IMPACTS OF THE COVID-19 PANDEMIC IN THE NATIONAL CAPITAL REGION

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Systems Performance, Operations and Technology Subcommittee
November 3, 2022

Agenda Item #3

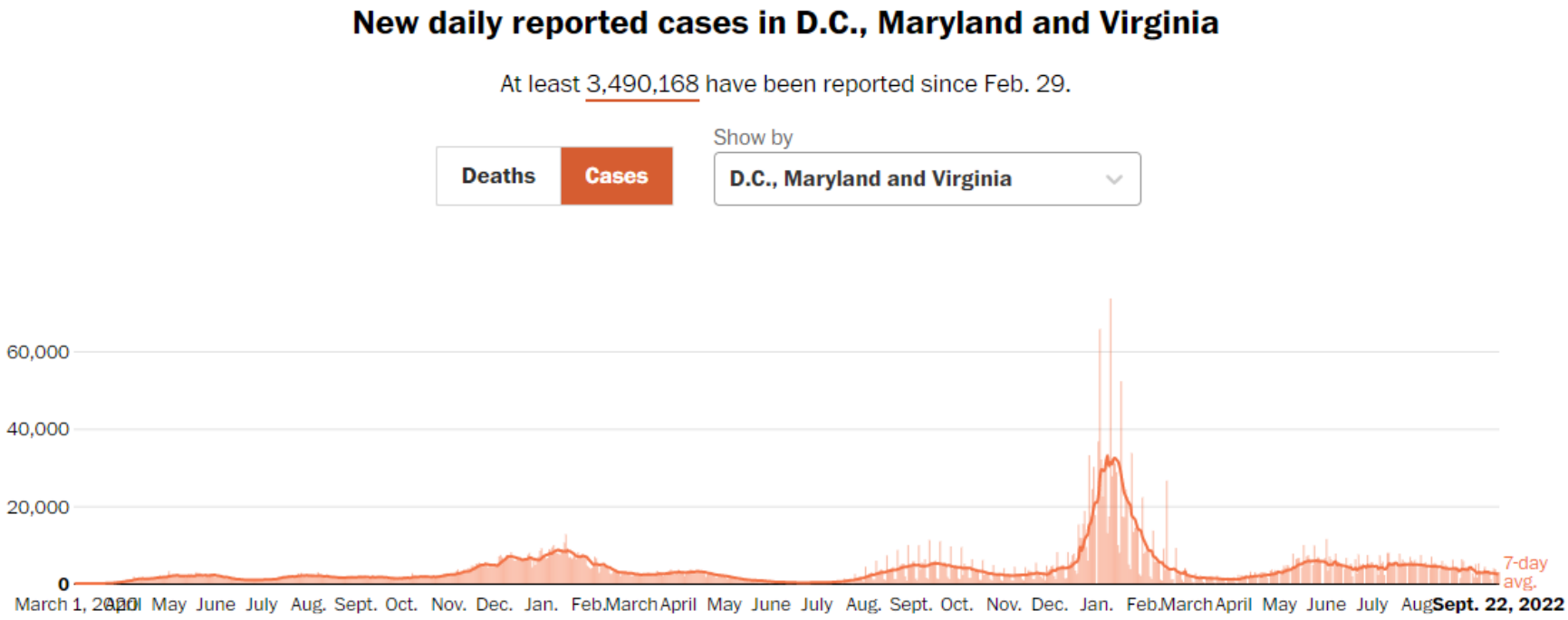
Metropolitan Washington Council of Governments

Overview

- Staff from various COG departments are collaborating to develop a snapshot summary of observed impacts of the COVID-19 pandemic on the region from a multisectoral perspective.
- A multisectoral approach provides a snapshot summary of impacts from a broader perspective to provide more context. These include: (1) Health, (2) Economy, (3) Transportation, and (4) Environment
- 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 measure what has occurred and is not predictive in nature due to remaining uncertainties.

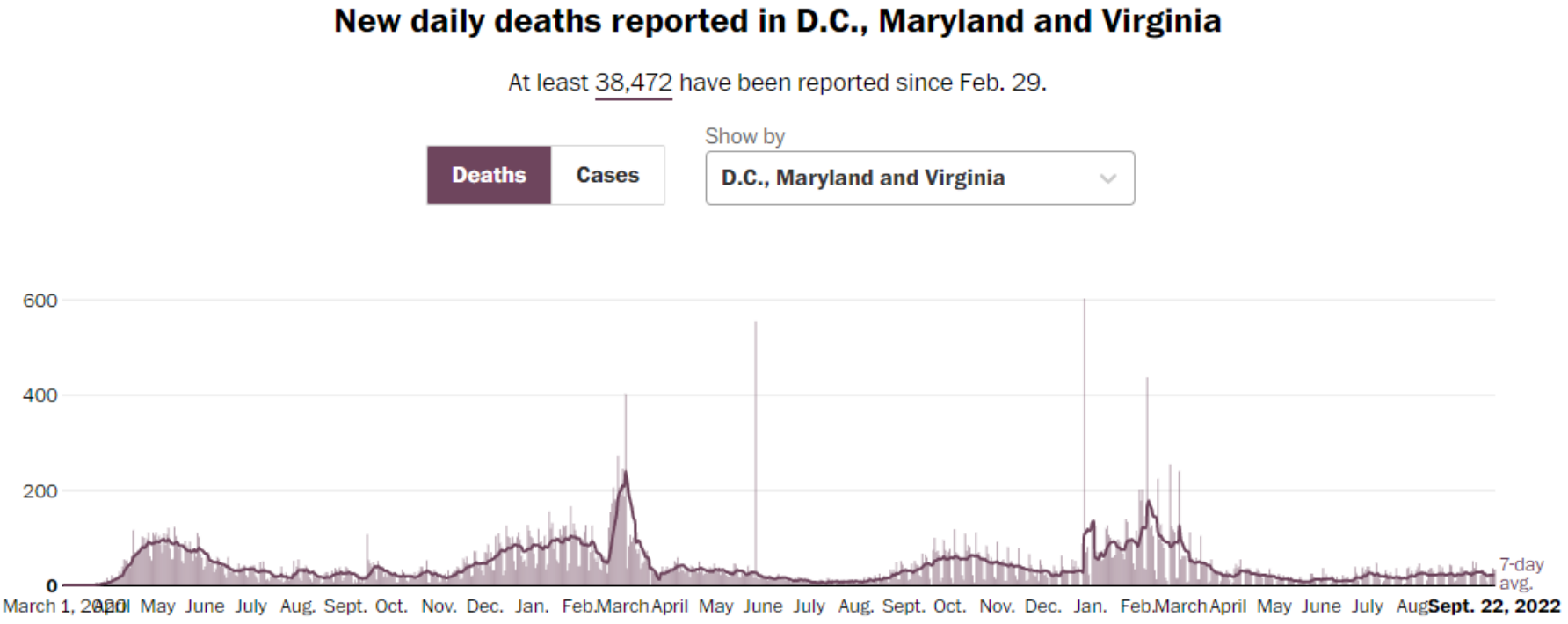
Health

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



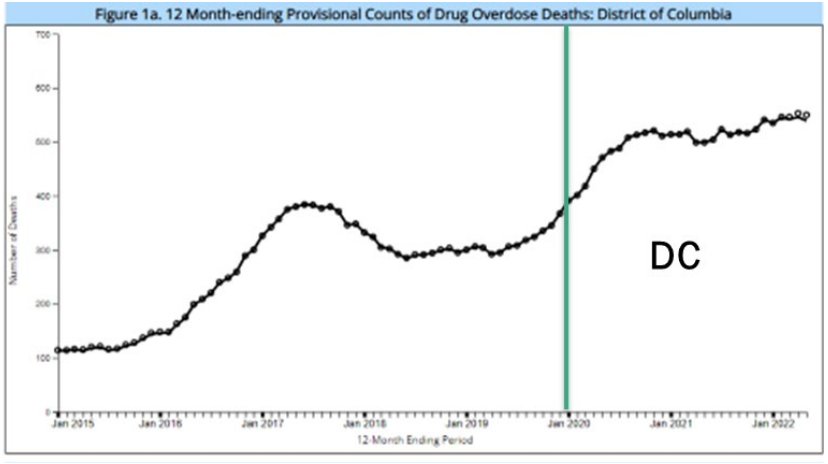
The Washington Post: https://www.washingtonpost.com/graphics/local/dc-maryland-virginia-coronavirus-cases/

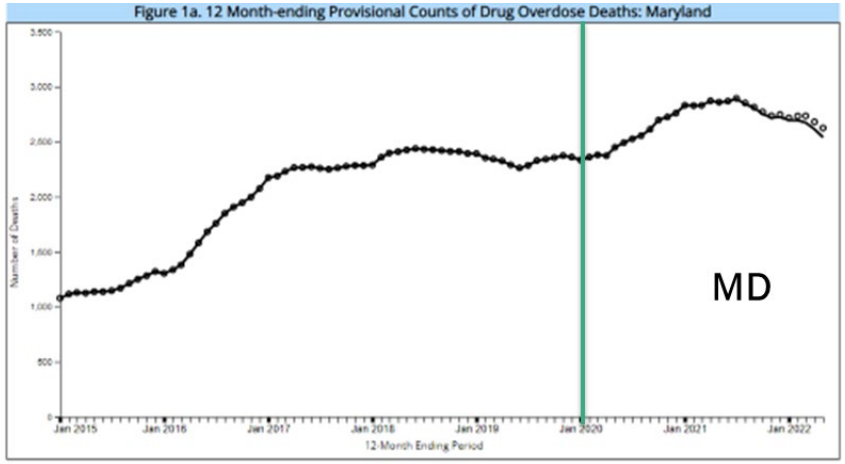
COVID Deaths in Washington Region March 1, 2020 – September 22, 2022



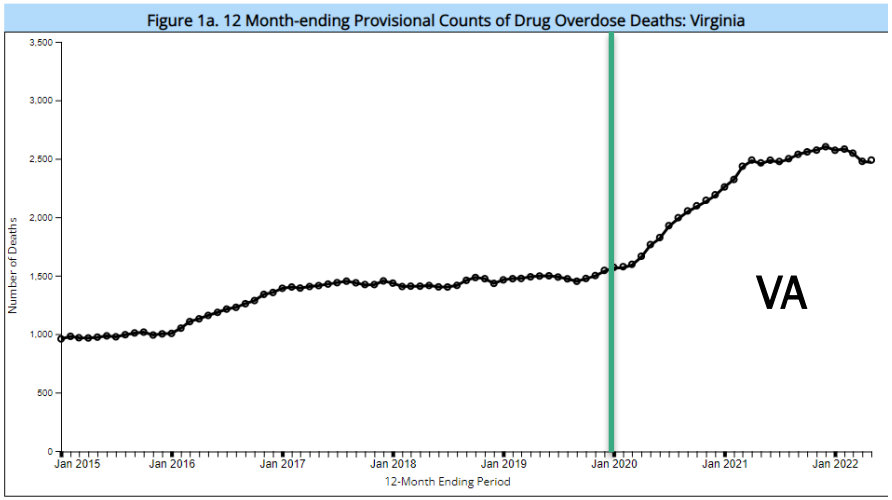
The Washington Post: https://www.washingtonpost.com/graphics/local/dc-maryland-virginia-coronavirus-cases/

Drug Overdose Deaths





CDC National Center for Health Statistics
https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm



Current overdose death counts are available from Jan. 2015 – June 2022.

Summary – Health

- COVID-19 cases initially peaked during June 2020. Cases in early 2021 decreased as vaccines became more widely available, but like the nation, the region experienced surges in cases as new variants emerged and spread.

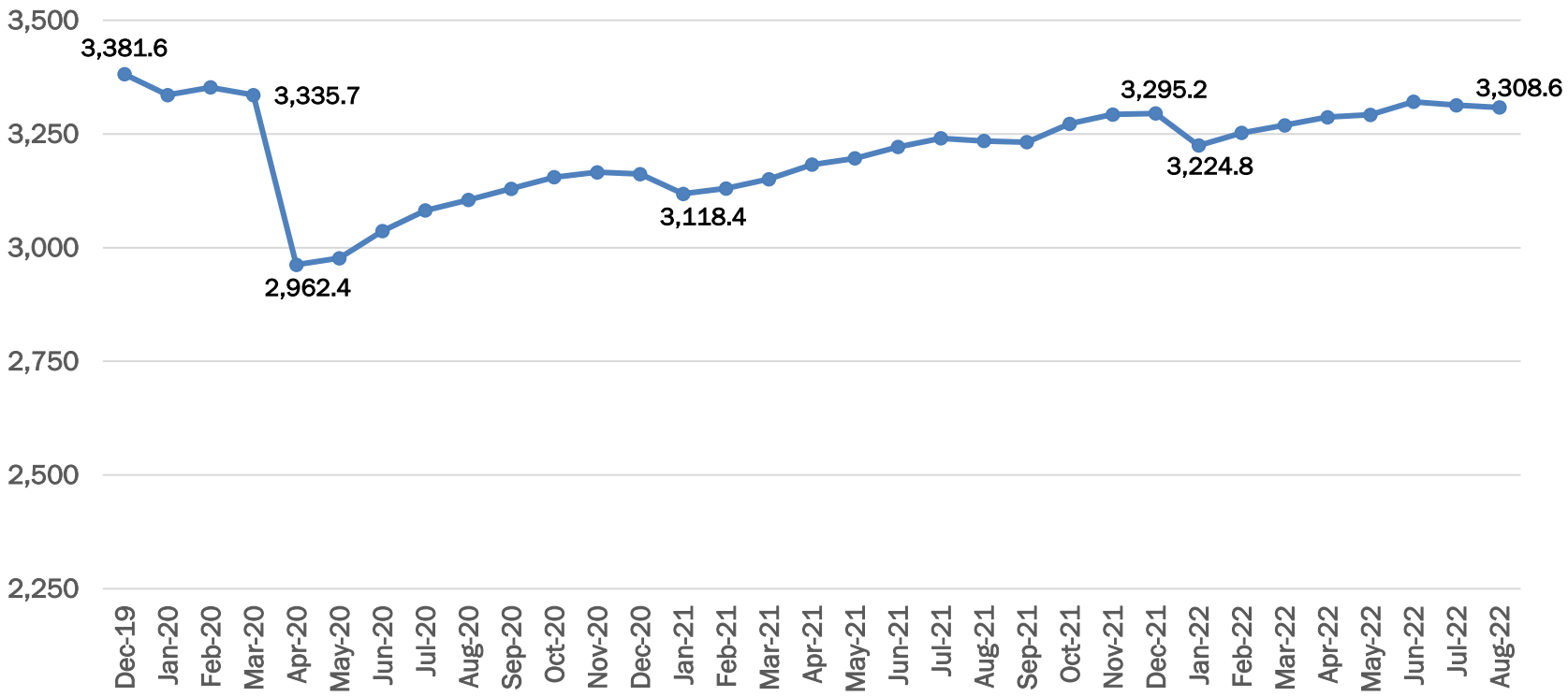
- Current overdose death counts are available from January 2015 – June 2022. During the pandemic, overdose deaths have been trending upward across DC, Maryland, and Virginia.

Economy

Non-Farm Jobs (000s) - Washington MSA

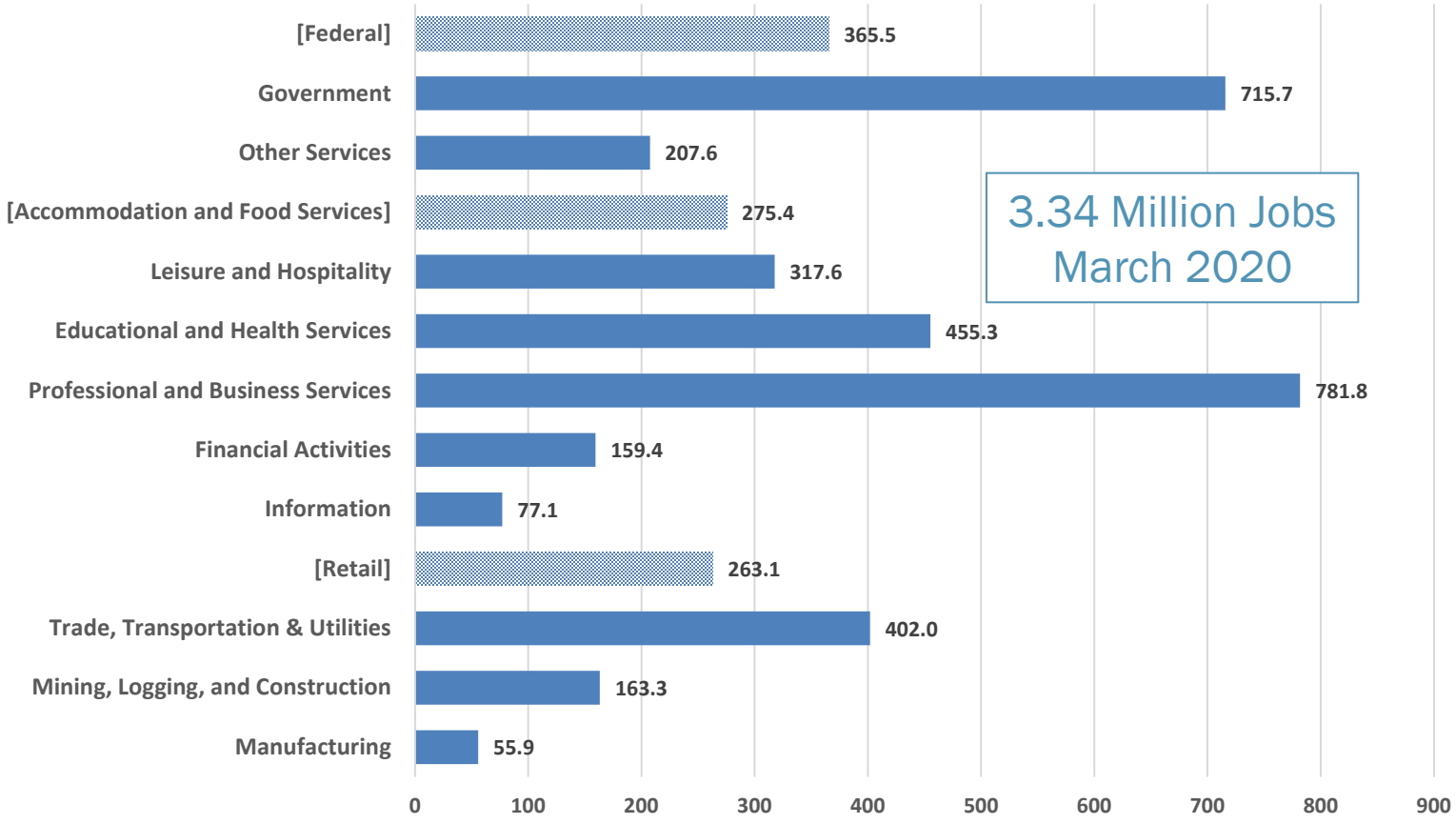
December 2019 to August 2022

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

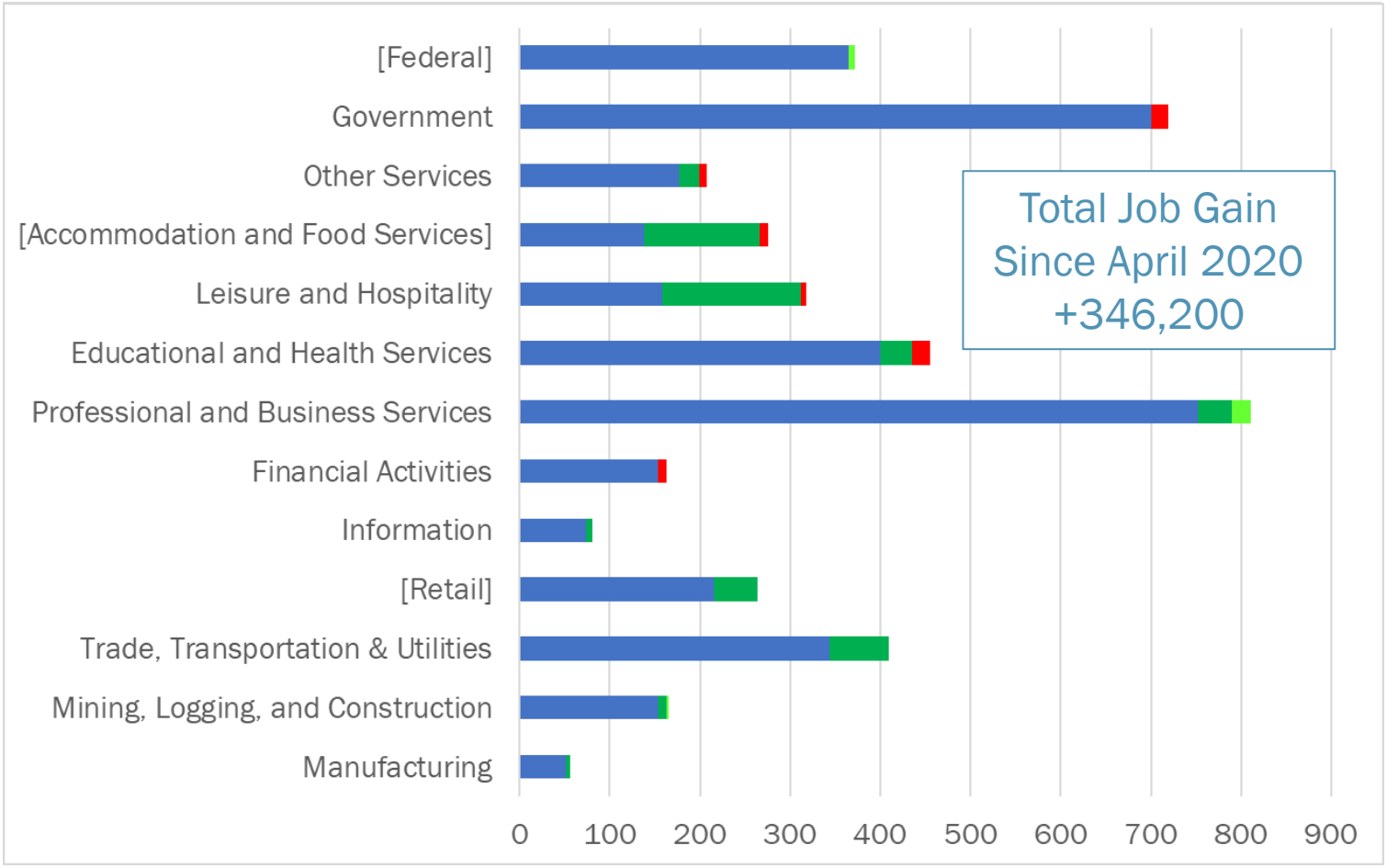


Revised BLS data show the region lost 373,300 jobs between March and April of 2020. As of August 2022, 346,200 jobs have been added during our reopening, or about a 99% recovery of jobs lost to the pandemic.

Jobs By Sector
Pre-Shutdown March 2020
Washington MSA (Thousands)

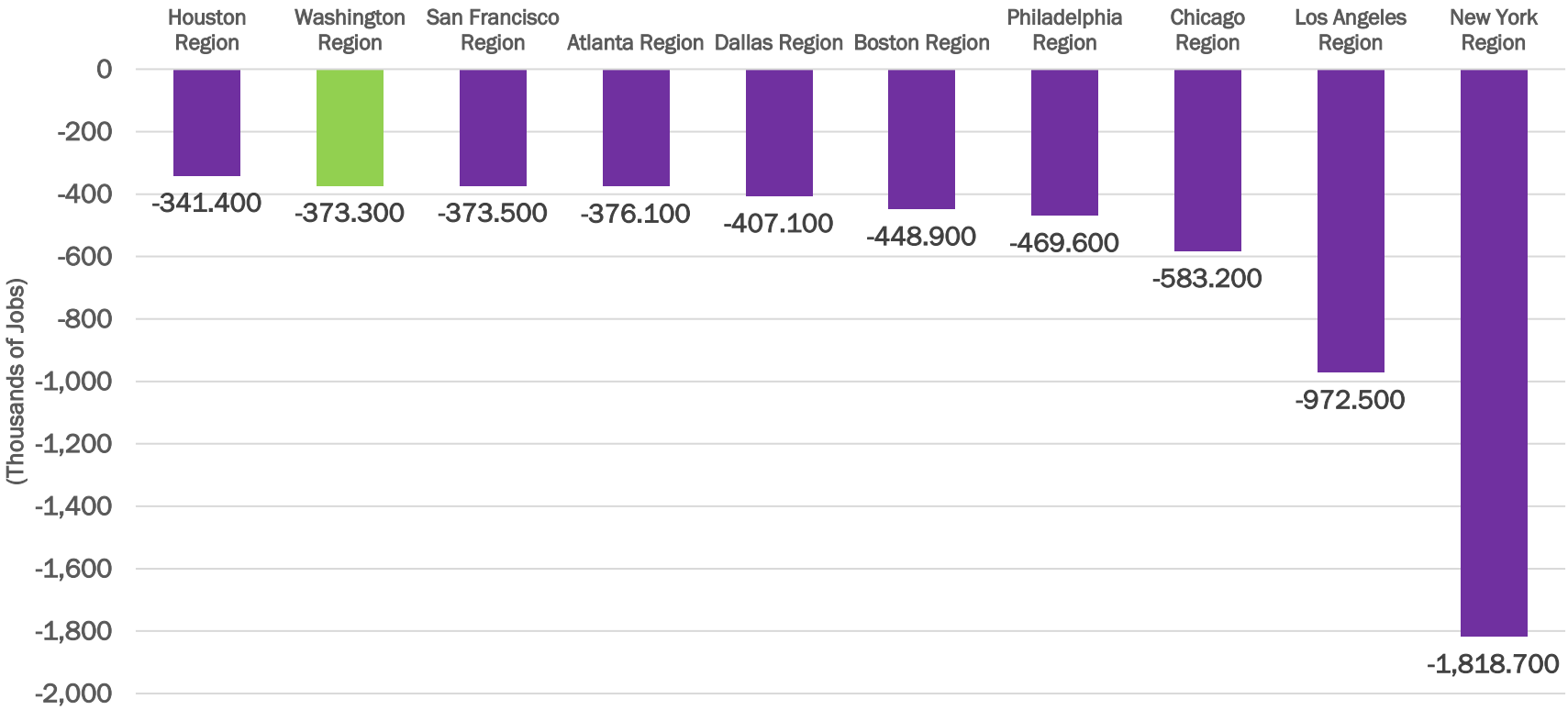


Job Change Trends By Sector March 2020-August 2022 Washington MSA (Thousands)



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

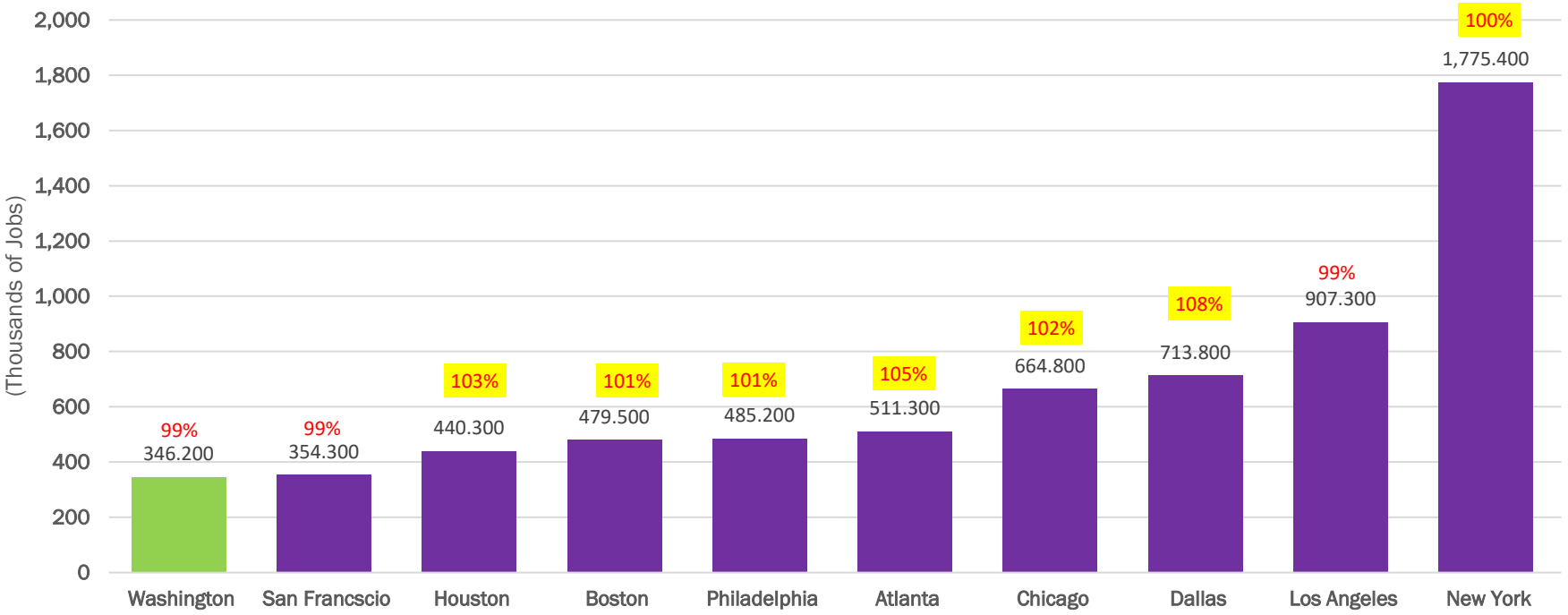
(Source: Bureau of Labor Statistics, Revised Data 3/22)



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.

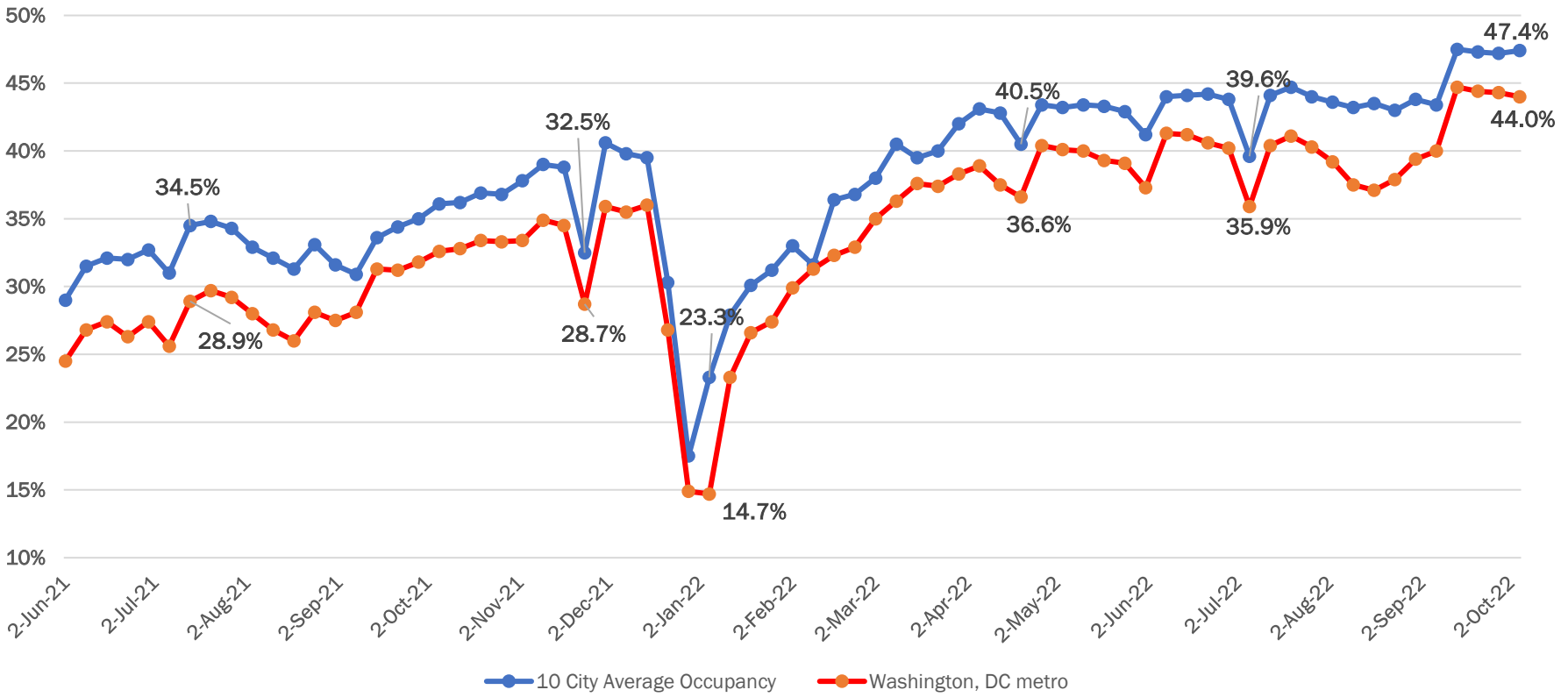
Non-Farm Job Change In 10 Largest MSAs April 2020 to August 2022 And Share of Jobs Recovered Since April 2020

(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.

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

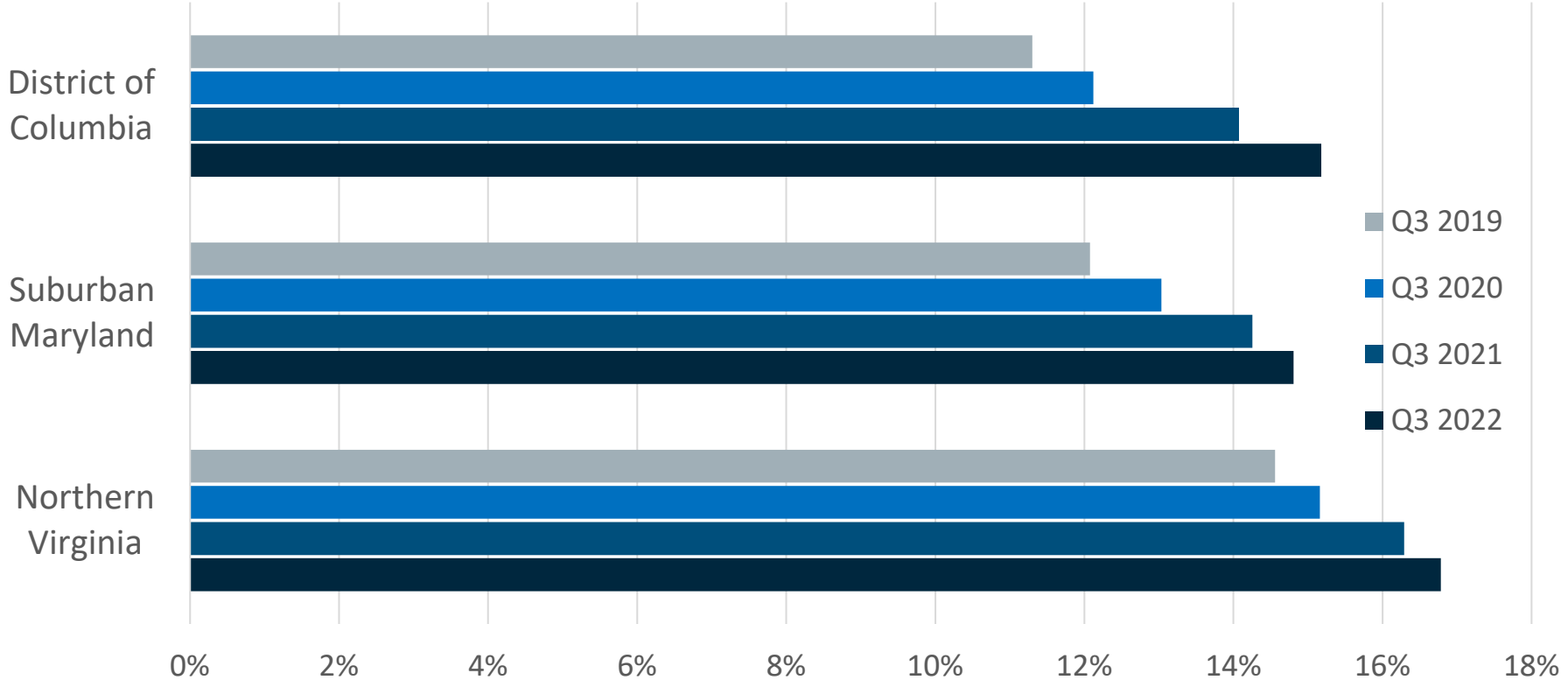


Source: COG tabulation of Kastle Systems "Back to Work Barometer"

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

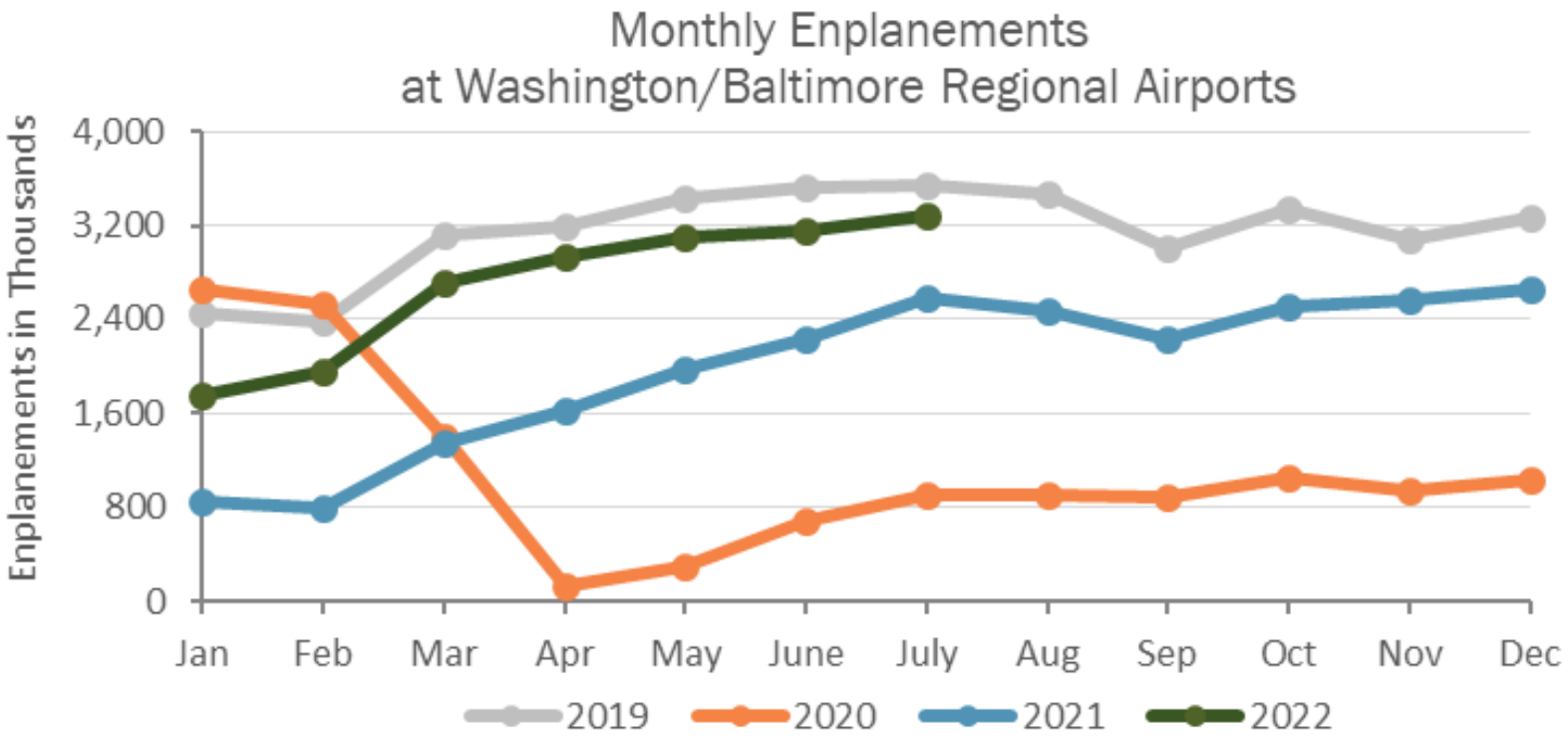
Change in Office Vacancy Rates Q3 2019 to Q3 2022

(Source: CoStar)



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

Air Travel



Sources: Metropolitan Washington Airports Authority and Maryland Department of Transportation/Maryland Aviation Administration

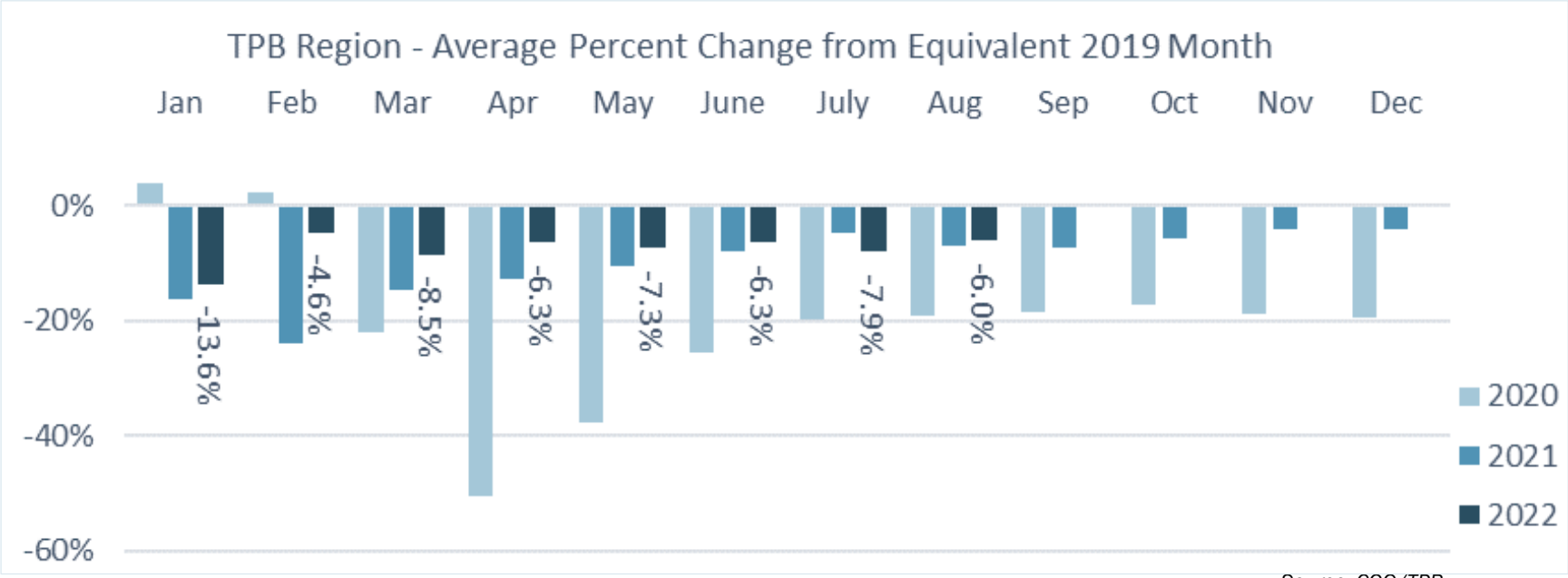
After steep declines early in the pandemic period, air travel has made notable recovery at the region's three large commercial airports.

Summary – Economy

- With the onset of the pandemic, the region lost nearly 373,300 jobs between March and April 2020 – more than were lost locally during the Great Recession. We have regained more than 346,000 jobs (99 percent) but many of our peer regions have seen stronger growth.
- The region's unemployment rate nearly tripled in April 2020 but was still nearly 5 points below the nation. Unemployment rates have returned to near pre-pandemic levels, and local unemployment filings have remained flat.
- Office and retail vacancy rates increased in many submarkets. Our return-to-office 'occupancy rate' is increasing but remains below the average for major peer regions. New housing permits remain well below the adopted COG targets, as well as the number approved in many other major metropolitan areas.
- Air travel has recovered at the region's three major airports since April 2020, nearly matching pre-pandemic volumes.

Transportation

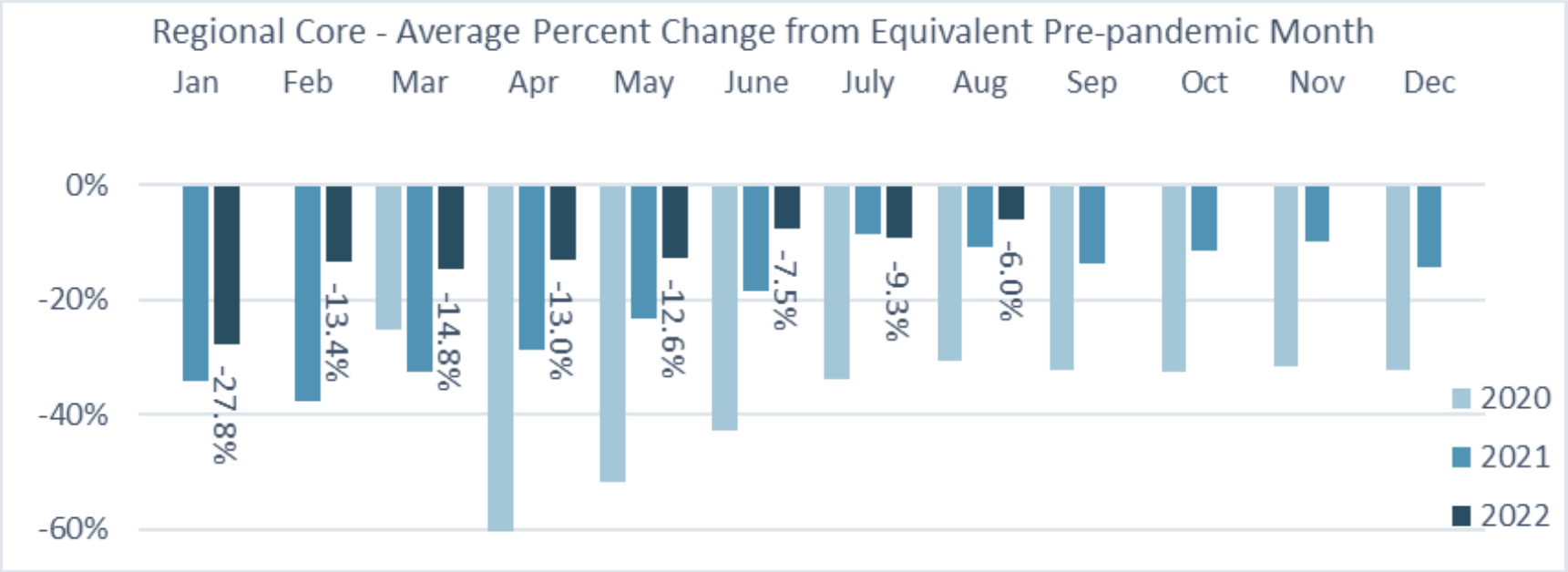
Roadway Traffic Volumes: Region



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.

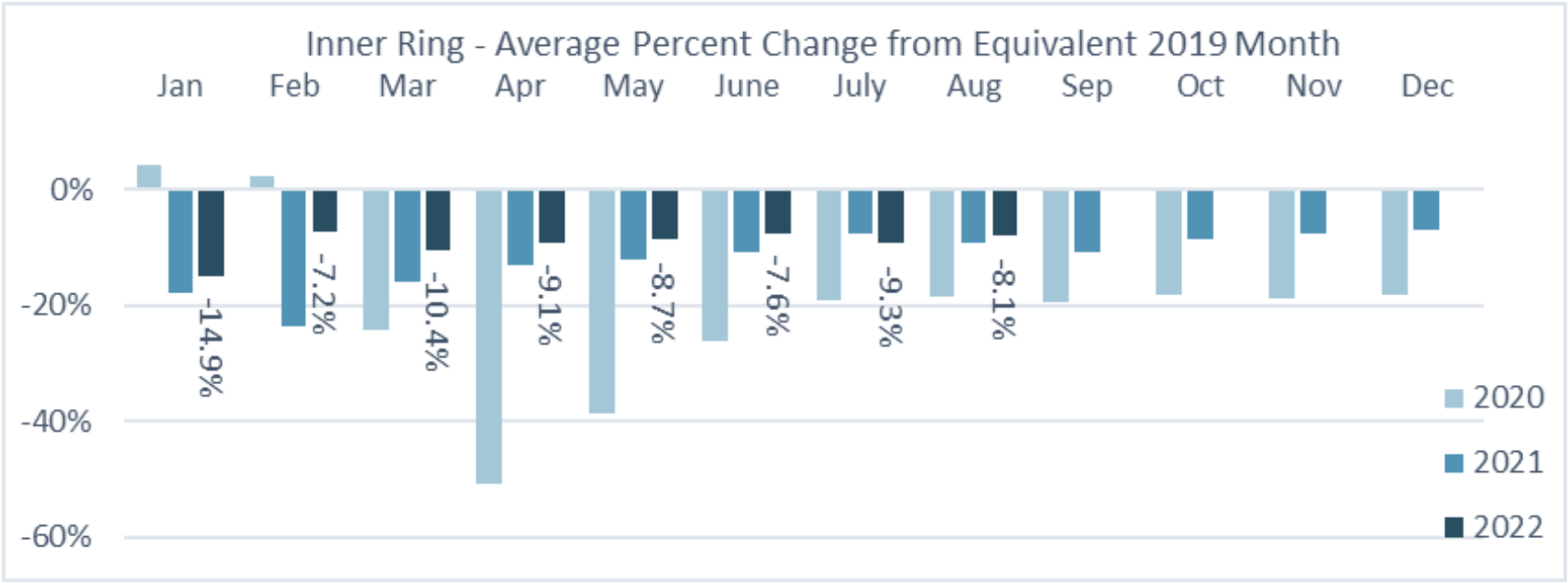
Roadway Traffic Volumes: Regional Core



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.

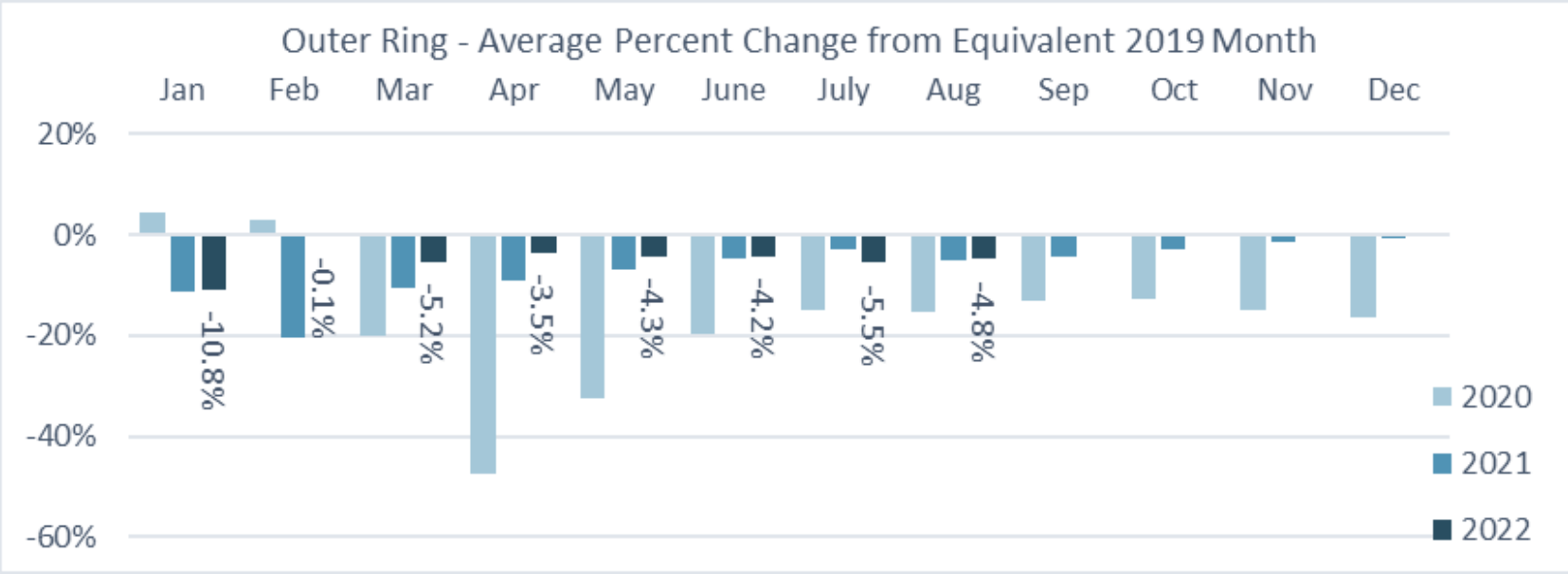
Roadway Traffic Volumes: Inner Suburbs



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.

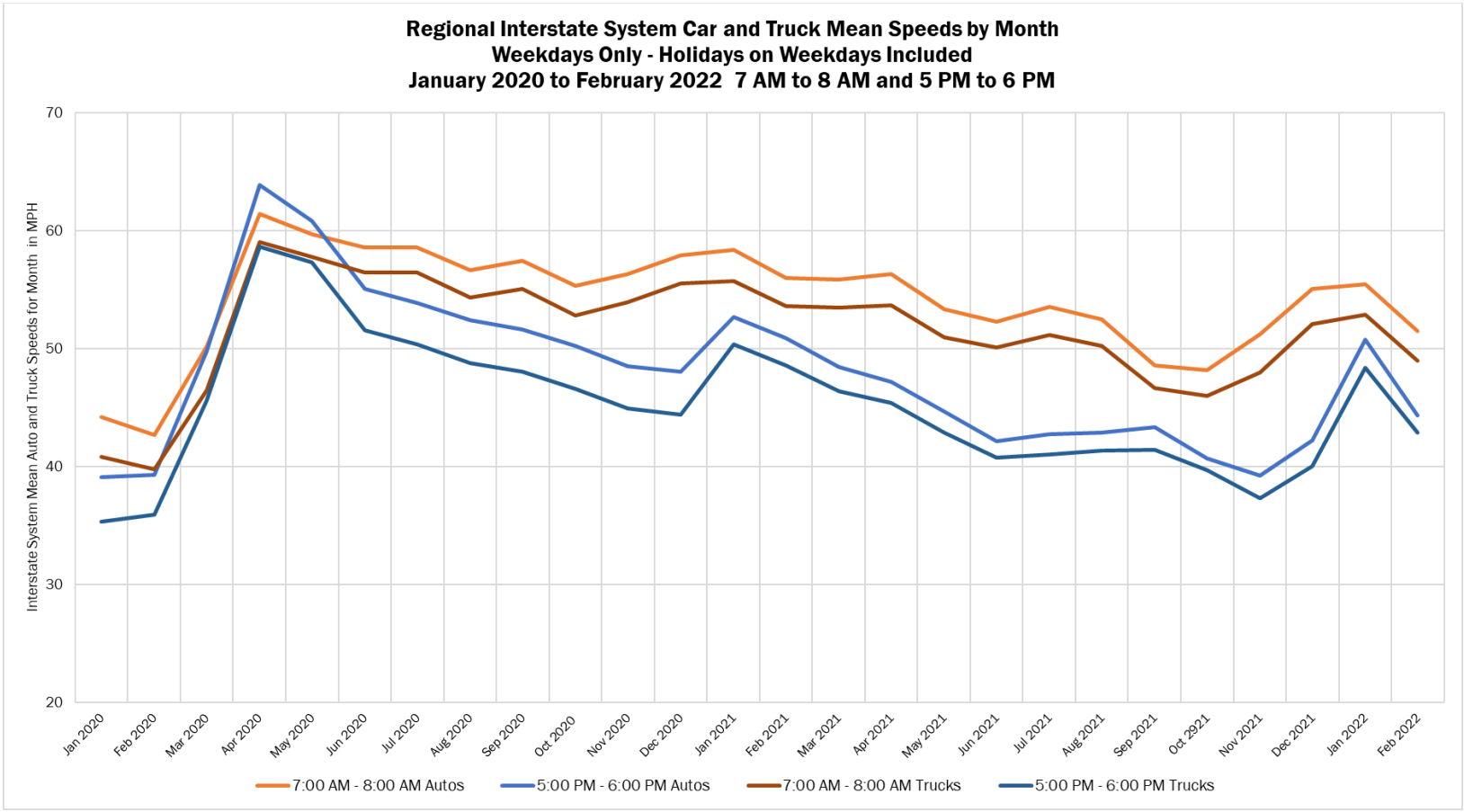
Roadway Traffic Volumes: Outer Ring



Source: COG/TPB

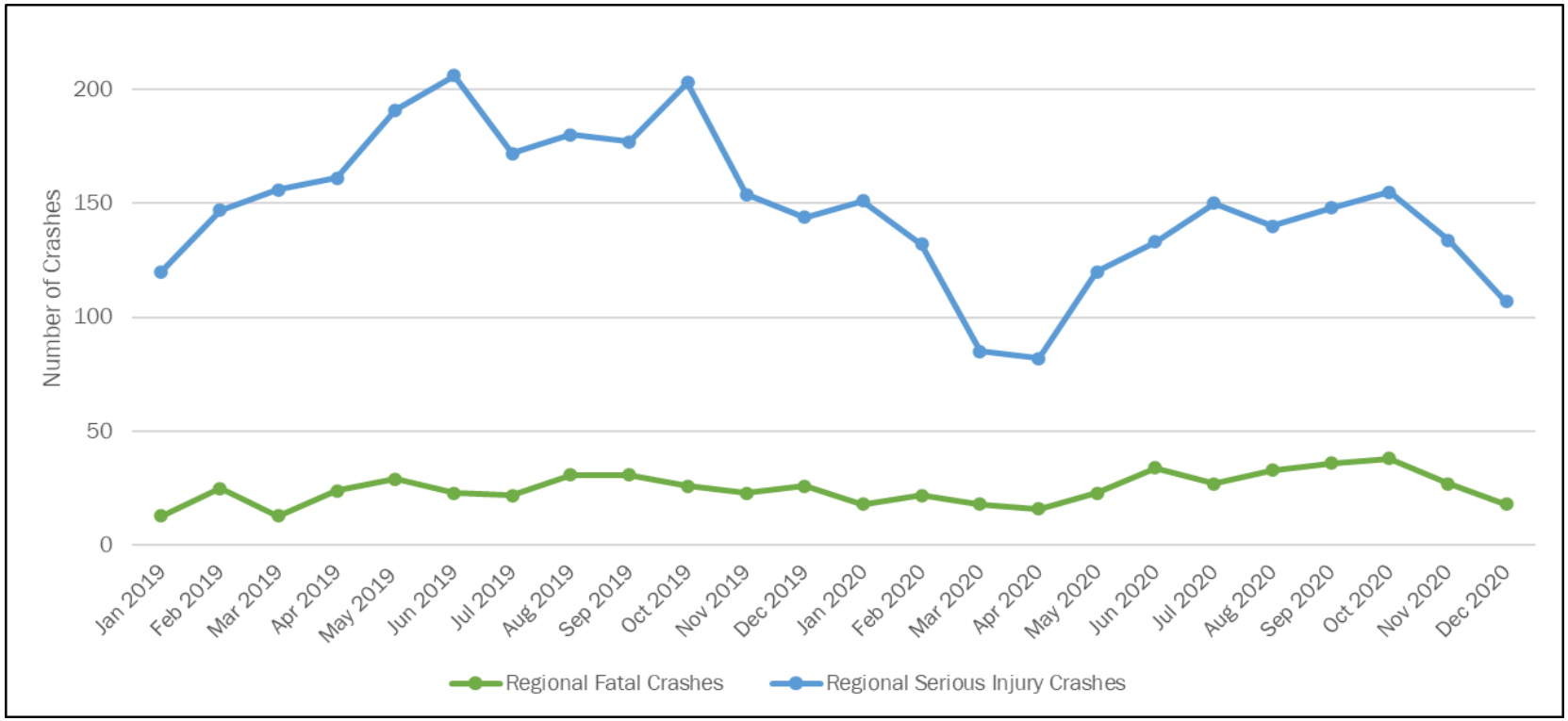
Traffic volumes in the outer ring sustained the smallest peak decrease in April 2020 of 47.6% and by February 2022, volumes in the outer ring were more than 99% of comparable 2019 levels. Volumes in the outer suburbs dipped again slightly in March to 95% of pre-pandemic levels and experienced slight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

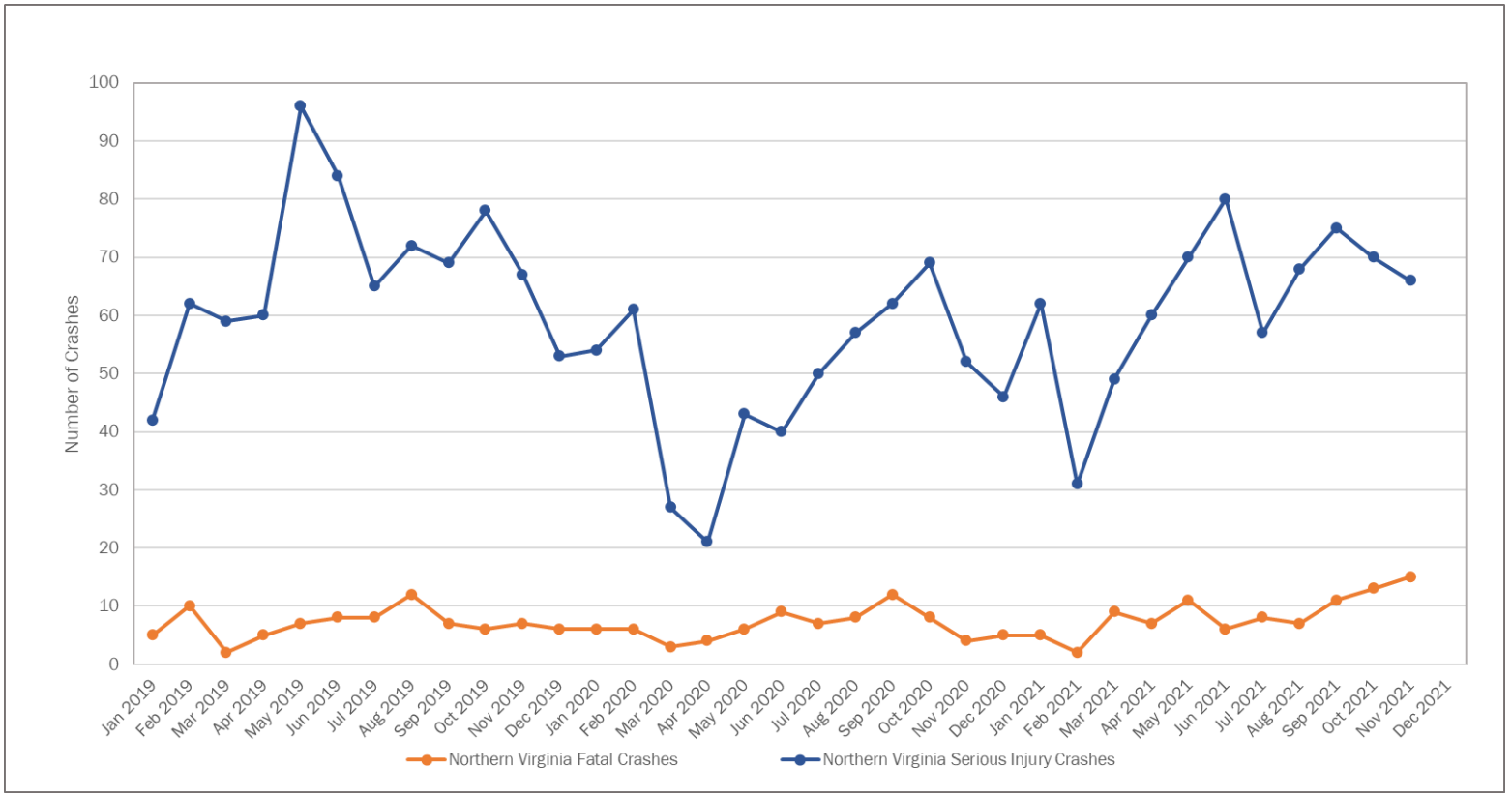
Safety: Crashes (NCR Regionwide, 2019-20)



Data are preliminary and may reflect adjustments to previously posted data; supersedes previous versions. Source: DDOT, MDOT, and VDOT.

In 2020, fatal crashes generally were at about 2019 levels (even with reduced traffic volumes).

Safety: Crashes (Northern Virginia 2019-21)



Data are preliminary and may reflect adjustments to previously posted data; supersedes previous versions. Source: VDOT.

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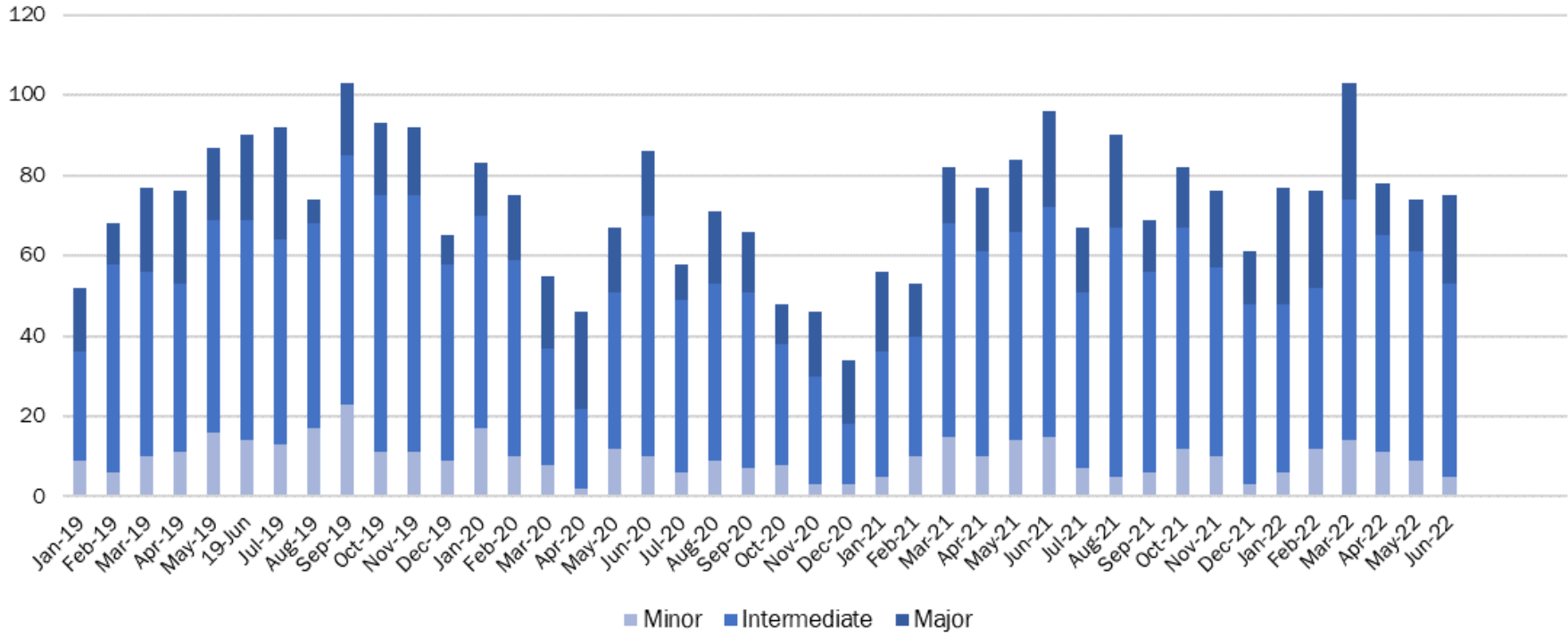
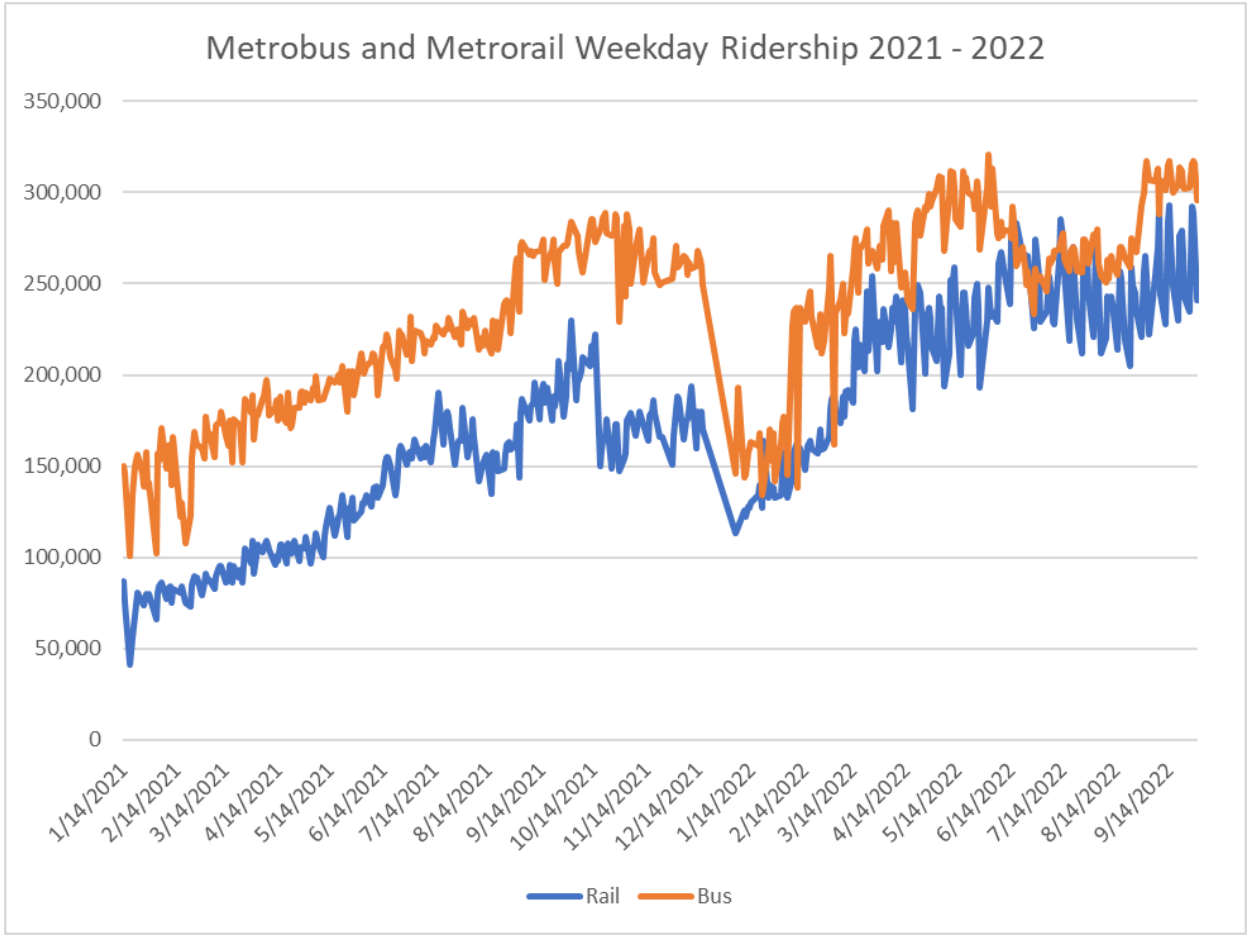
Safety: MATOC Incidents



Numbers of documented roadway incidents during Metropolitan Area Transportation Operations Coordination (MATOC) Program operating hours (4:30 A.M. to 8:00 P.M. weekdays only, major holidays excluded). Source: MATOC.

MATOC-tracked major incidents trended disproportionately high in 2020, to some extent persisting since then (data through June 2022).

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.

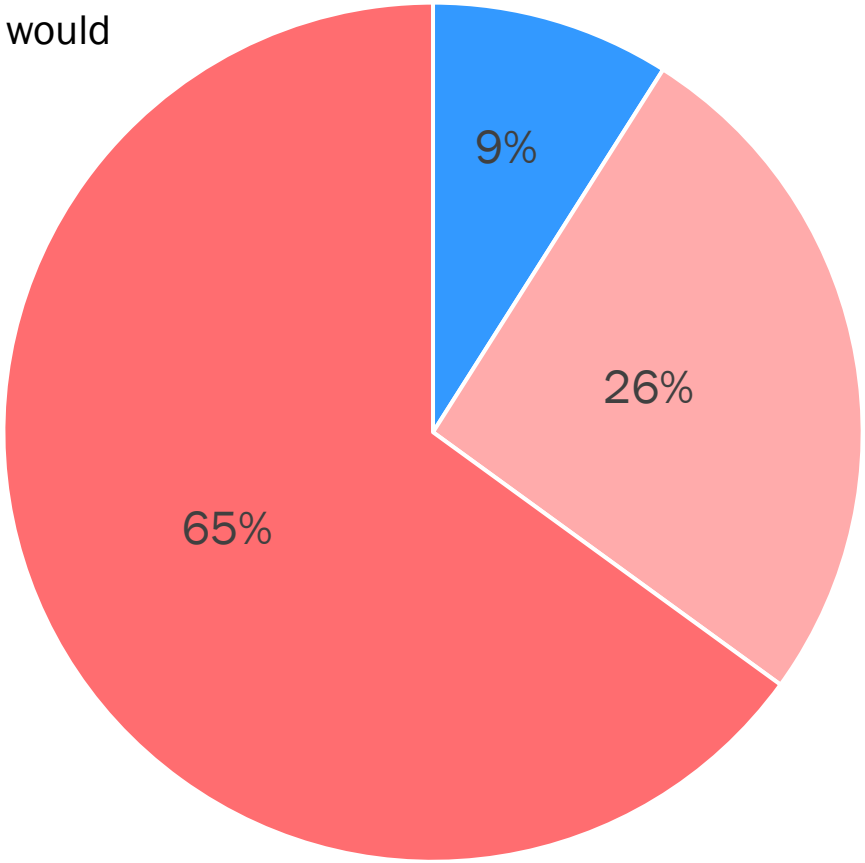
Telework Ready Region (Pre-Pandemic)

- About 50% of commuters in the region reported having “teleworkable” jobs
- One third of all regional commuters had teleworked at least occasionally
- About 75% of work sites had some teleworking before the pandemic
- Pre-pandemic, on average weekday, about 10% of commute trips were avoided with teleworking
- About 60% of commuters with teleworkable jobs teleworked, average 1.2 days a week
- 48% were federal employees, 14% State/Local Govt. employees
- 40% worked in Regional Core and 23% worked in Outer Suburbs

Preferences of Current Teleworkers

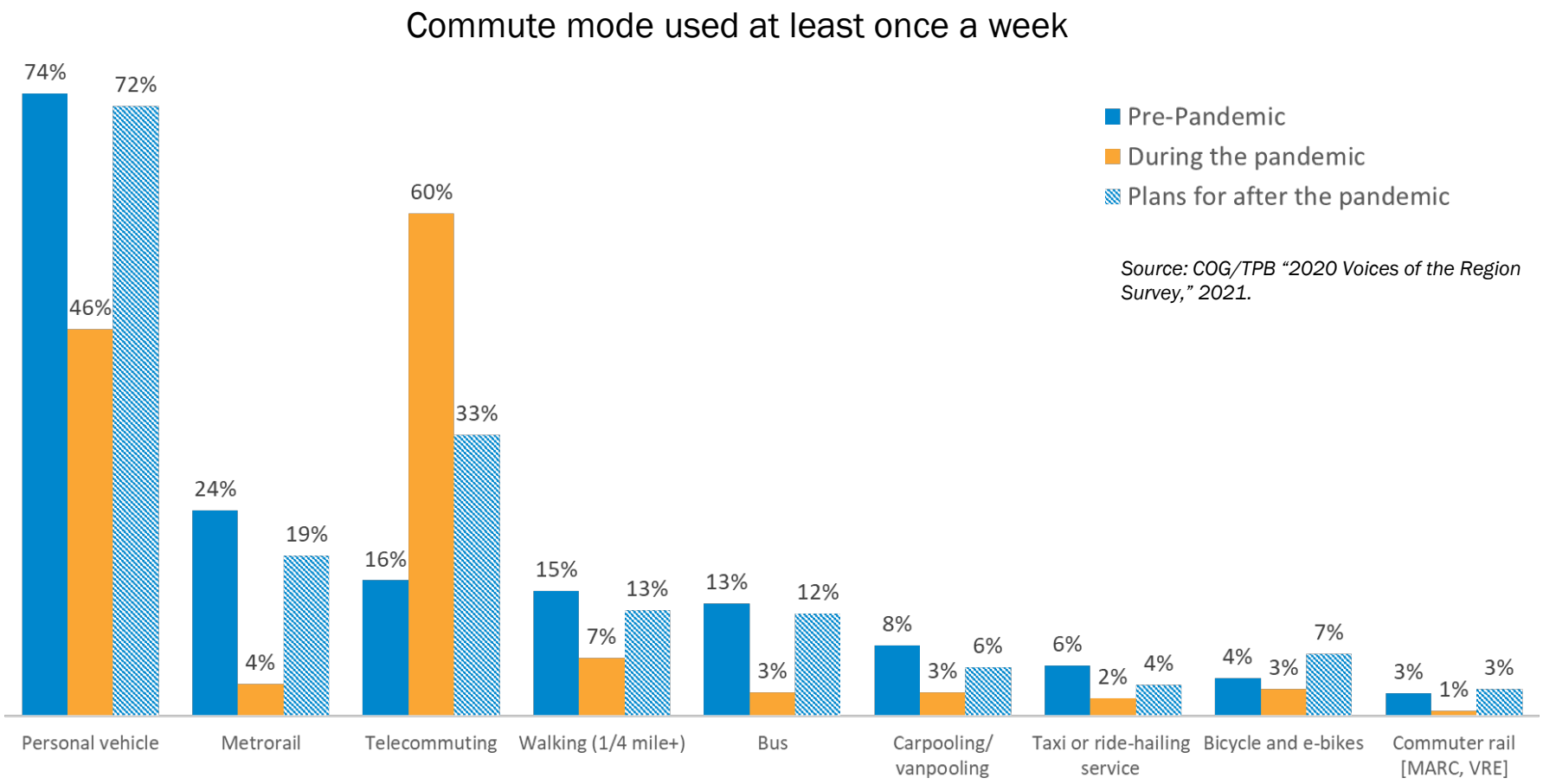
If given the choice to return to a work location once the COVID-19 pandemic is over, would you prefer to…?

- 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



Summary – Transportation

- Traffic volumes and vehicle miles of travel dipped most dramatically in April 2020 but have significantly recovered, including the return of rush hour peaking characteristics.
- Transit ridership – overall about 45% of pre-pandemic ridership; Metrobus ~2/3 of pre-pandemic; Metrorail ~28% of pre-pandemic; long-distance commuter rail/bus still down the most (~12% of pre-pandemic)
    - Transit service levels are near pre-pandemic levels (>90%)
- Workplace occupancy, especially given federal and military guidelines to employees, significantly drives traffic/transit/commute numbers
- The region was comparatively "telework ready" and able to accommodate large-scale teleworking for workers in many, but not all, sectors and job types.

Environment

Criteria Pollutants

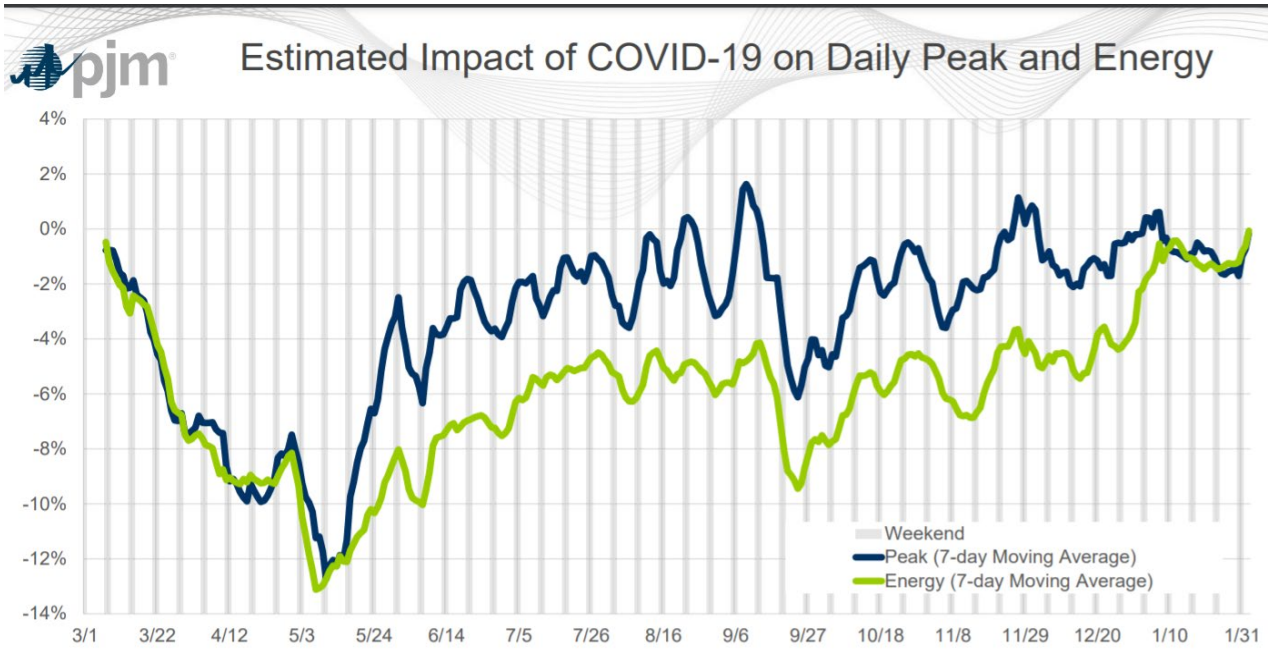
- **Ozone and fine particulate matter (PM2.5) levels are higher in 2021 compared to 2020, but still a bit lower compared to 2019 suggesting air quality is getting back closer to "normal" levels.**
- There is still some impact of ongoing COVID-19 related restrictions and closures resulting in lower than "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.

Impact on Electricity & Energy Consumption

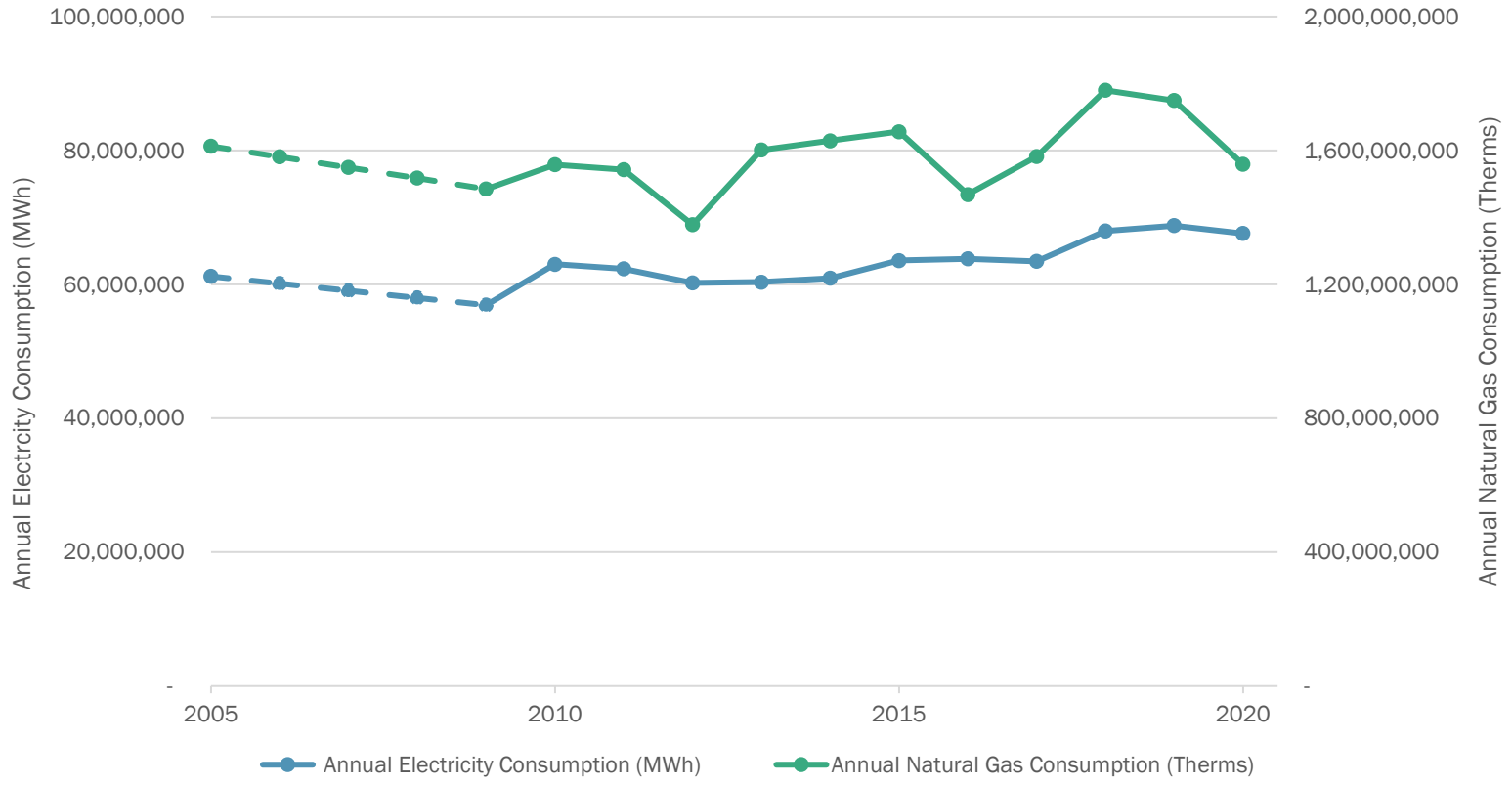
- Total daily electricity and energy use was at its lowest in Spring 2020. Data until January 2021 below shows that the peak electricity use was near "normal" levels as COVID-19 related restrictions and closures started to ease. The PJM grid saw a 5.5% decrease in electricity consumption between March 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.



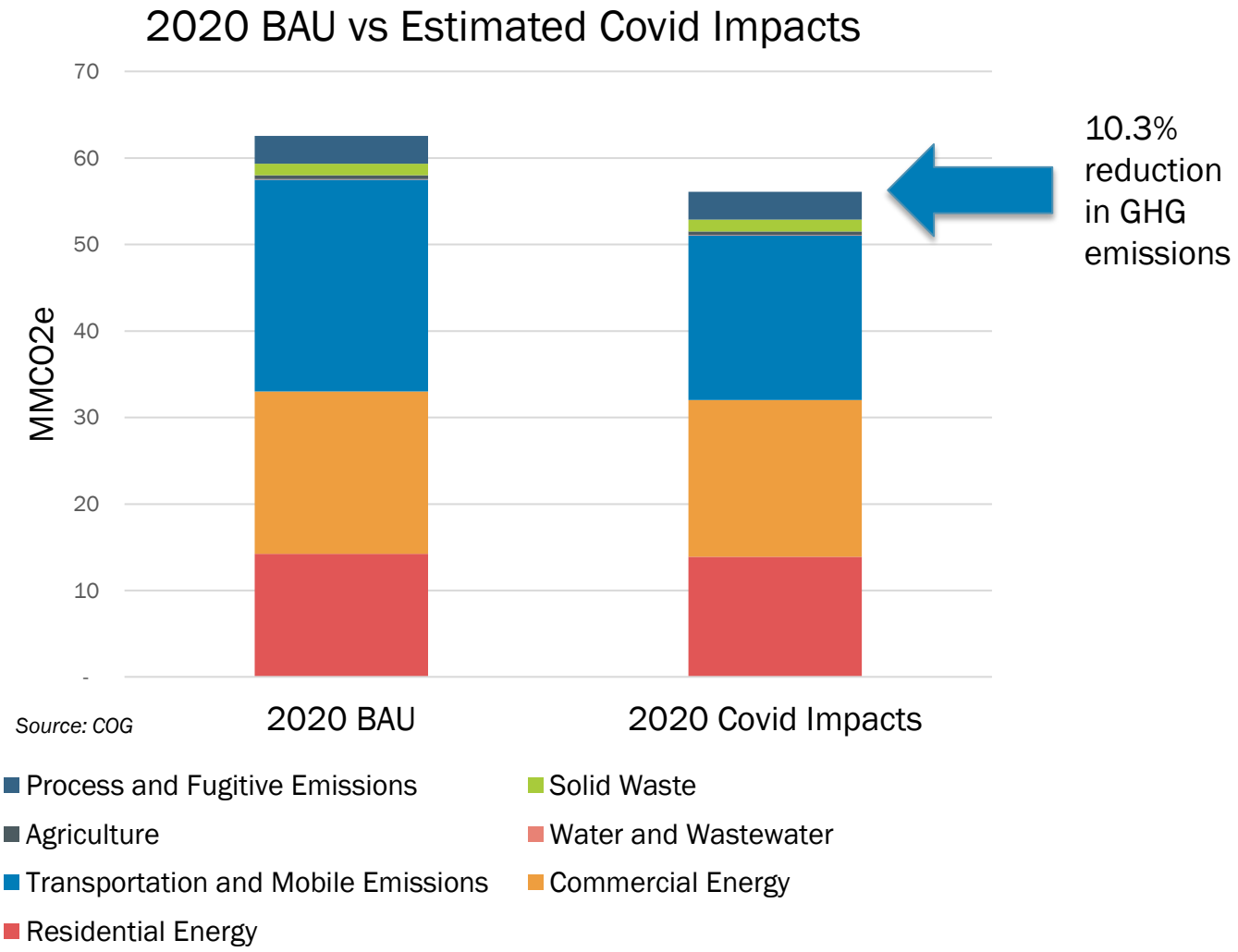
https://www.pjm.com/-/media/committees-groups/pandemic/postings/estimated-impact-covid-19-daily-peak-and-energy.ashx?la=en

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



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.**

Thank you!

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