COVID-19 IMPACTS IN METROPOLITAN WASHINGTON

Metropolitan Washington
Council of Governments

Overview

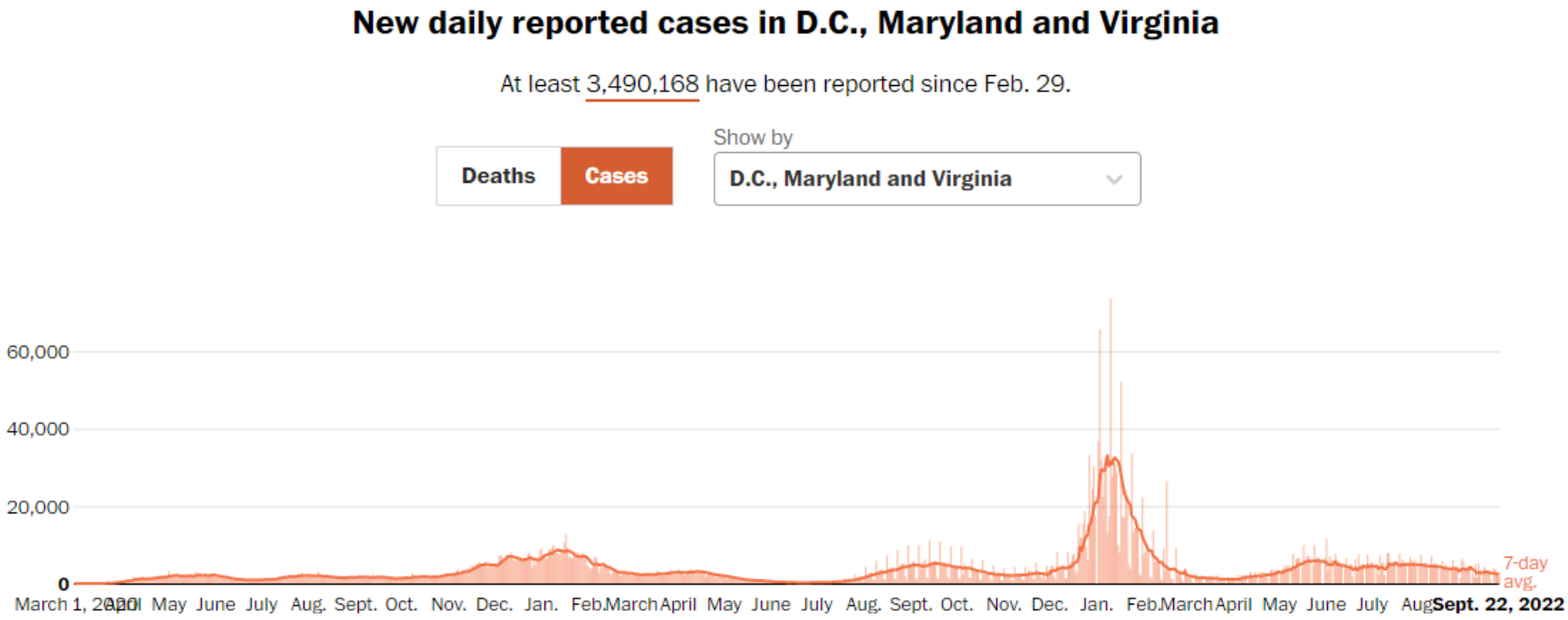
- Numerous actions have been taken to contain the pandemic spread of COVID-19 and to mitigate its threat to personal and public health.
- These actions have restricted socio-economic activities throughout the country, including the metropolitan Washington area.
- Staff from various COG departments are 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

- 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.

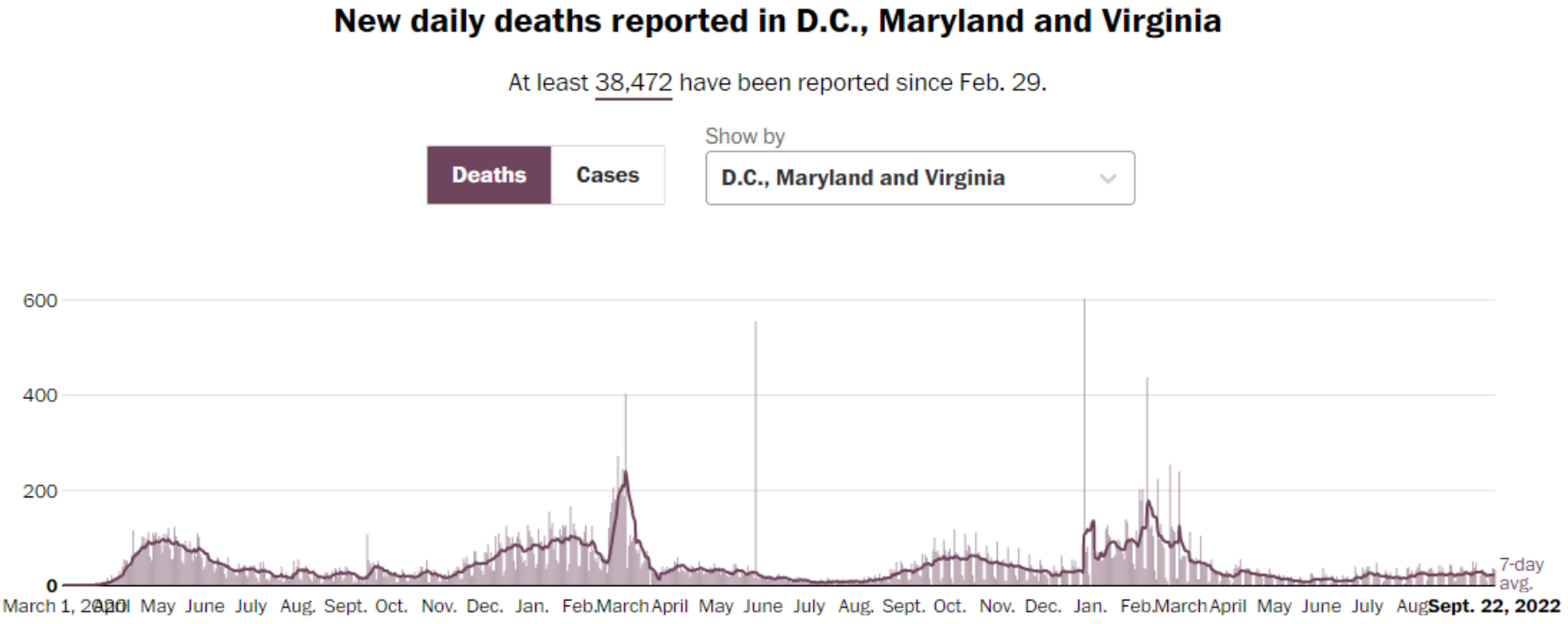
Health

COVID Cases in Washington Region March 1, 2020 – September 22, 2022



The Washington Post: https://www.washingtonpost.com/graphics/local/dc-maryland-virginia-coronavirus-cases/

COVID Deaths in Washington Region March 1, 2020 – September 22, 2022



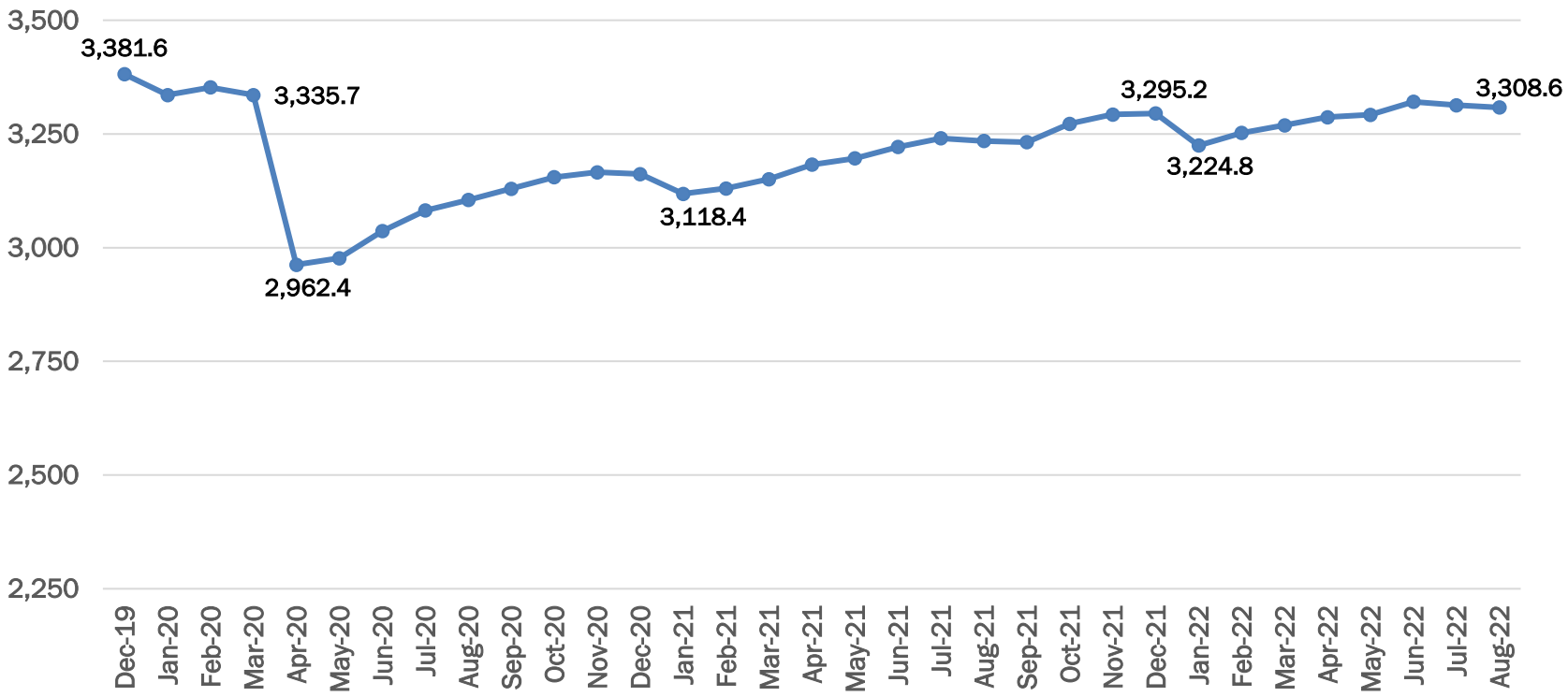
The Washington Post: https://www.washingtonpost.com/graphics/local/dc-maryland-virginia-coronavirus-cases/

Economy

Non-Farm Jobs (000s) - Washington MSA

December 2019 to August 2022

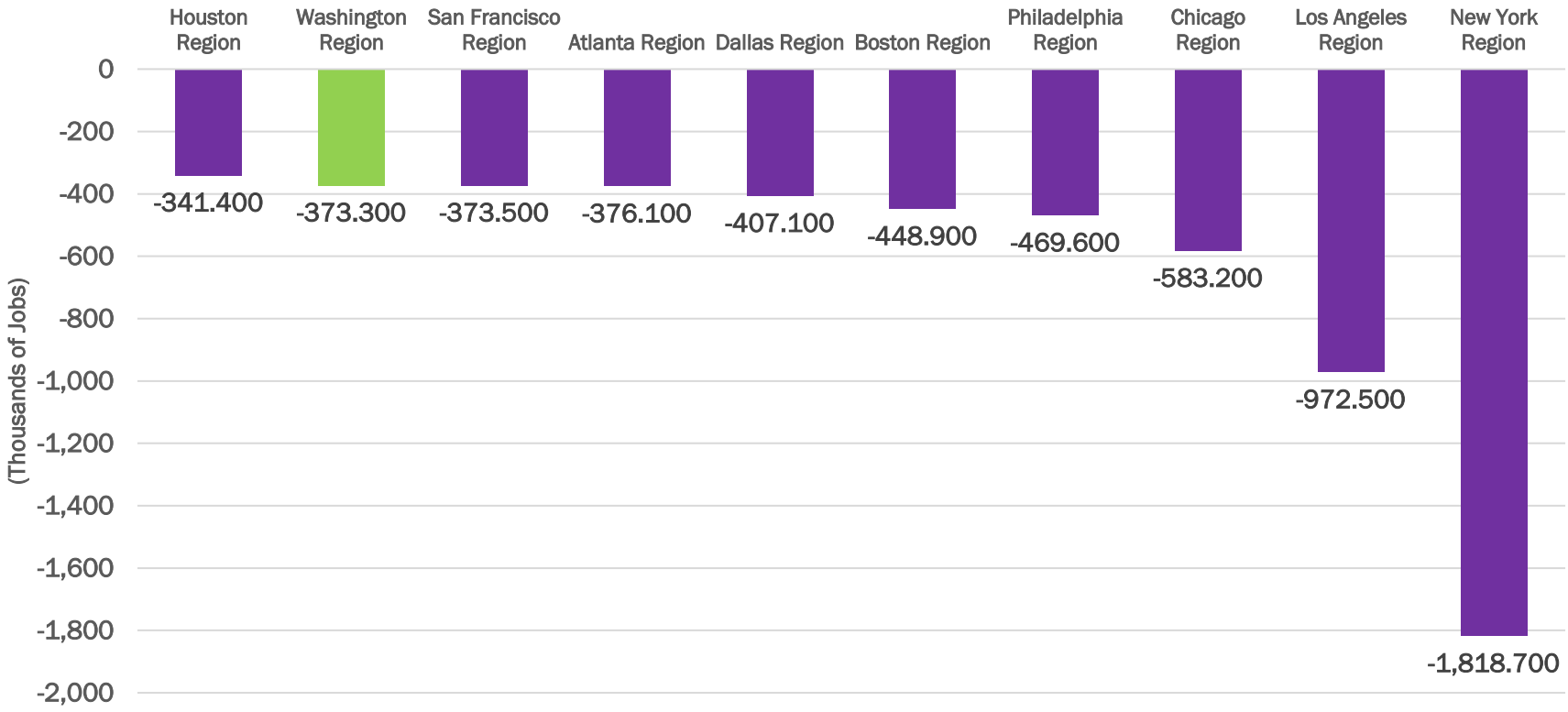
(Bureau of Labor Statistics, Not Seasonally-adjusted, Thousands)



Revised BLS data show the region lost 373,300 jobs between March and April of 2020. As of August 2022, 346,200 jobs have been added during our reopening, or about a 99% recovery of jobs lost to the pandemic.

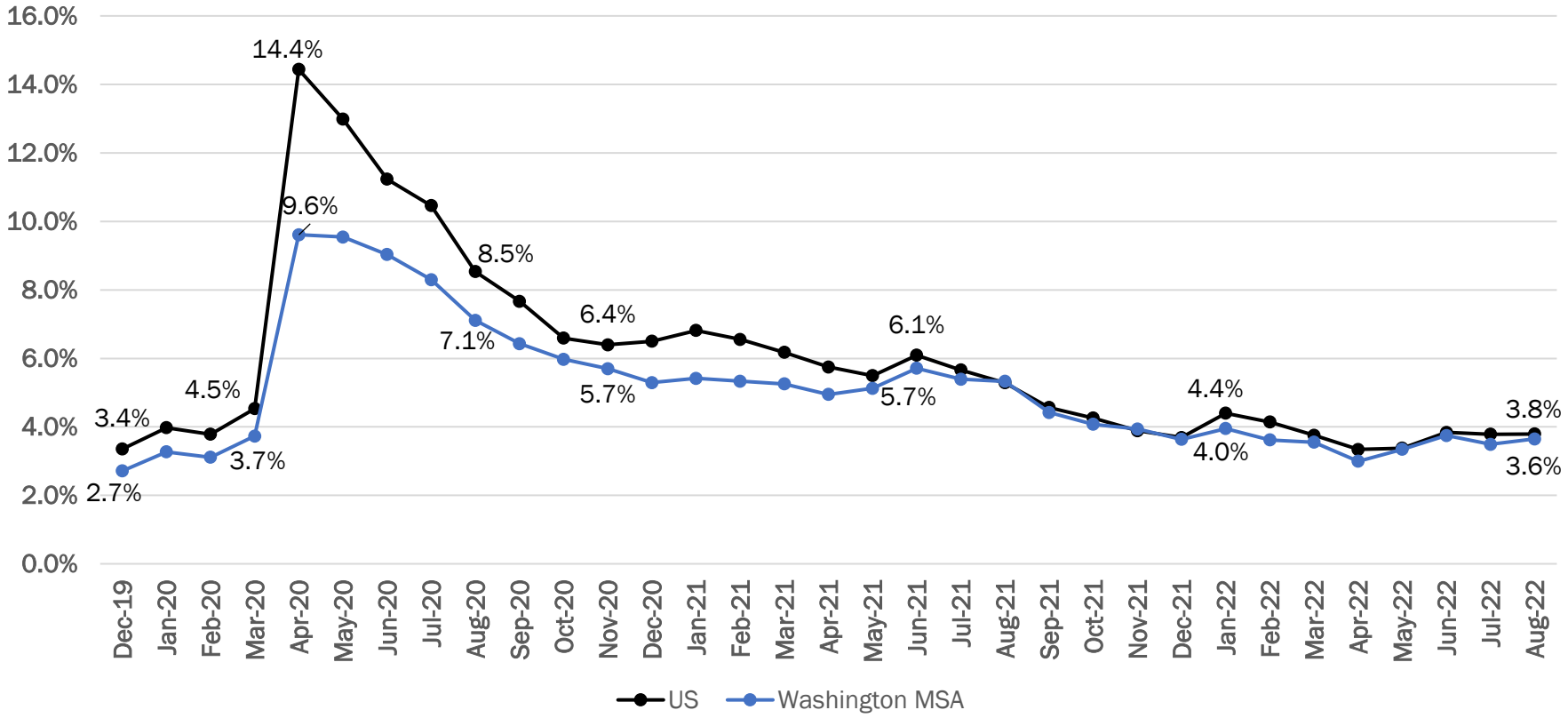
Non-Farm Job Loss March to April 2020 In 10 Largest MSAs

(Source: Bureau of Labor Statistics, Revised Data 3/22)



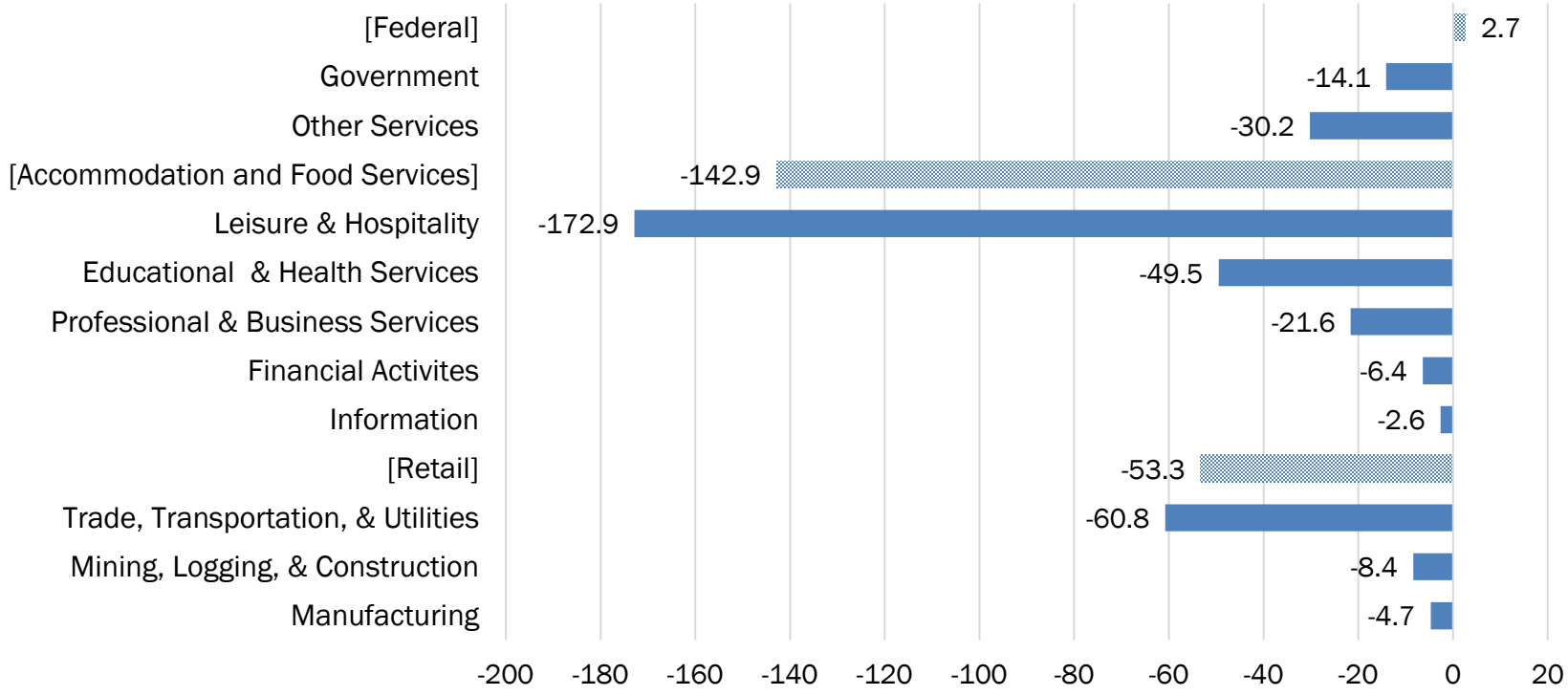
Our initial job losses were among the lowest when compared to many of our peer regions. New York and Los Angeles experienced the most severe losses.

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 converged in late 2020. Rates have recently returned to near pre-pandemic levels.

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



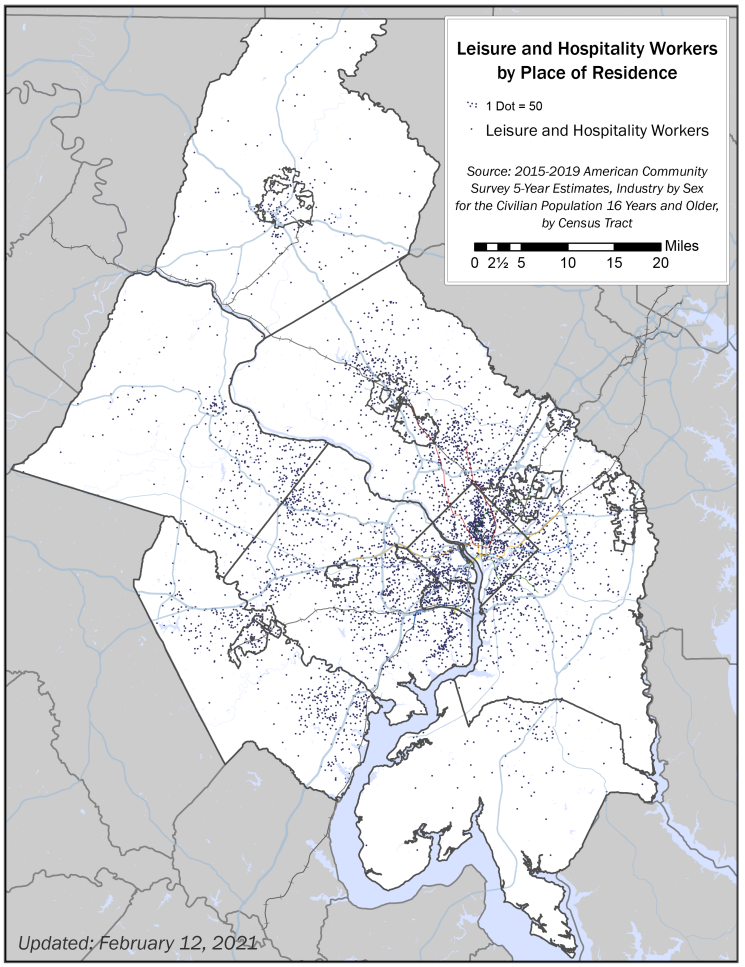
May 2020 employment data (May 2020 – May 2019) shows job losses in nearly every sector especially in hospitality, retail, and several service industry sectors.

Place of Residence for Leisure and Hospitality Workers

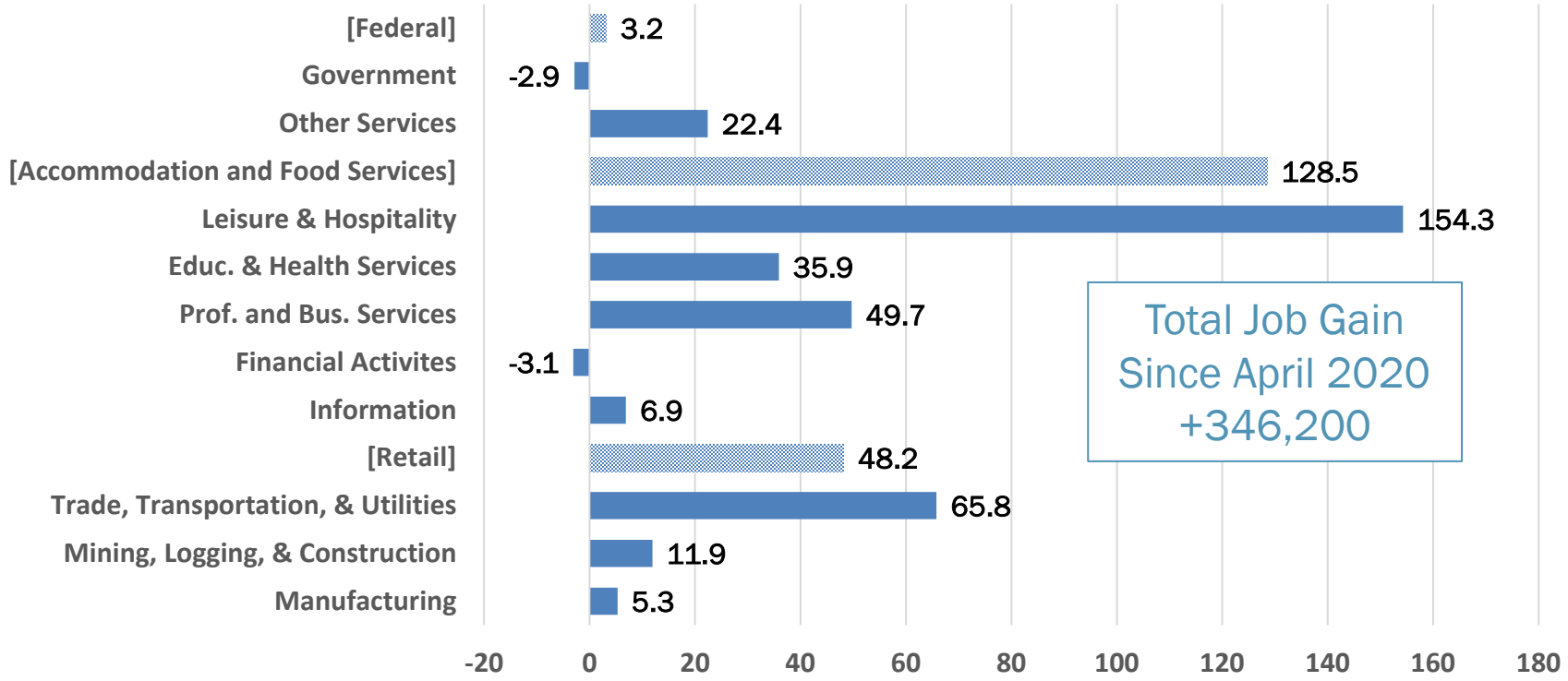
(Source: Census ACS)

- 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.

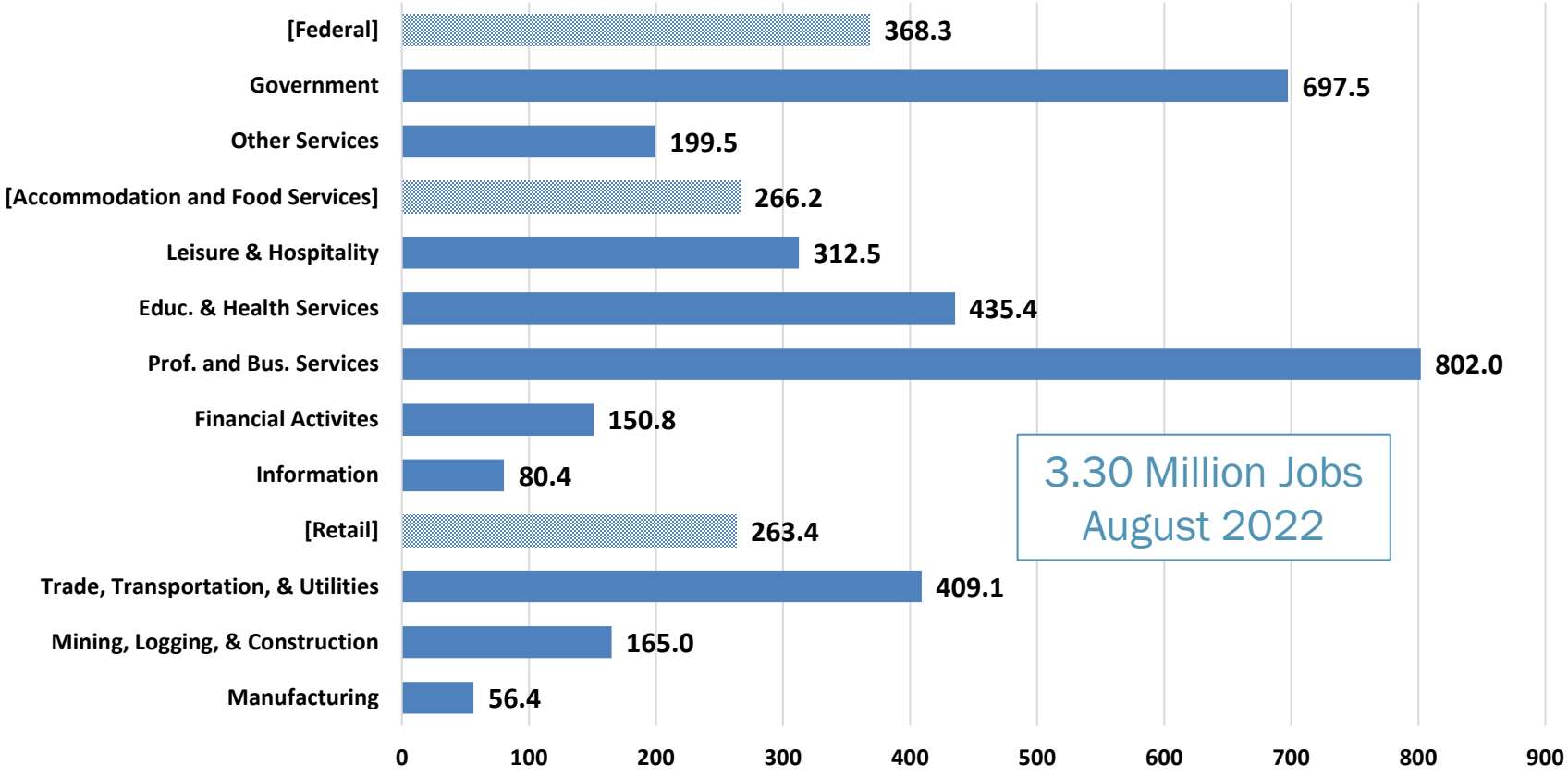


Job Change By Sector
April 2020 to August 2022
Washington MSA (Thousands)



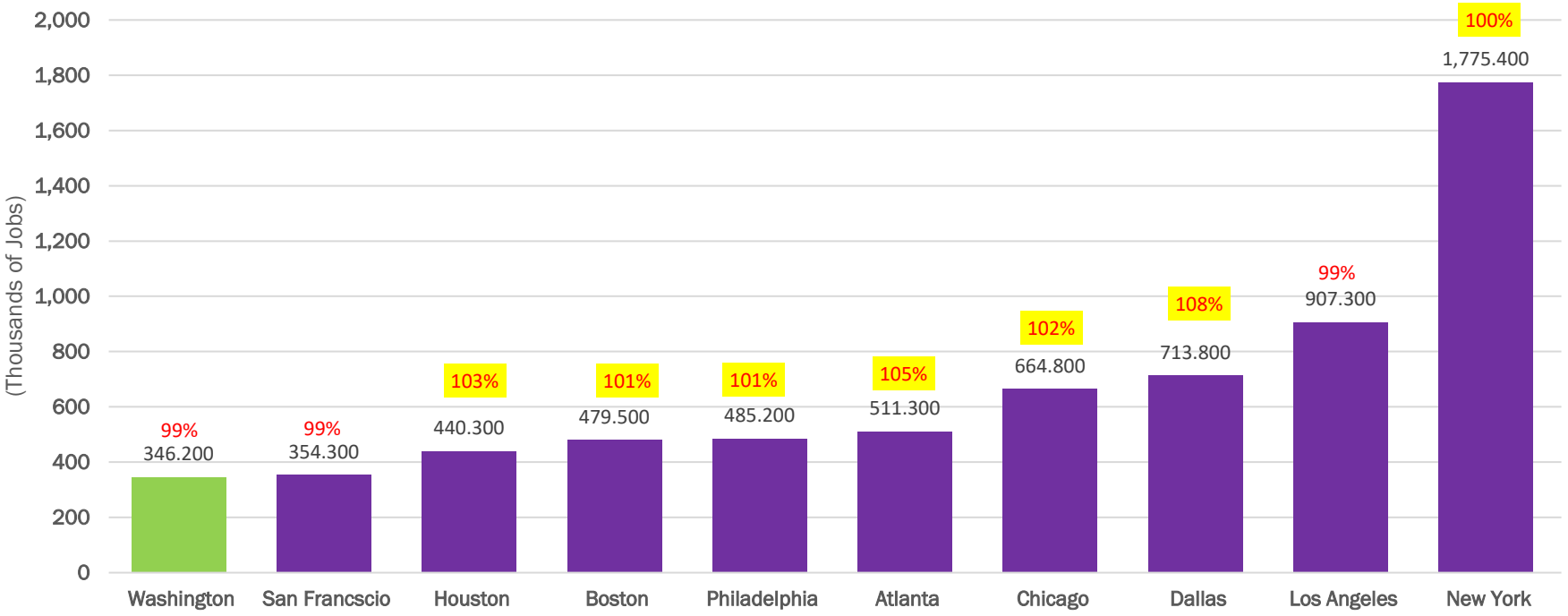
By August 2022, the region had recovered approximately 99 percent of the jobs lost at the outset of the pandemic.

Jobs By Sector
Post Pandemic August 2022
Washington MSA (Thousands)



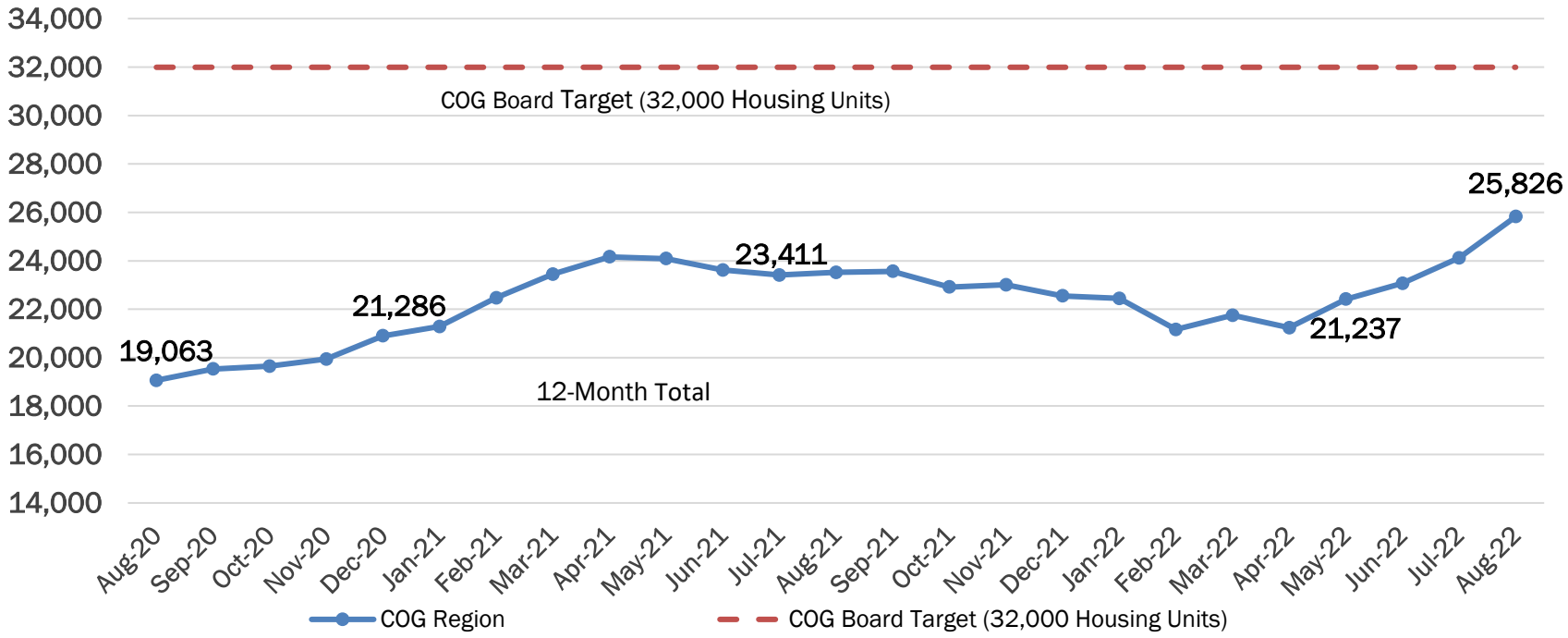
Non-Farm Job Change In 10 Largest MSAs April 2020 to August 2022 And Share of Jobs Recovered Since April 2020

(Source: Bureau of Labor Statistics, Revised Data 3/22)



Most of our peer regions have experienced larger job growth since the onset of the pandemic, but only Atlanta, Boston, Chicago, Dallas, Houston, Philadelphia, and New York have more jobs now than in April 2020.

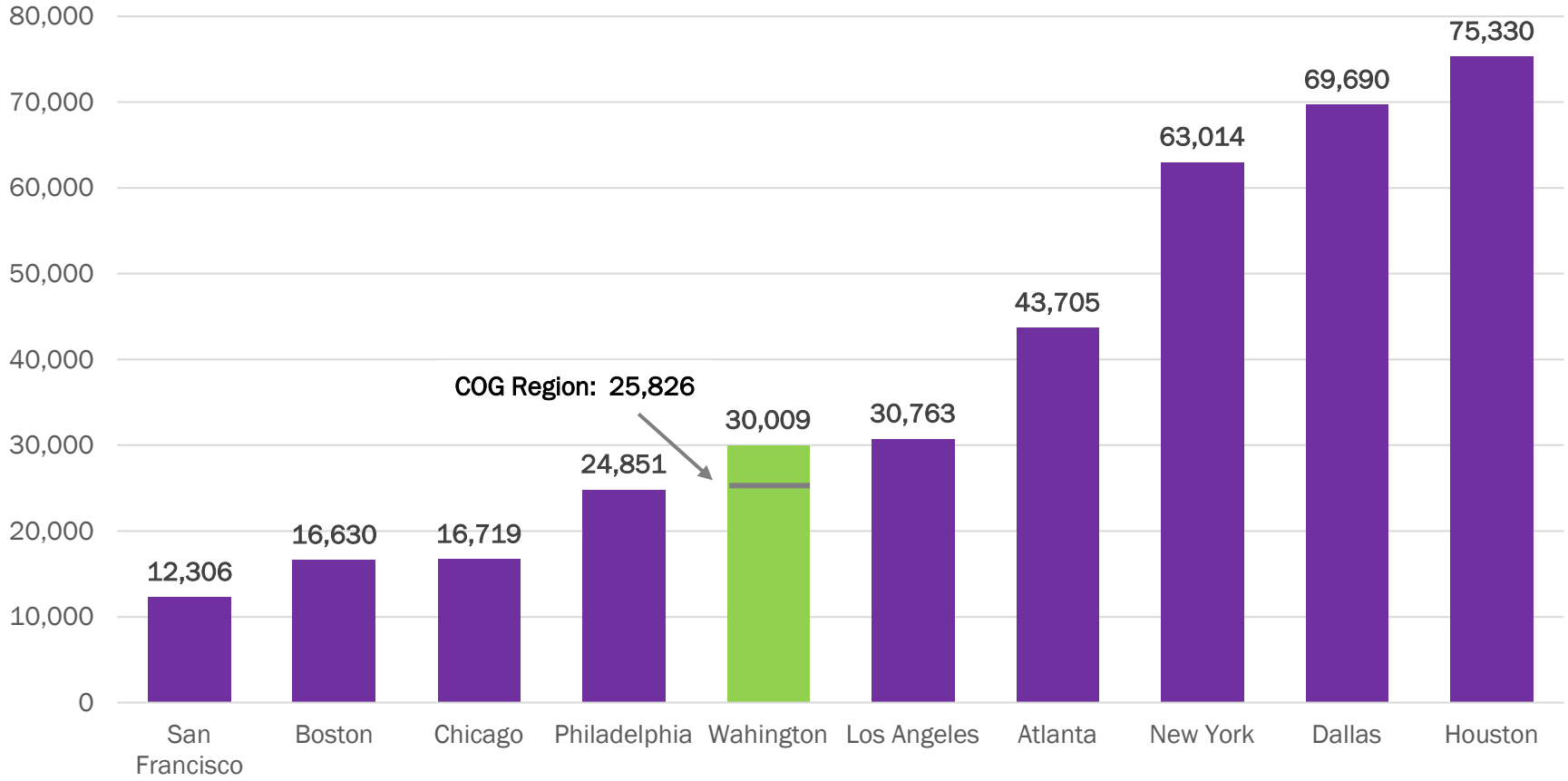
New Housing Units Authorized
12-month total for COG Region
(Source: US Census C-40 data)



The number of new housing permits remained flat from July 2020 through mid-2020. This was followed by an upward trend from late 2020 through spring of 2021, but again registered declines in the second quarter of 2021 through the fourth quarter of 2021. First quarter of 2022 through third quarter had an upward trend.

New Housing Units Authorized Issued in 10 Largest MSAs September 2021 to August 2022 (12-Month Total)

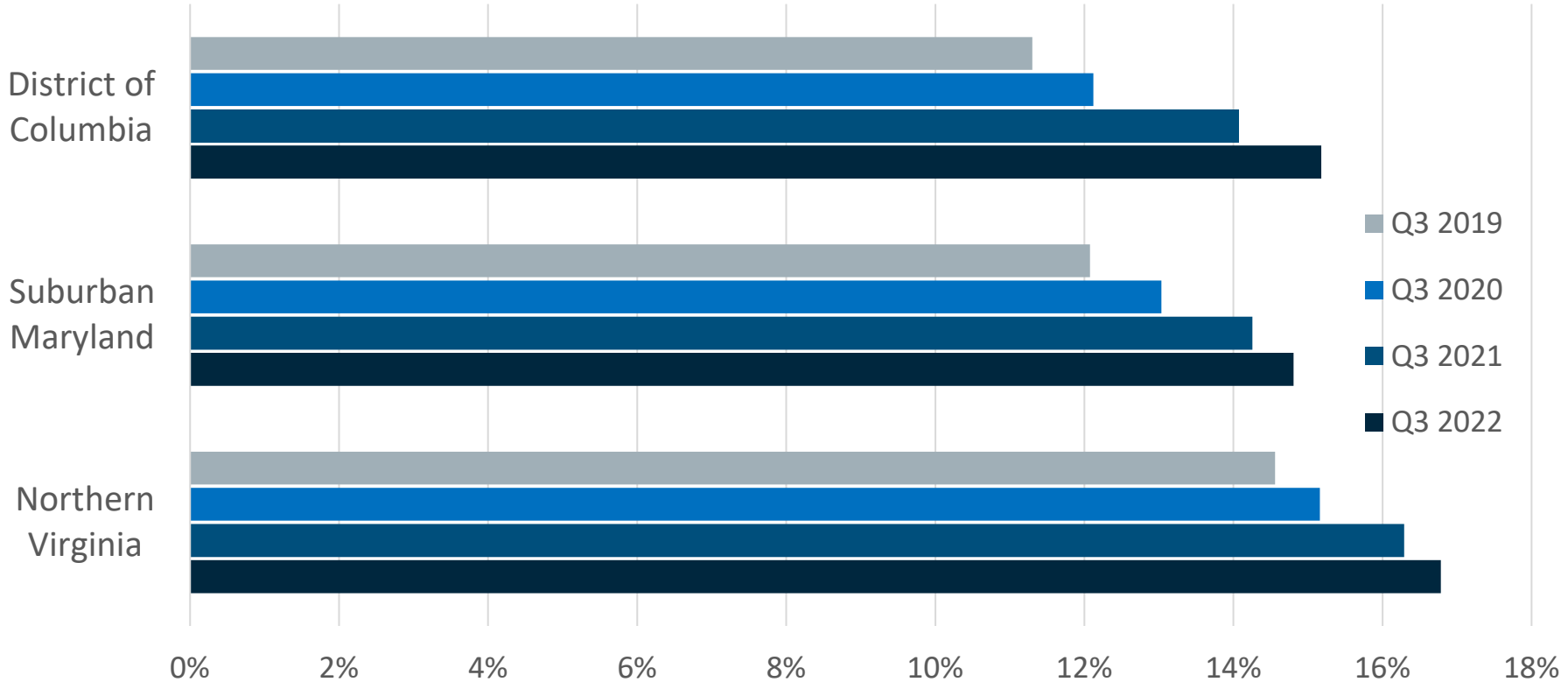
(Source: Census Bureau)



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 to Q3 2022

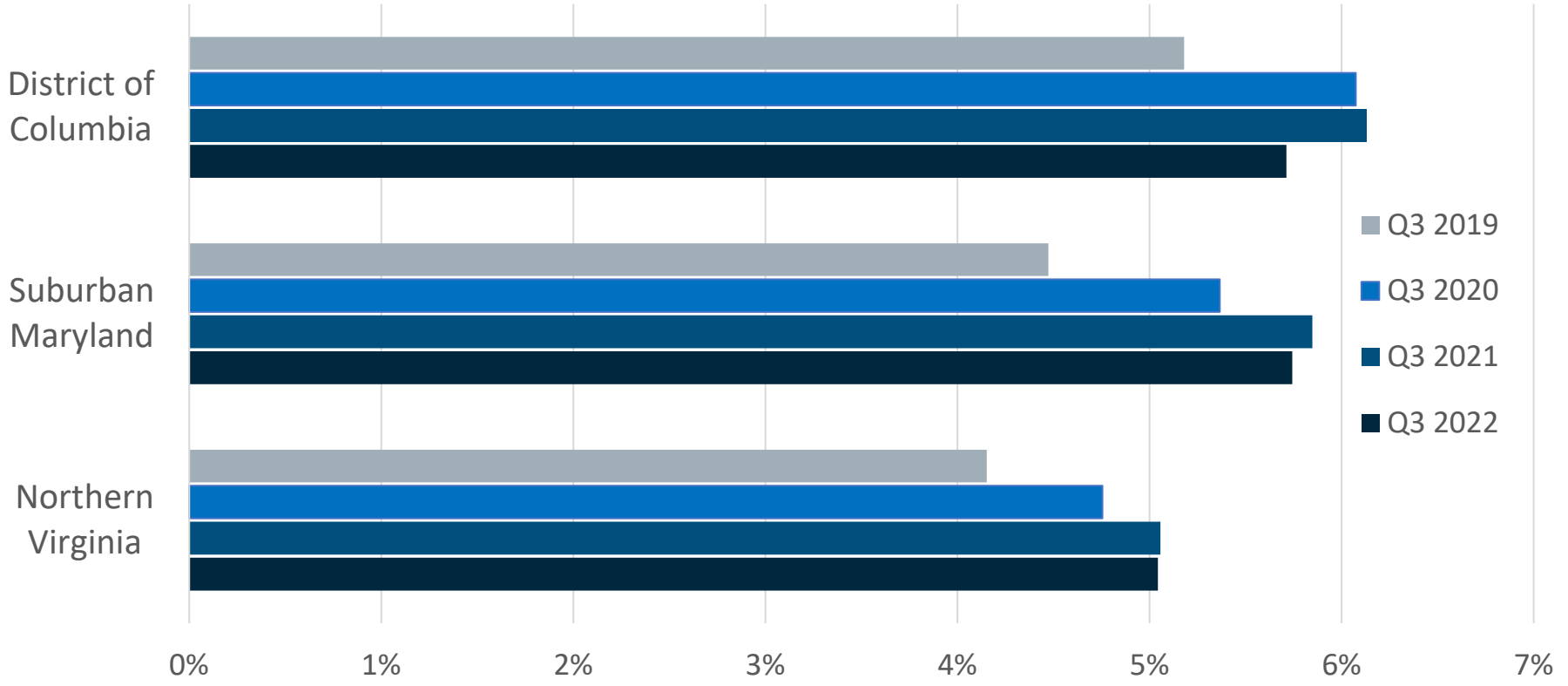
(Source: CoStar)



Office vacancies have risen across the region since the pandemic began in 2020. Vacancies are highest in Northern Virginia.

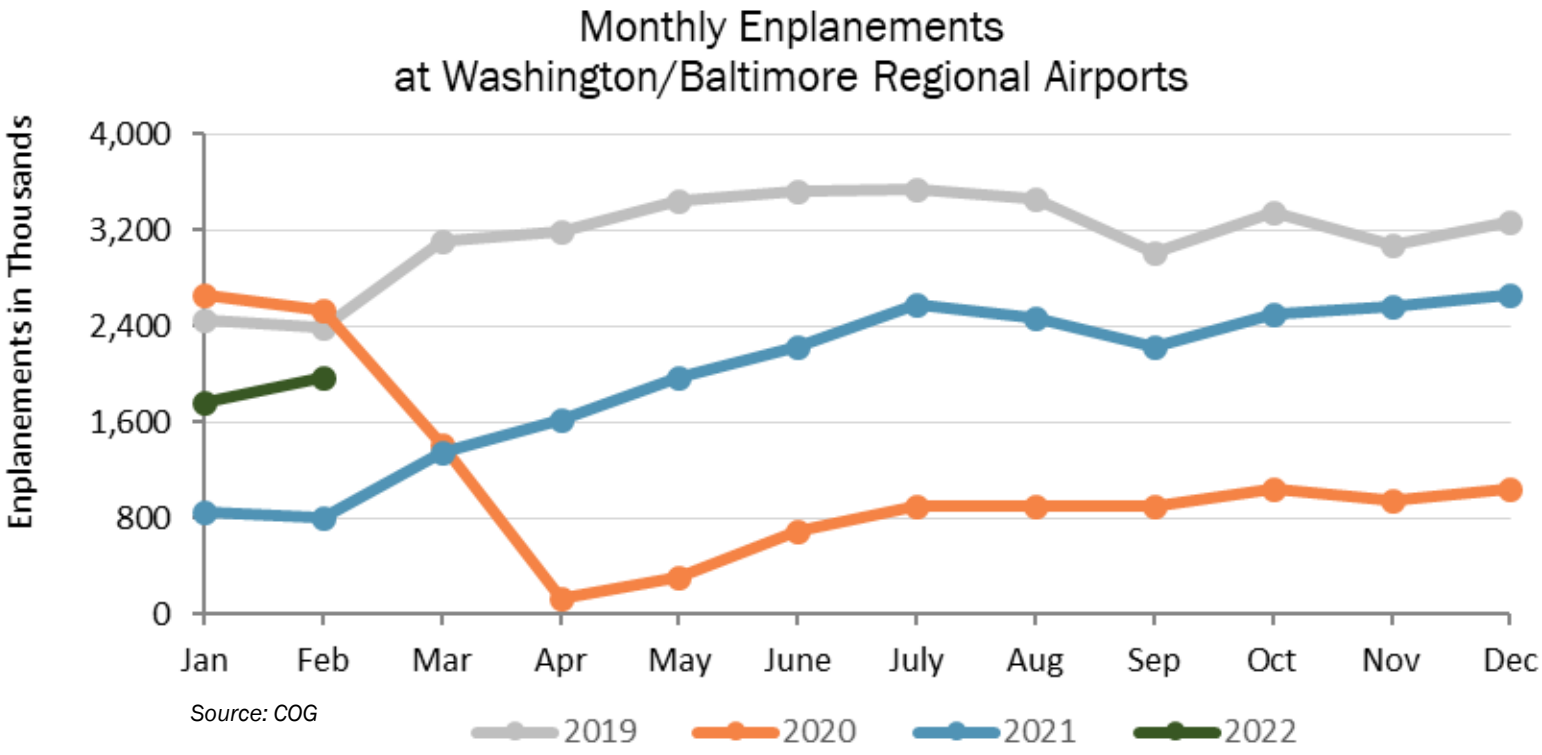
Change in Retail Vacancy Rates Q3 2019 to Q3 2022

(Source: CoStar)



Retail vacancies increased slightly at the beginning of the pandemic. In 2022, vacancies have begun to come down but are still above pre-pandemic rates.

Air Travel

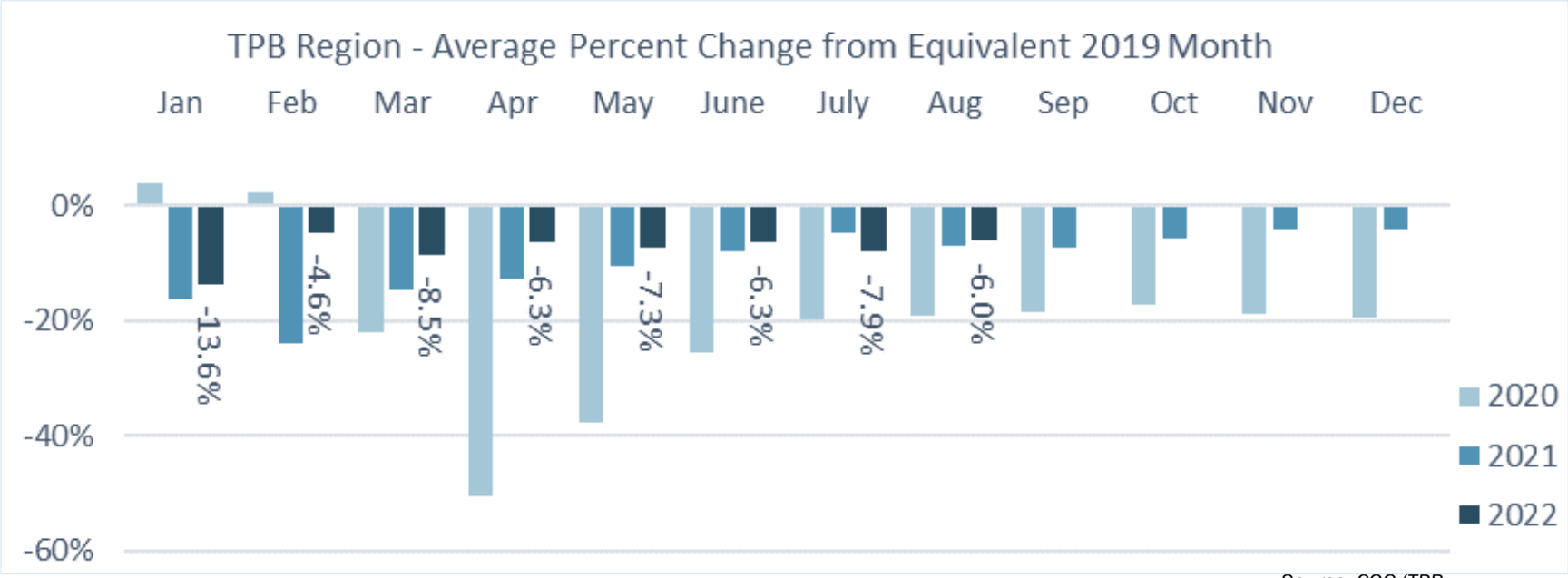


Source: COG

After steep declines early in the pandemic period, air travel has made notable recovery at the region's three large commercial airports.

Transportation

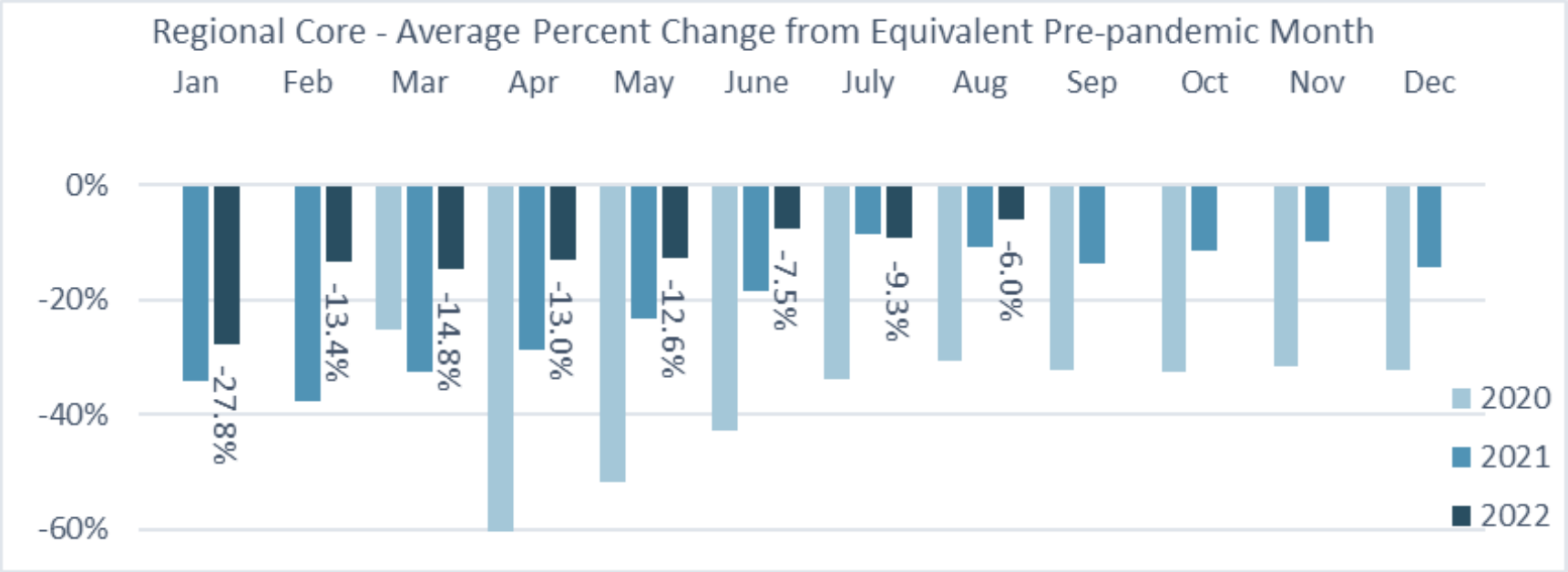
Roadway Traffic Volumes: Region



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 February 2022 and experienced slight variations through August 2022.

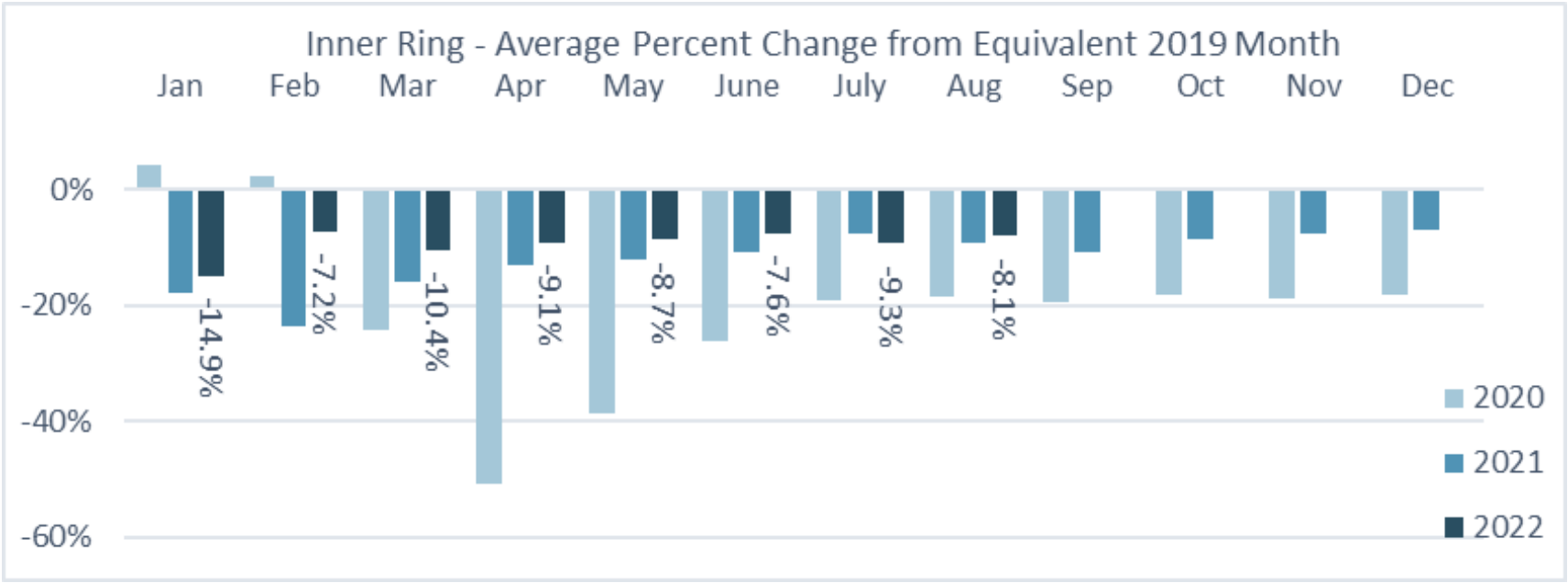
Roadway Traffic Volumes: Regional Core



Source: COG/TPB

Traffic Volumes in the Regional Core decreased by more than 60% over the year in April 2020 and had recovered more slowly compared to the region overall through spring 2022. However, in August 2022, volumes in the Regional Core had recovered to 96% of pre-pandemic levels for the same month, matching the region's recovery overall.

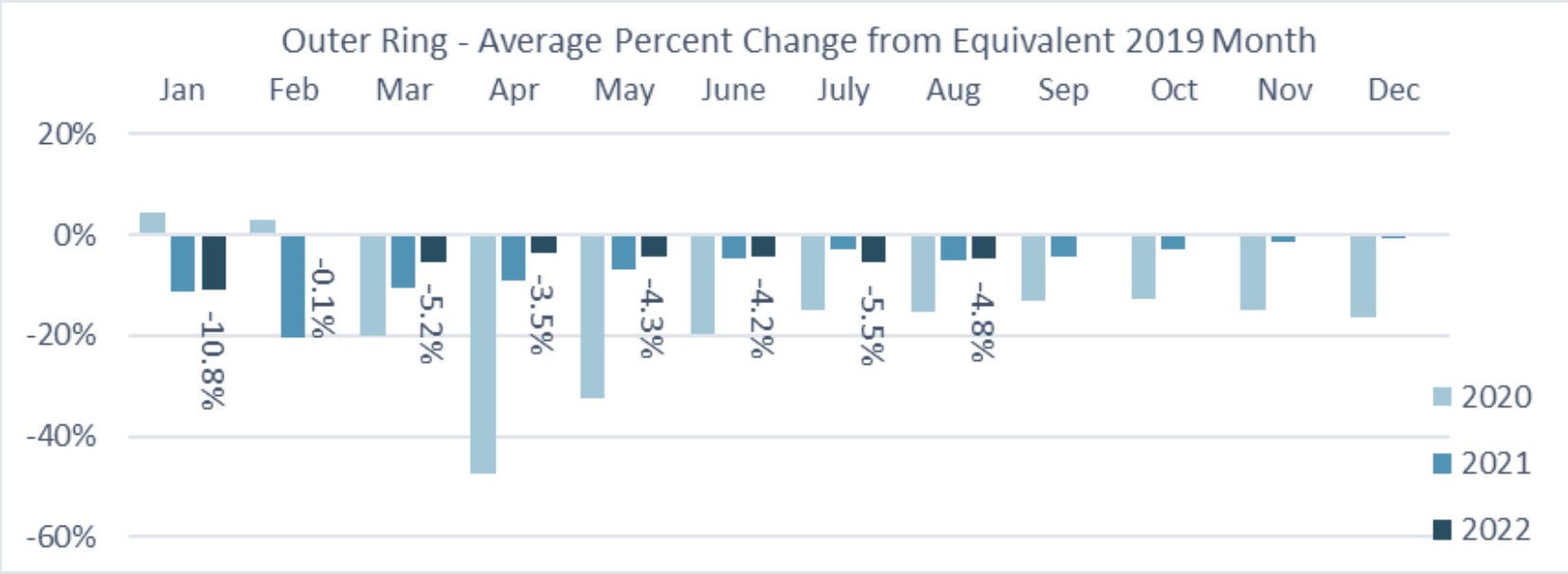
Roadway Traffic Volumes: Inner Suburbs



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 nearly 93% of 2019 levels by February 2022, and experienced slight variations through August 2022.

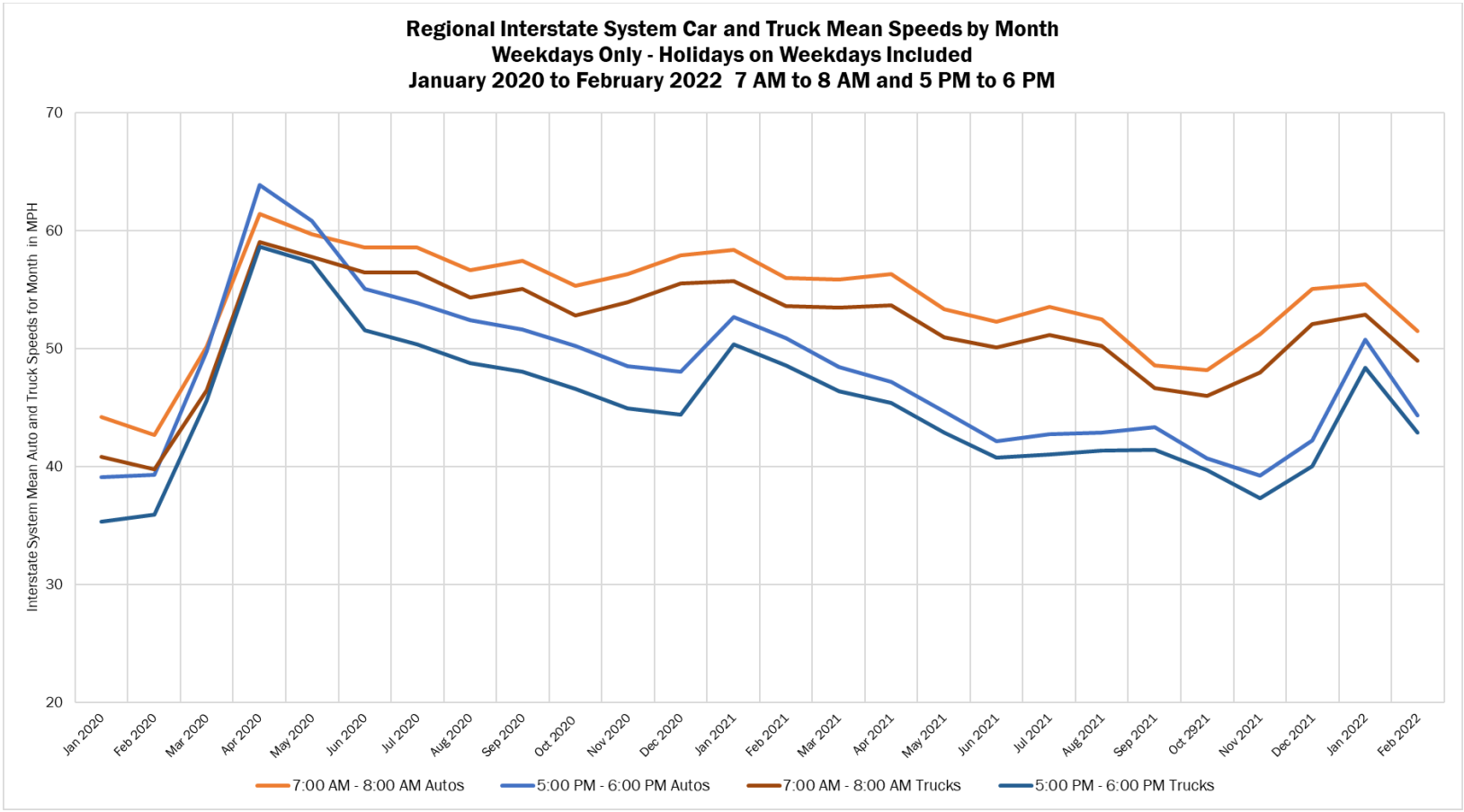
Roadway Traffic Volumes: Outer Ring



Source: COG/TPB

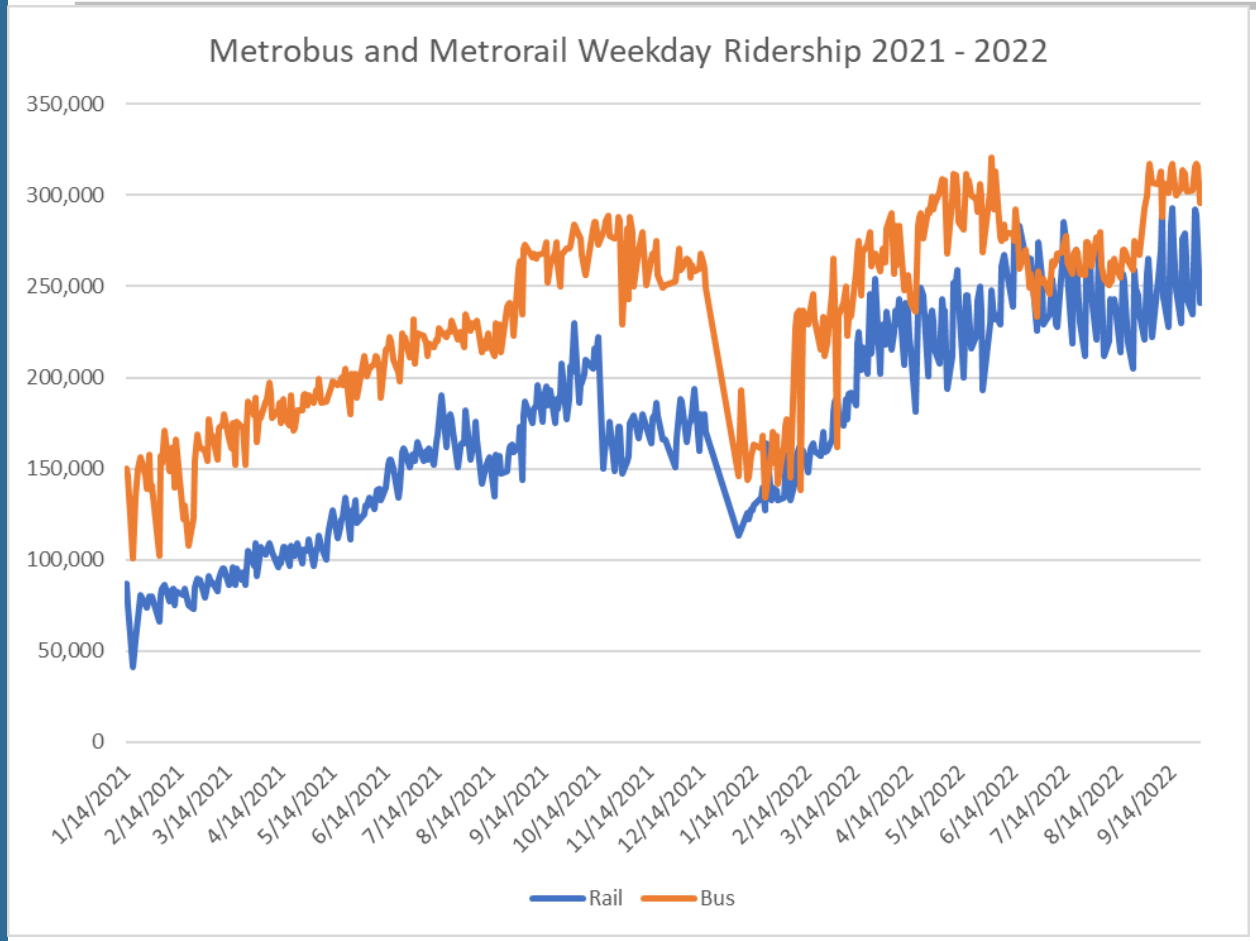
Traffic volumes in the outer ring sustained the smallest peak decrease in April 2020 of 47.6% and by February 2022, volumes in the outer ring were more than 99% of comparable 2019 levels. Volumes in the outer suburbs dipped again slightly in March to 95% of pre-pandemic levels and experienced slight variations through August 2022.

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



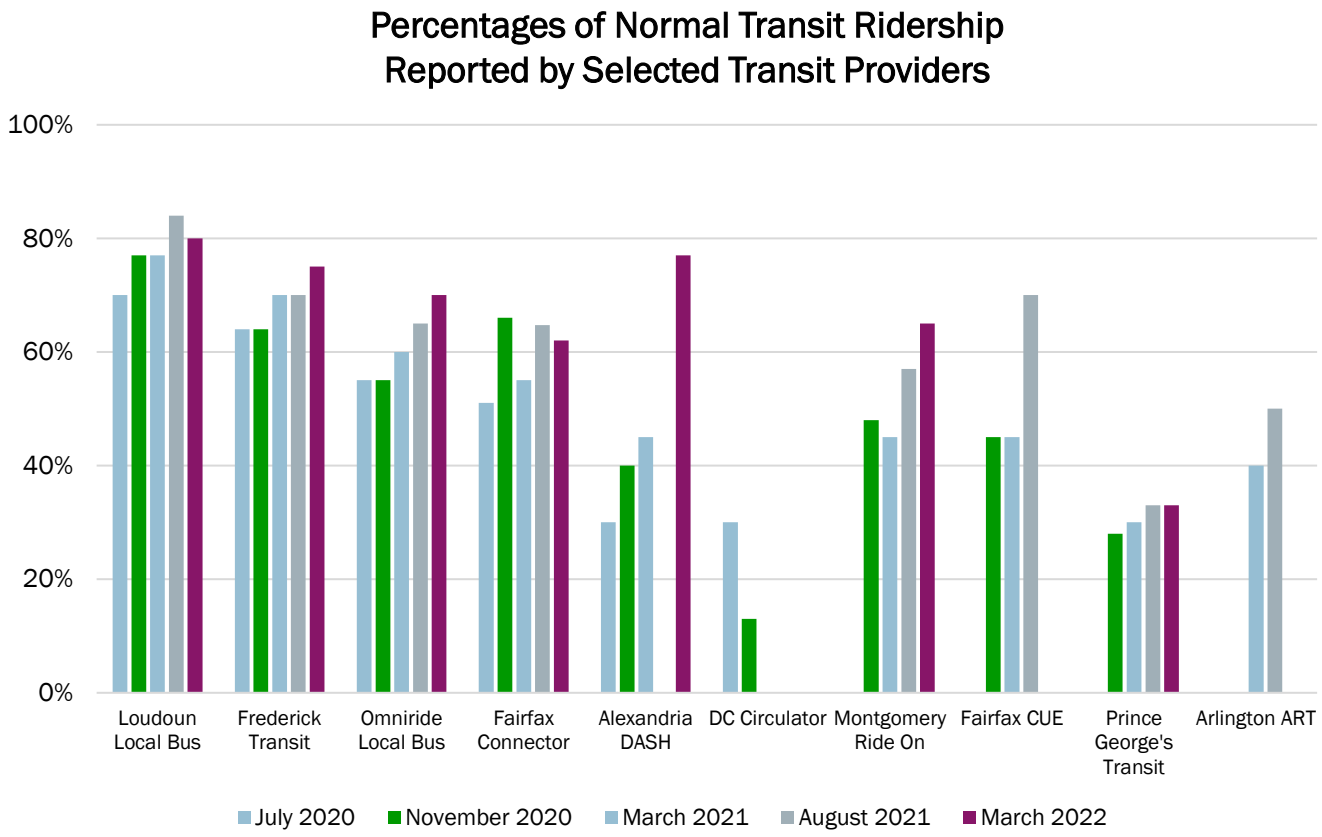
September 2022:

Metrorail ~40%
Metrobus ~82%
combined ~55%

of Sep 2019 levels

Source: WMATA Covid-19 Public Information Website 10/26/22: https://www.wmata.com/service/covid19/Covid-19-Public-Information.cfm.
Holidays and snow days removed.

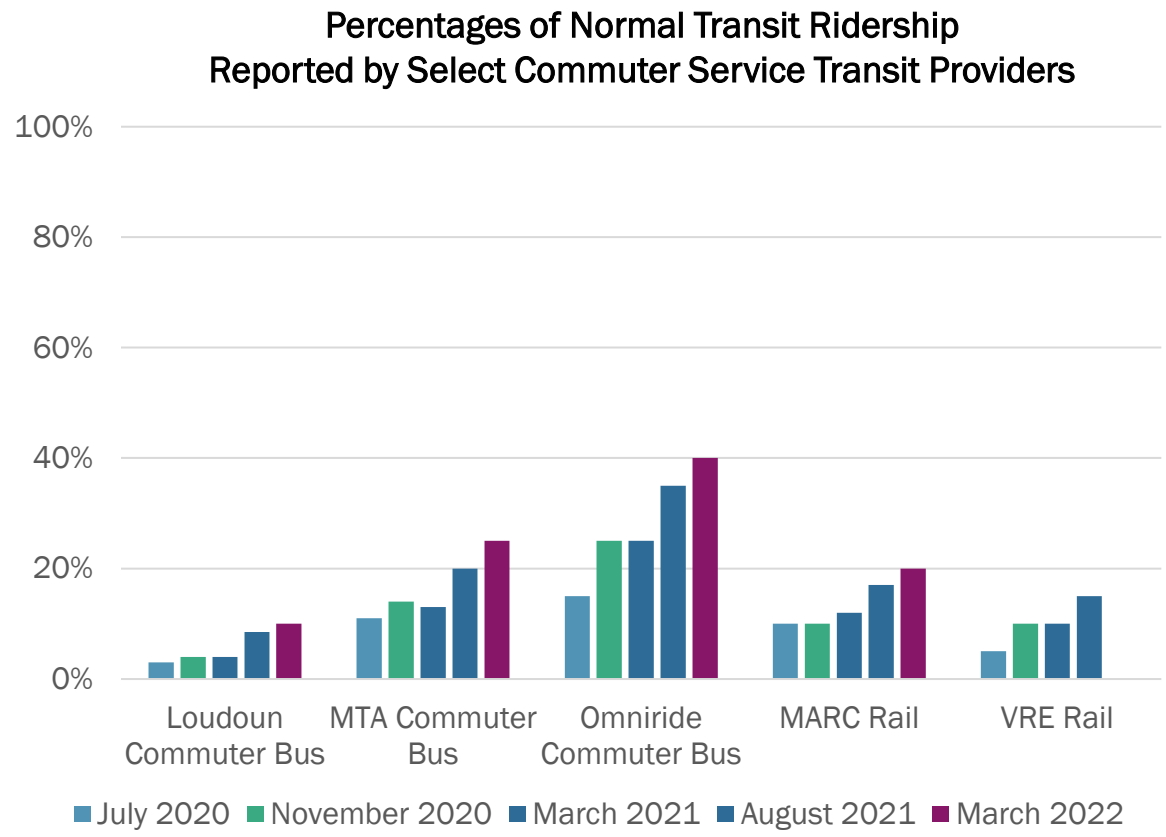
Local Transit Ridership



- Ridership down over December/ January due to Omicron variant, but increasing since

Agency self-reported approximate percentages of ridership vs. typical levels. Source: COG/TPB questionnaires of local (non-WMATA) transit agencies. Not all providers participated in all surveys.

Commuter Services Transit Ridership



- Commuter services ridership continues to slowly increase

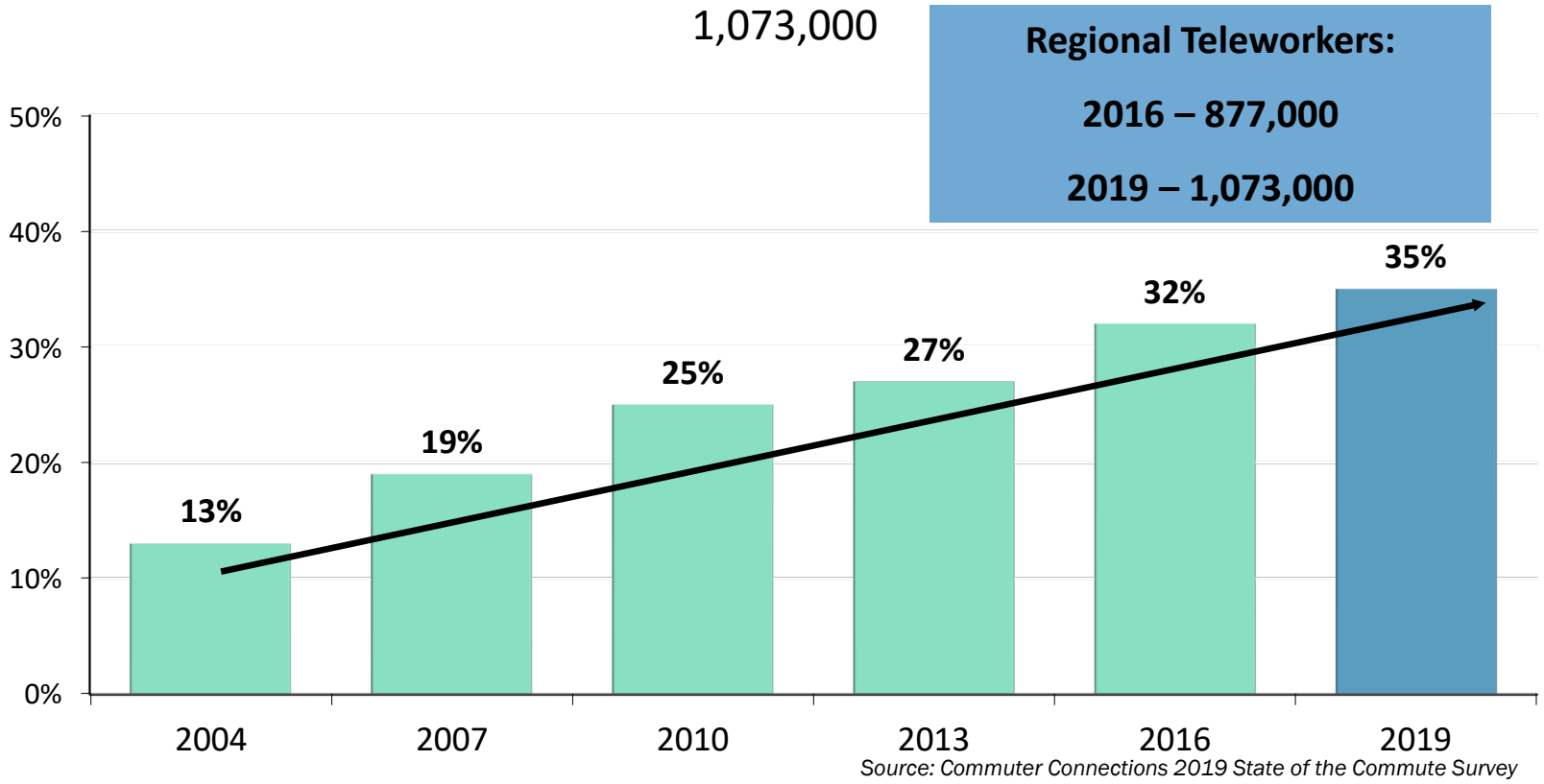
Agency self-reported approximate percentages of ridership vs. typical levels. Source: COG/TPB questionnaires of local (non-WMATA) transit agencies. Not all providers participated in all surveys.

Teleworking Characteristics

Historical Teleworking Growth (Pre-Pandemic)

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

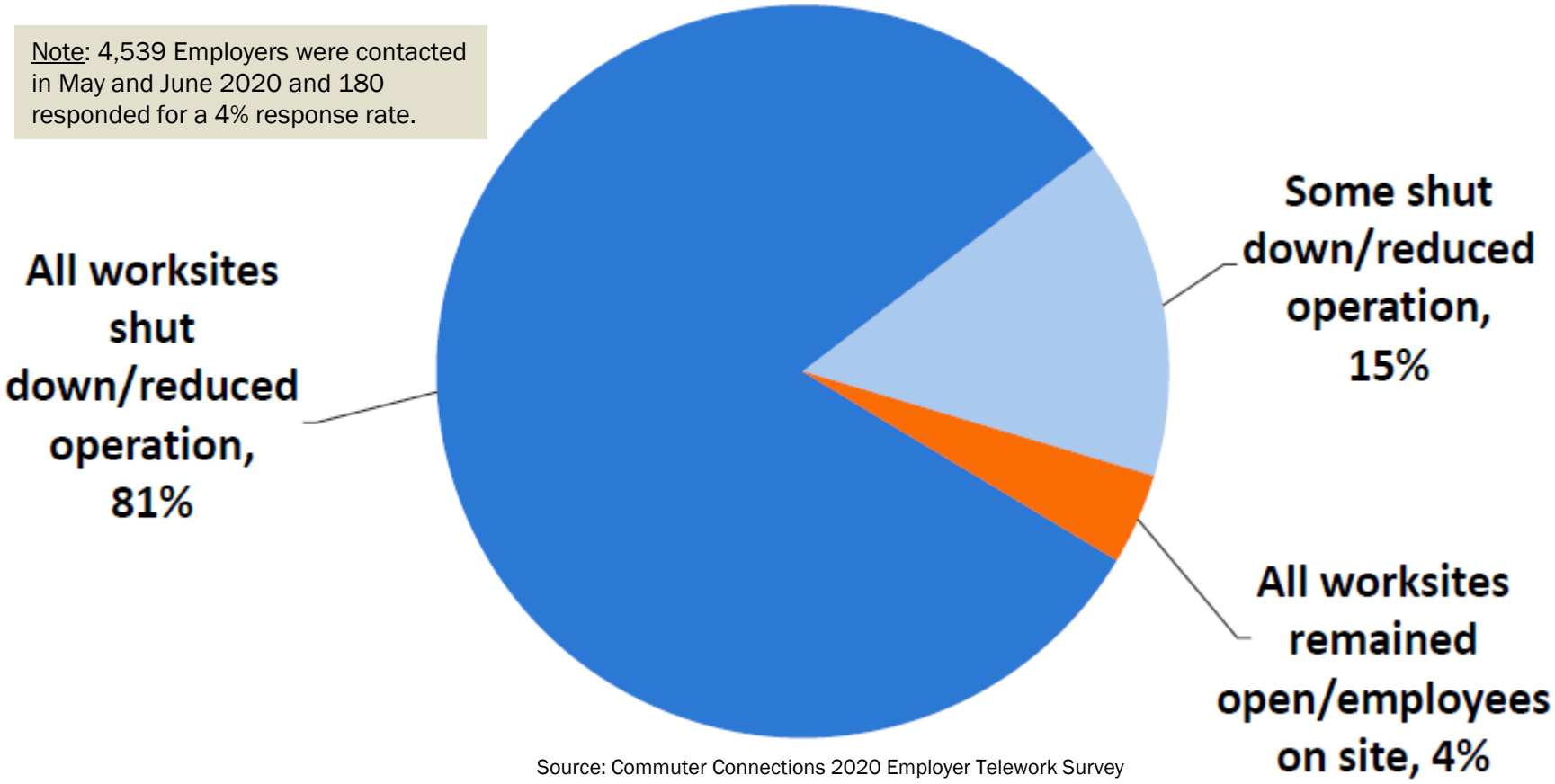
Between 2016 and 2019, the region added 196,000 new teleworkers for a total of 1,073,000



Source: Commuter Connections 2019 State of the Commute Survey

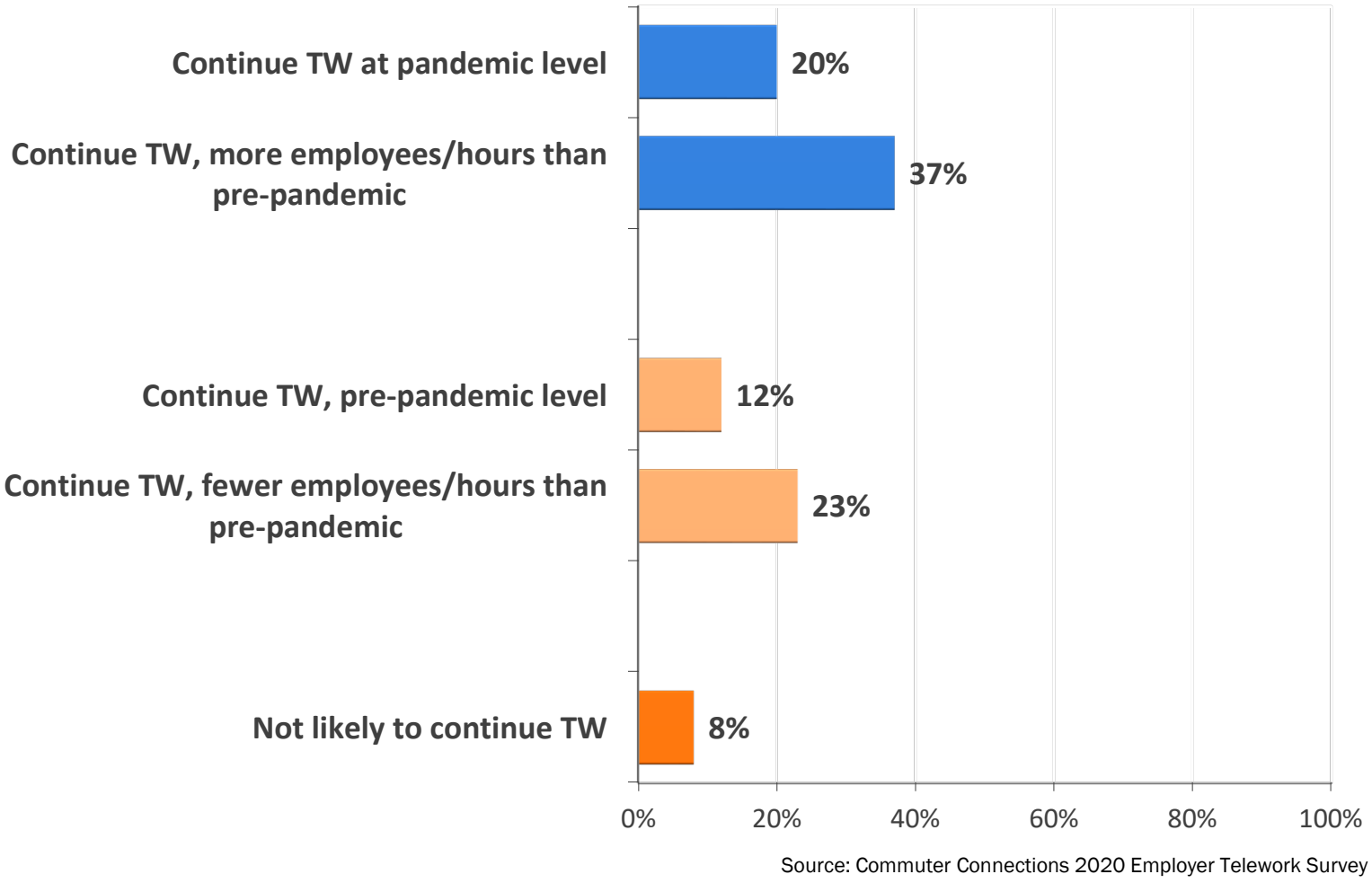
96% of Worksites Shut Down or Reduced On-site Operation Either Completely (81%) or Partially (15%) Since the Pandemic Began

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

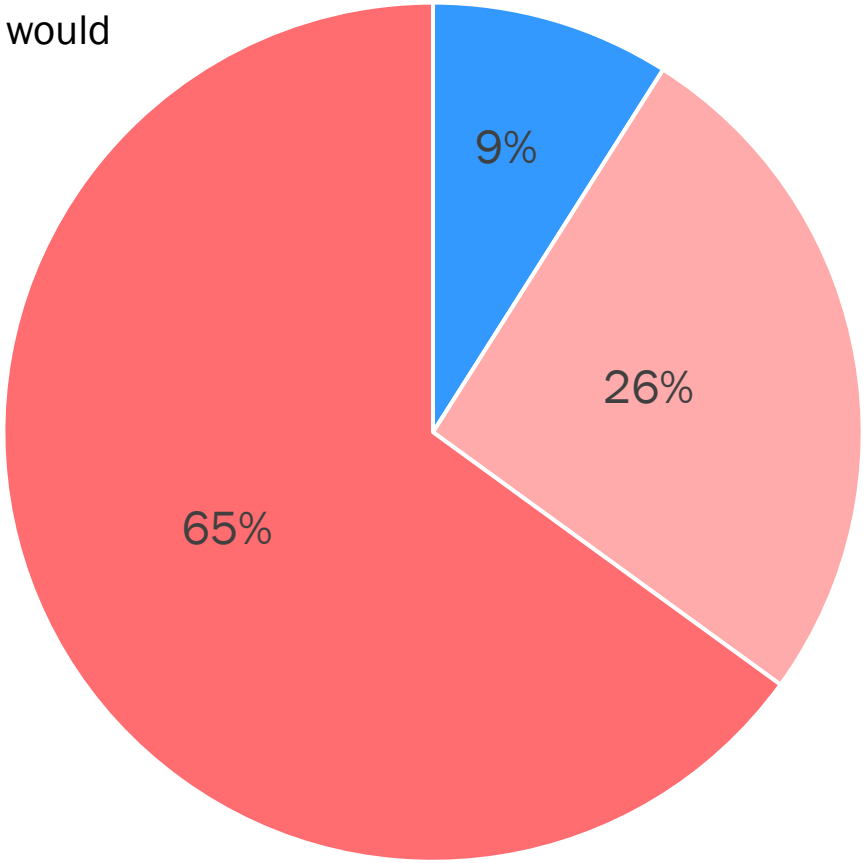


Source: Commuter Connections 2020 Employer Telework Survey

Preferences of Current Teleworkers

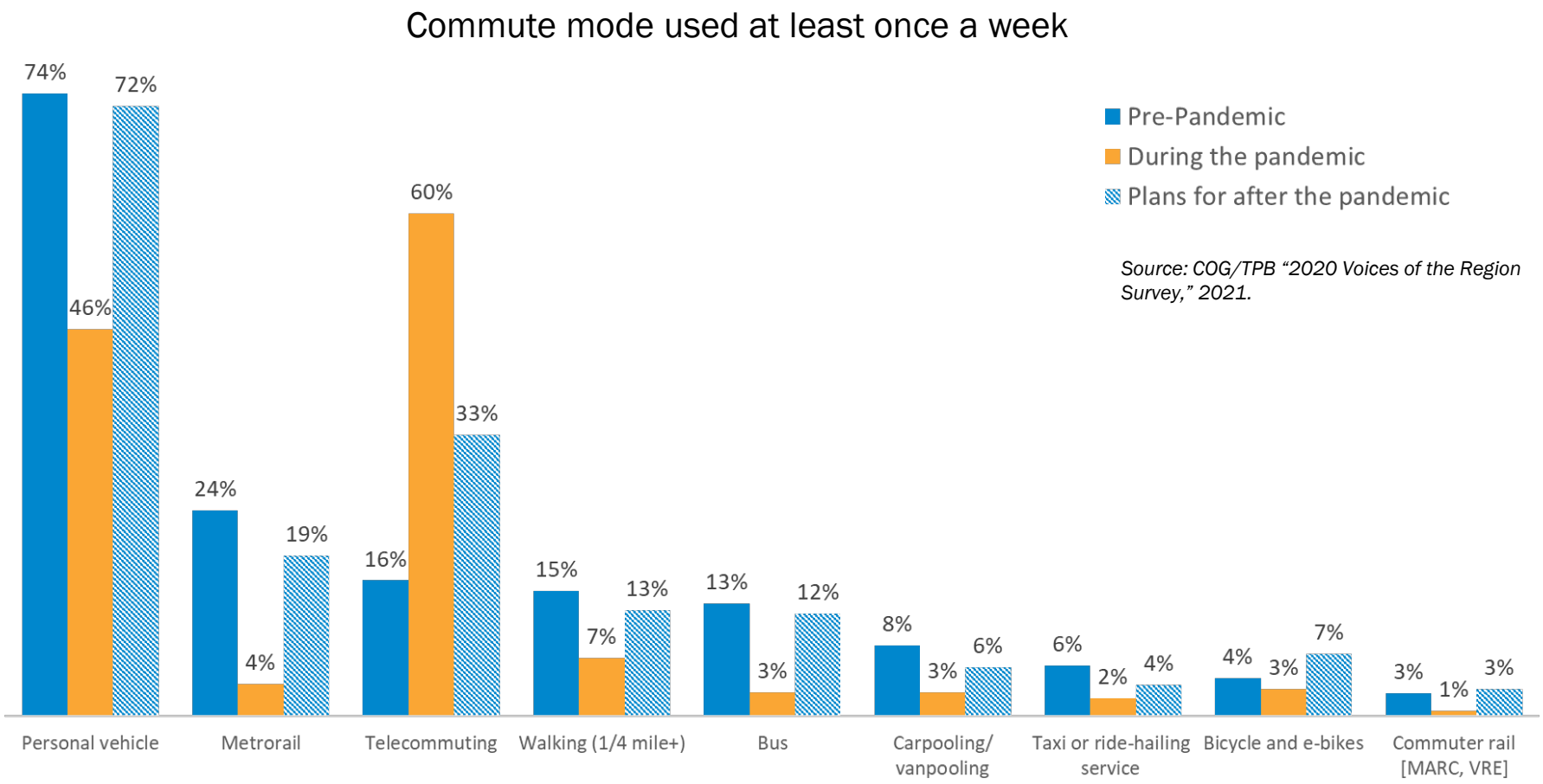
If given the choice to return to a work location once the COVID-19 pandemic is over, would you prefer to…?

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

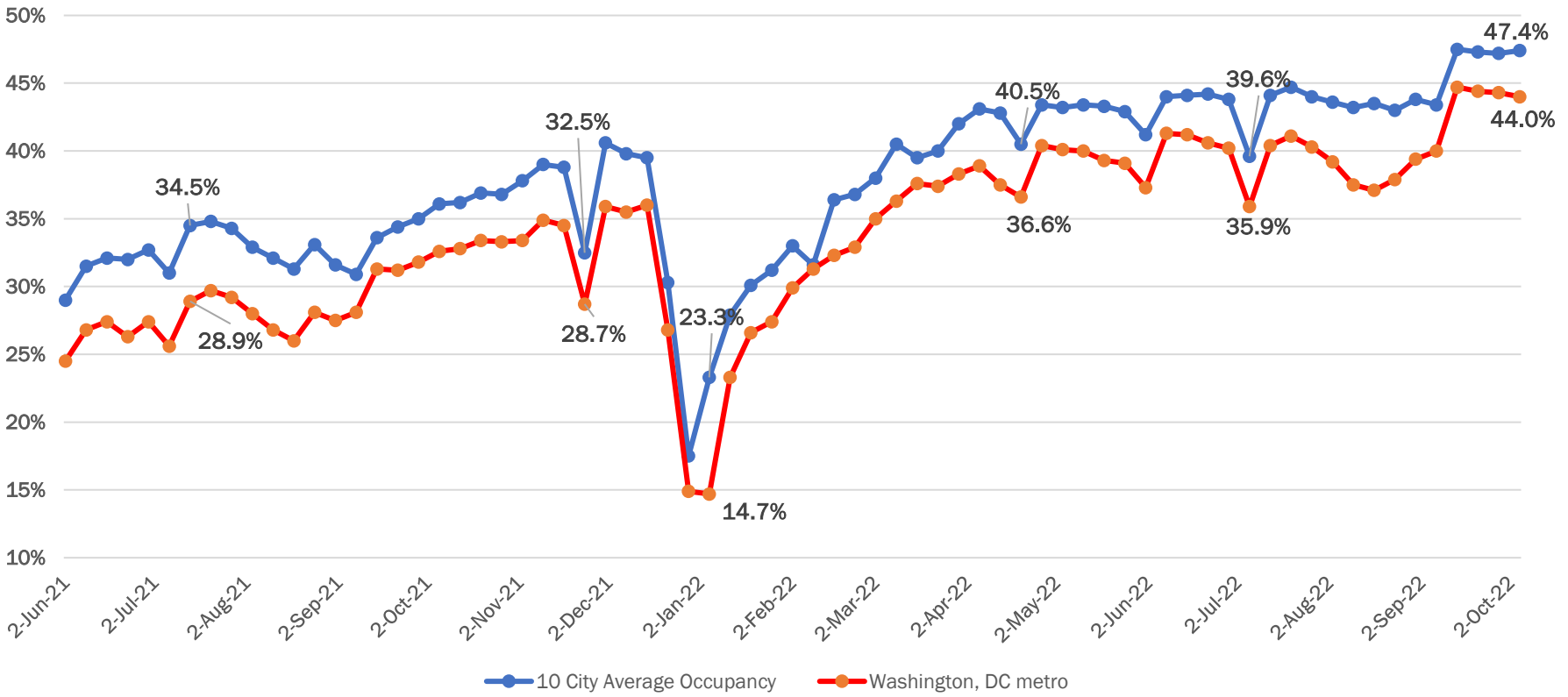


Source: COG/TPB "2020 Voices of the Region Survey," 2021.

Commute Mode



Office Occupancy Since June 2021 Average for 10 MSAs and Washington MSA



Source: COG 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

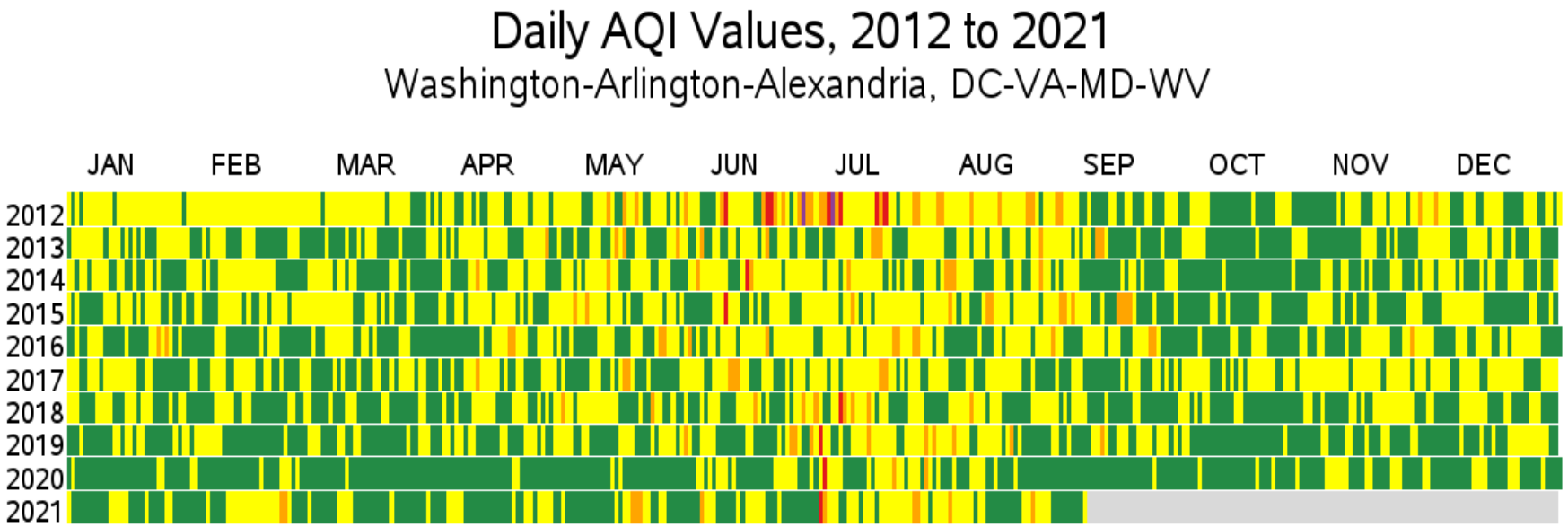
Criteria Pollutants

- **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



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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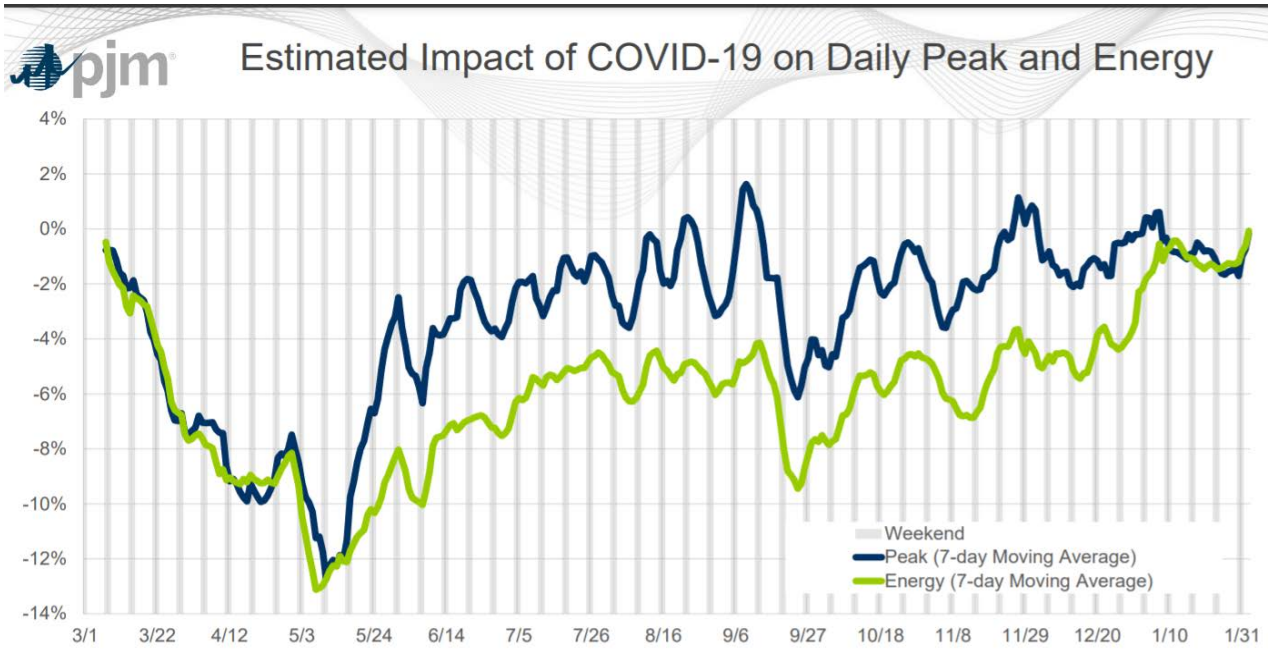
Council of Governments

Impact on Electricity & Energy Consumption

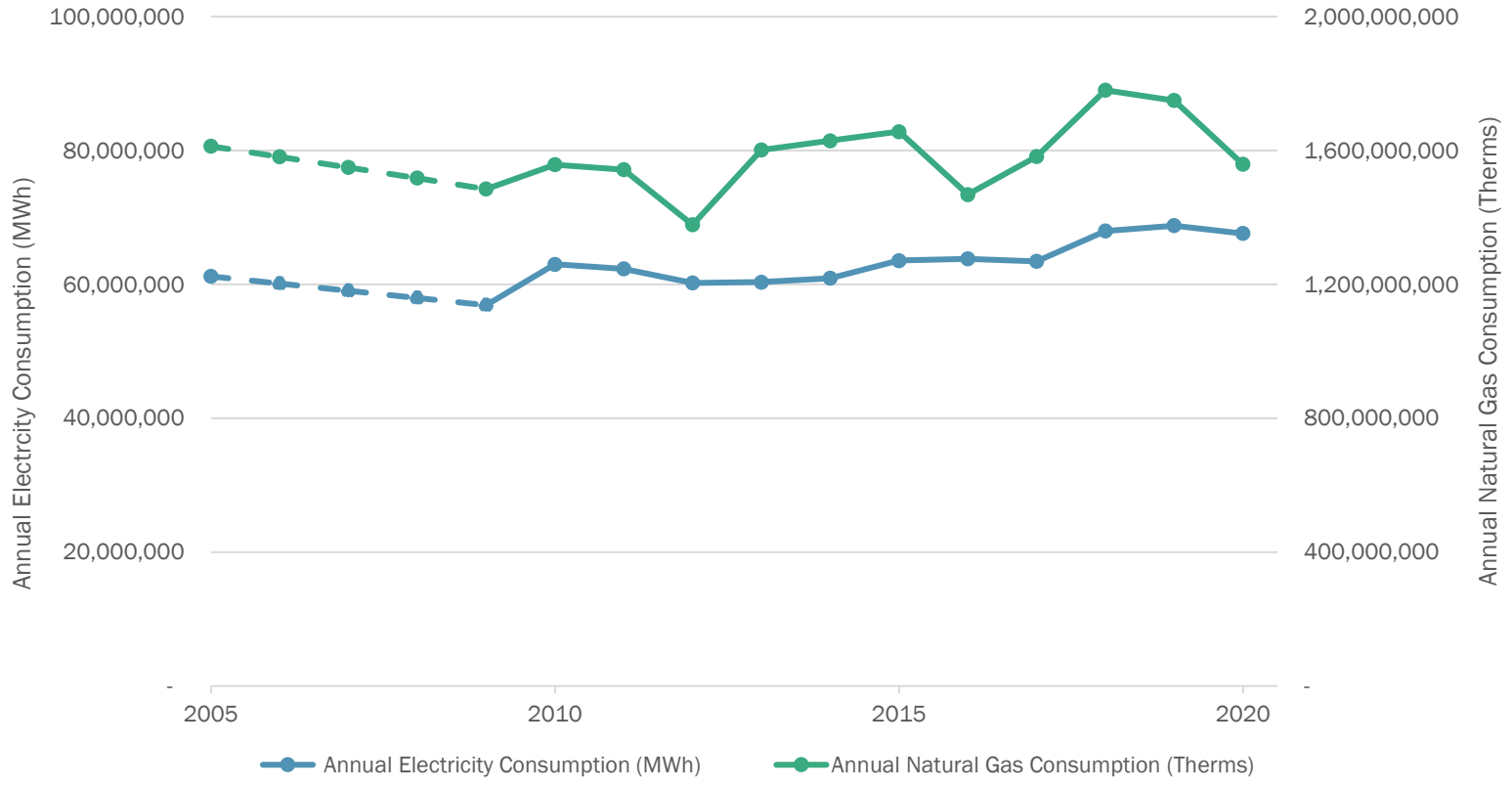
- Total daily electricity and energy use was at its lowest in Spring 2020. Data until January 2021 below shows that the peak electricity use was near "normal" levels as COVID-19 related restrictions and closures started to ease. The PJM grid saw a 5.5% decrease in electricity consumption between March 23, 2020, and December 31, 2020. Note: Recent PJM-wide data may differ from metropolitan Washington due to differing rates of reopening across the PJM territory.



https://www.pjm.com/-/media/committees-groups/pandemic/postings/estimated-impact-covid-19-daily-peak-and-energy.ashx?la=en

Regional Utility Energy Data Trends

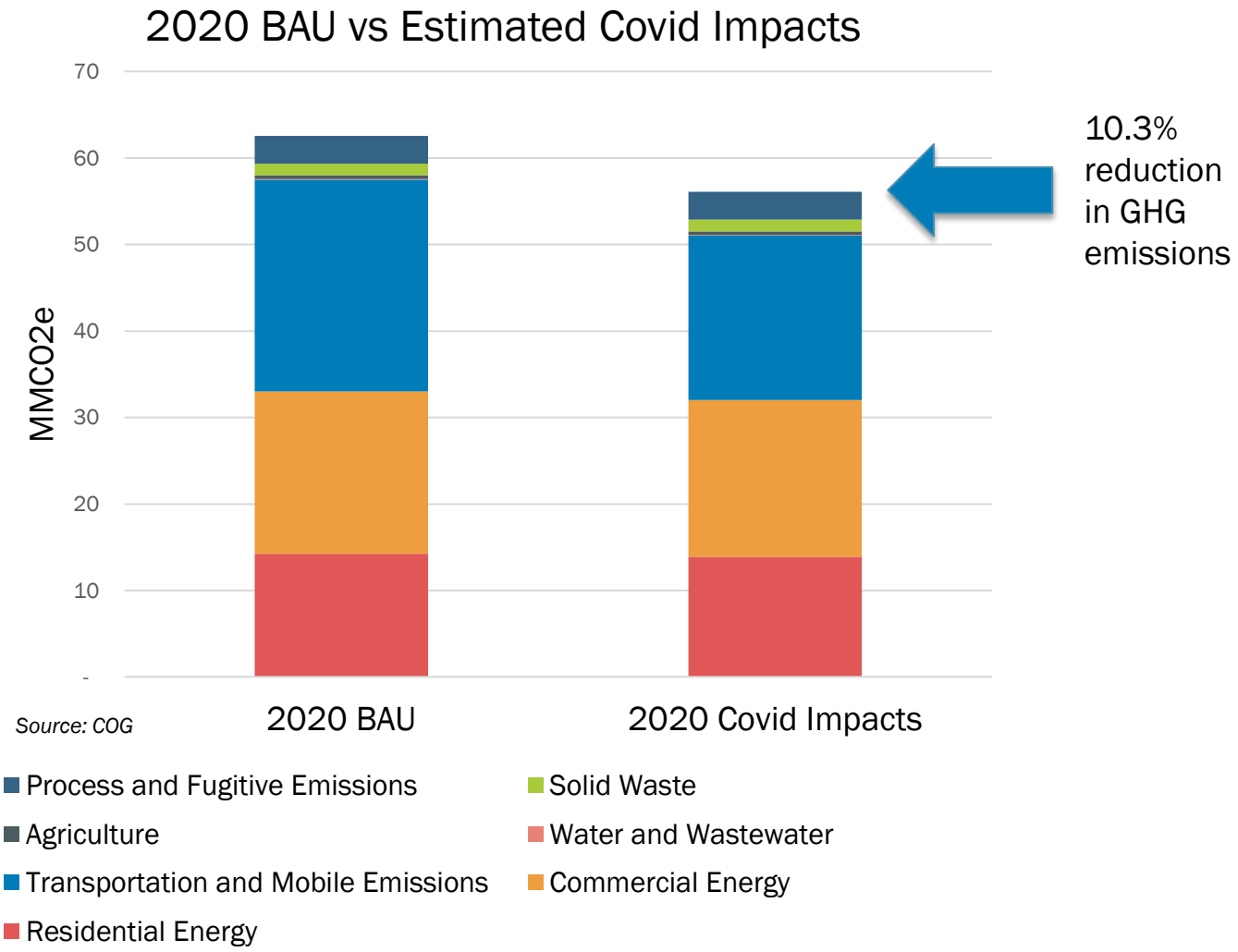
- COG's Annual Utility Energy Data Survey shows a 2% decrease in electricity consumption and an 11% decrease in natural gas consumption between 2019 and 2020. Note: Weather conditions can significantly impact natural gas consumption from year to year, and the region experienced a warmer winter in 2020.



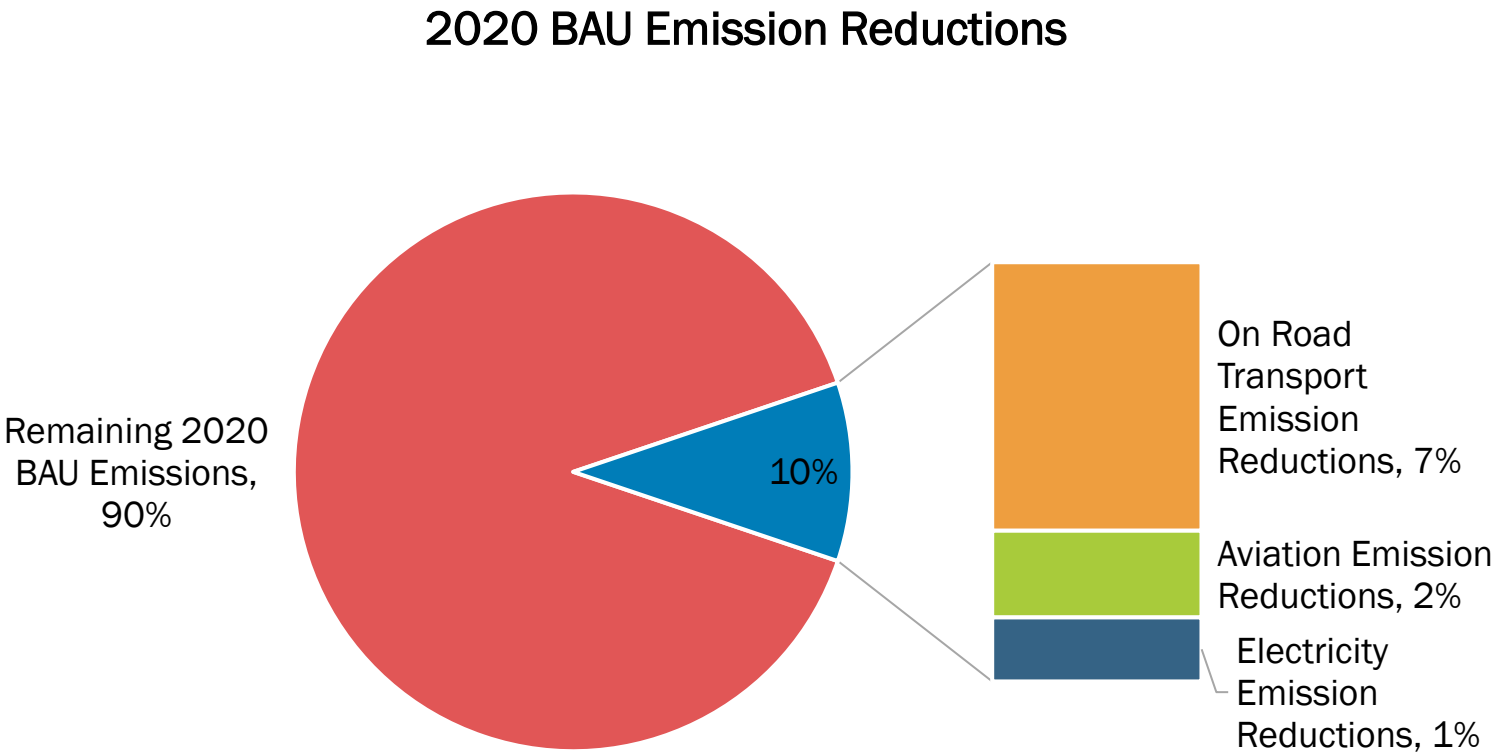
Impact on Greenhouse Gas Emissions

- Annual Reductions of Business as Usual (BAU) GHG emissions.
  - Traffic volume down 20.2%; resulting in a 6.6% reduction in emissions below the 2020 BAU result.
  - Electricity consumption down 4.3%; resulting in a 1.6% reduction in emissions below the 2020 BAU result.
  - Aviation flights down 61%; resulting in a 2.1% reduction in emissions below the 2020 BAU result.
- **Total GHG emission reductions = 10.3% of 2020 baseline.**

Impact on Greenhouse Gas Emissions



Impact on Greenhouse Gas Emissions



Source: COG

Summary: Air Quality & GHG Emissions

- Ozone and PM2.5 levels were higher in 2021 compared to 2020, but still lower compared to 2019 (normal/pre-pandelic level).

- Air quality seemed to be getting back closer to normal levels in 2021 as COVID-19 restrictions eased and emissions started getting back to "normal" levels though weather was also more favorable for pollutant formation and build up compared to 2020.

- GHG emissions in general lower by an estimated 10.3%. The bulk of emissions reductions coming from the transportation sector; On Road Transportation & Aviation

Next Steps

Staff from COG departments continue collaborating on the multisectoral assessment of COVID-19 impacts on the region.

- Deeper dive into more data
- Future presentations to be made (near term and longer term)
  - COG Board of Directors
  - Transportation Planning Board
  - Climate Energy and Environment Policy Committee
  - Metropolitan Washington Air Quality Committee
  - Chesapeake Bay and Water Resources Policy Committee
  - Human Services Policy Committee
  - Region Forward Coalition
  - Supporting Committees and Subcommittees