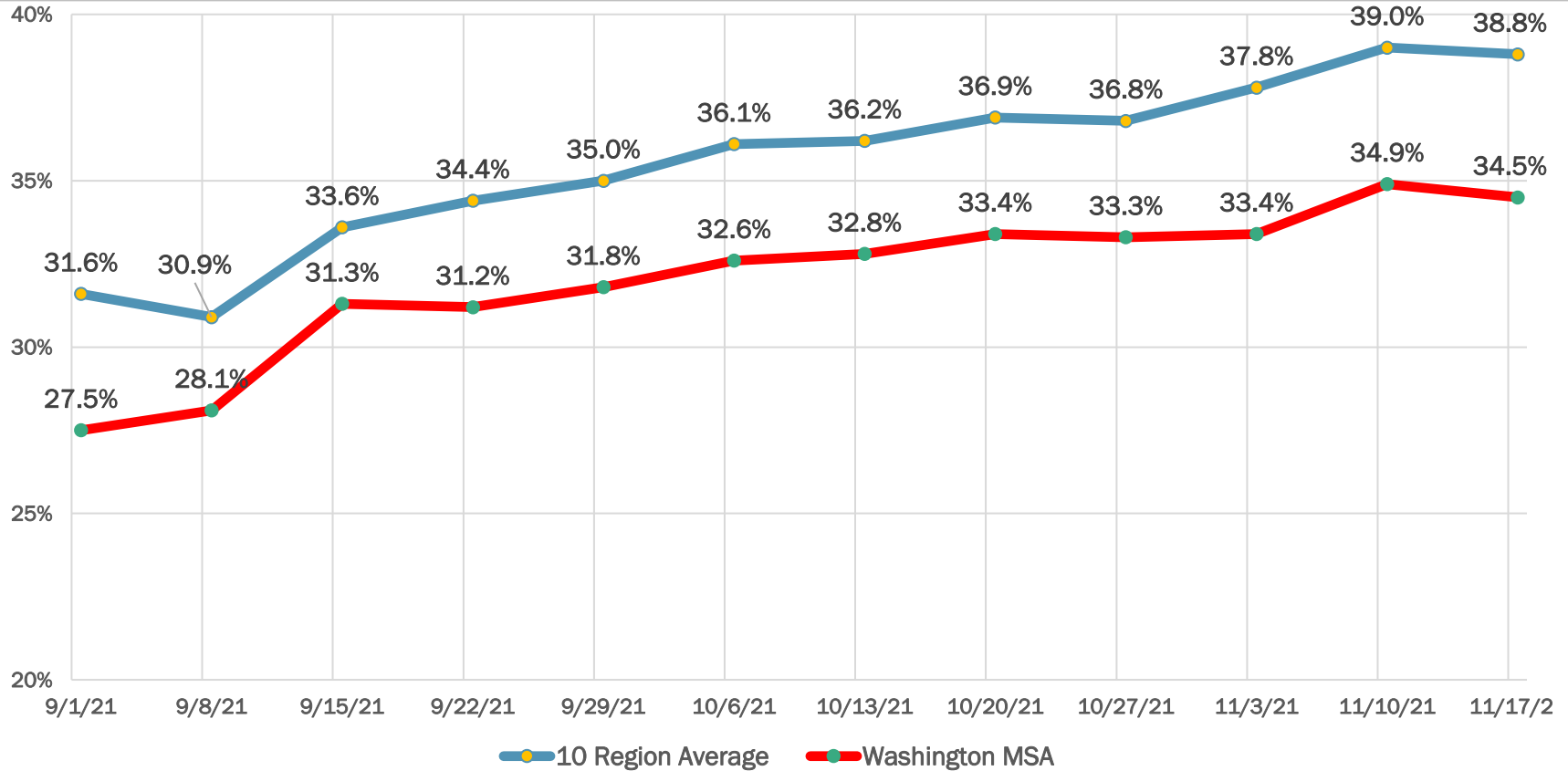


Source: COG/TPB "2020 Voices of the Region Survey," 2021.



# Office Occupancy Since September 2021

## Average for 10 MSAs and Washington MSA



Source: MWCOG tabulation of [Kastle Systems "Back to Work Barometer"](#)

As measured by [Kastle Systems](#) building security card 'swipes,' our office occupancy rate remains several points below the average for the 10 largest regions.

# Environment



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# Criteria Pollutants

- Ozone and fine particulate matter (PM2.5) levels are higher in 2021 compared to 2020, but still a bit lower compared to 2019 suggesting air quality is getting back closer to "normal" levels.
- There is still some impact of ongoing COVID-19 related restrictions and closures resulting in lower than "normal" reduced emissions in 2021.
- Weather was more favorable to the formation and build up of pollutants in 2021 compared to 2020.

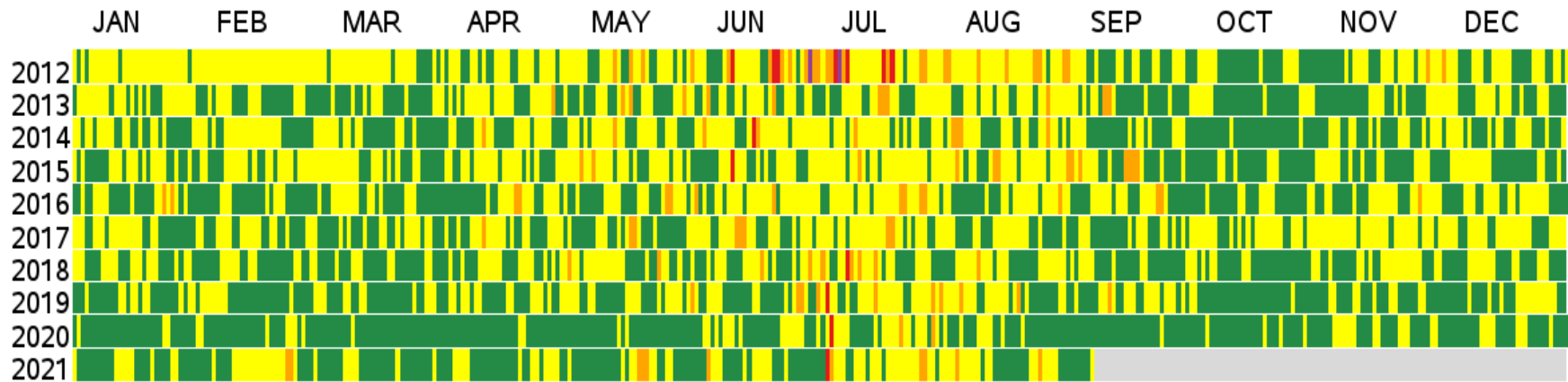
Ozone Air Quality Index Days (March - September)			
Year	Code Green	Code Yellow	Code Orange
2021	123	53	8
2020	180	32	2
2019	123	81	10

Note: 2021 data is for the period March-August, draft, and valid as of September 8, 2021.  
2019 and 2020 data is for the period March-September.



# Criteria Pollutants

## Daily AQI Values, 2012 to 2021 Washington-Arlington-Alexandria, DC-VA-MD-WV



Source: U.S. EPA Air Data, generated September 8, 2021

Note: Data shown above is for combined AQI values for ozone, PM2.5, PM10, CO, NO2, and SO2 for the Washington-Arlington, Alexandria CBSA.

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