ROUND 10.0 COOPERATIVE FORECASTING SURVEY RESULTS

KEY FINDINGS FROM THE JUNE 2021 SURVEY

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Agenda Item #3
Cooperative Forecasting and Data Subcommittee
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Metropolitan Washington
Council of Governments

Summary of Survey Results

- 17 survey responses

- Years of experience: **Range:** 3 to 34 years; **Average:** 17 years

- Number of forecast rounds: **Range:** 1 to 10; **Average:** 5

- Jurisdictions represented
  - District of Columbia
  - Maryland
    - Charles County, MD; Frederick County; City of Gaithersburg; City of Manassas; Montgomery County; St. Mary's County; Prince George's County; City of Rockville
  - Virginia
    - Arlington County; City of Alexandria; City of Fairfax; Fairfax County; City of Falls Church; Loudoun County; Prince William County

Summary of Survey Results

- Population & household forecasts: majority bottom-up approach

- Employment forecasts: majority hybrid approach

- Jurisdictional control totals: majority 3-6 months

- Develop TAZ-level data: majority 1-2 months

- COVID-19 impacted majority's ability to conduct the forecast

- COVID-19 impacts to track/incorporate into forecast: employment, telework, land use, transportation, migration & household size

My jurisdiction has the following approach to developing our population forecast:

- "Top-down" = Establish Control Totals/Benchmark Totals first and allocate to the TAZ level next

- "Bottom-up" = Develop the forecasts at the parcel & TAZ level first

- "Hybrid" = Somewhere between "Top-down" & "Bottom-up"

- "Other" = Please specify

My jurisdiction has the following approach to developing our population forecast:
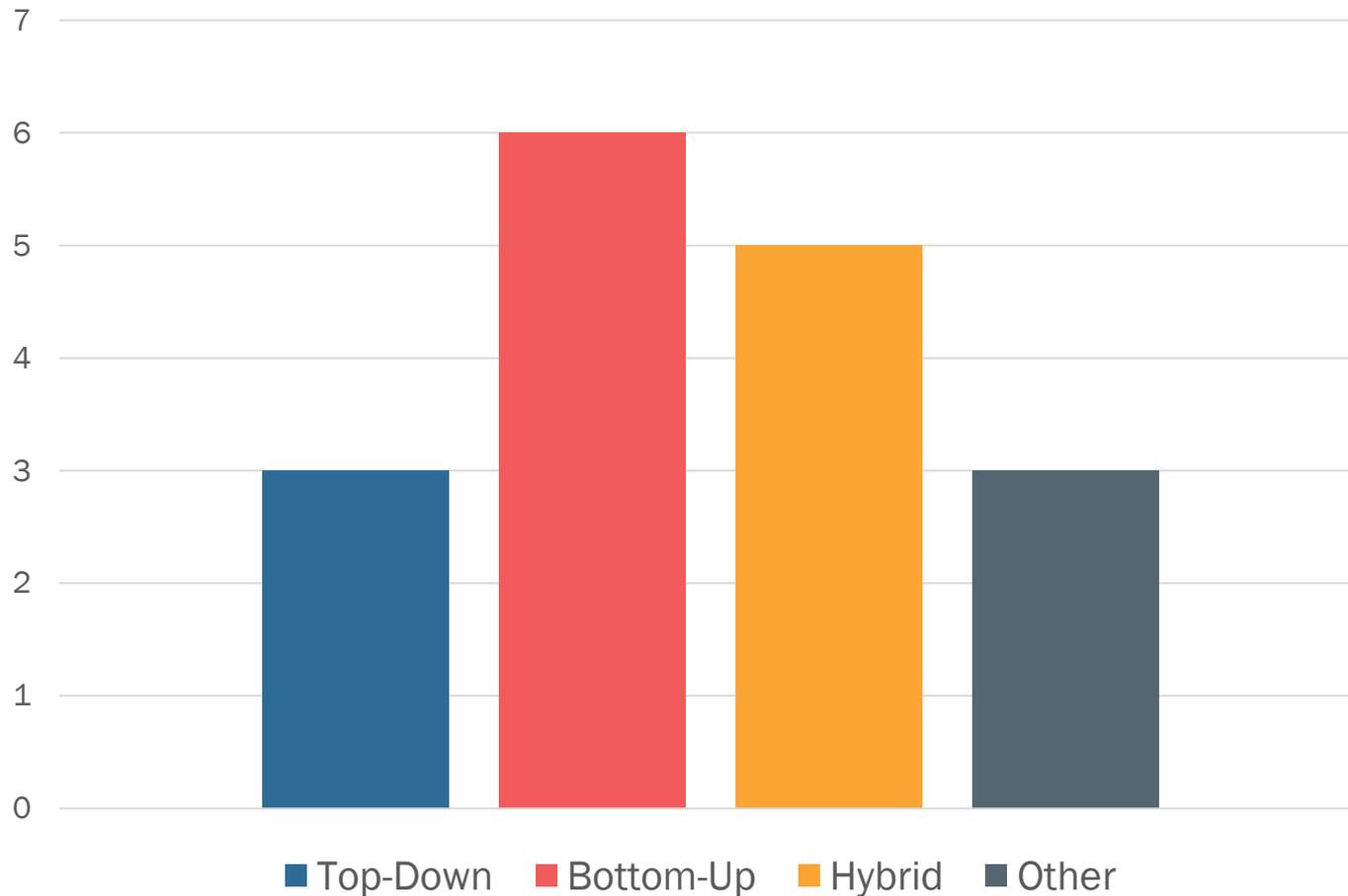
Population forecast "Other" responses:

- *Typically use bottom-up for the first five years and then top-down for the out-years*

- *Population is based on the average household size and household projection and allocation then adjusted to match the top-down control totals*

- *I don't do population forecast*

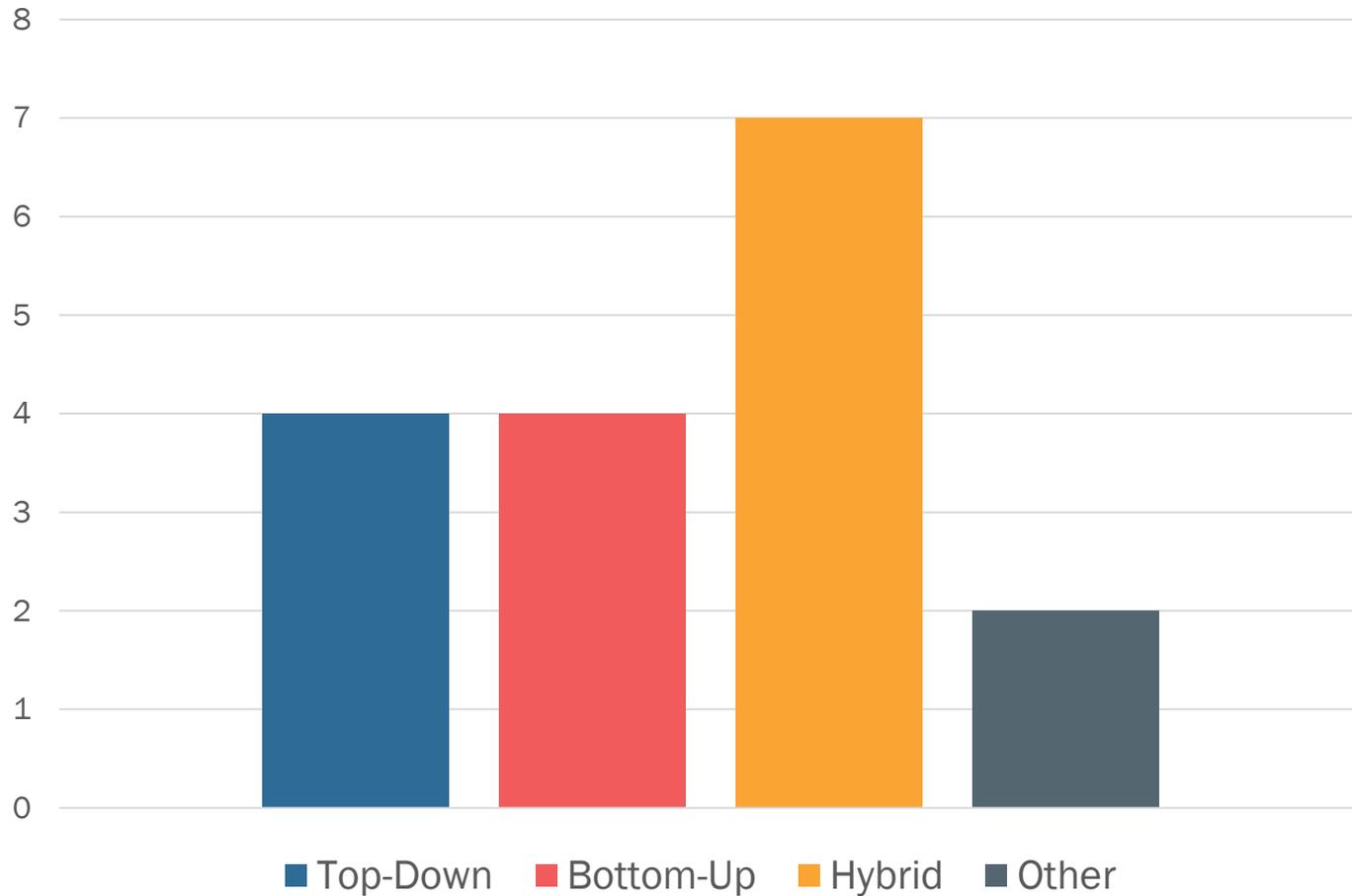# *My jurisdiction has the following approach to developing our household forecast:*
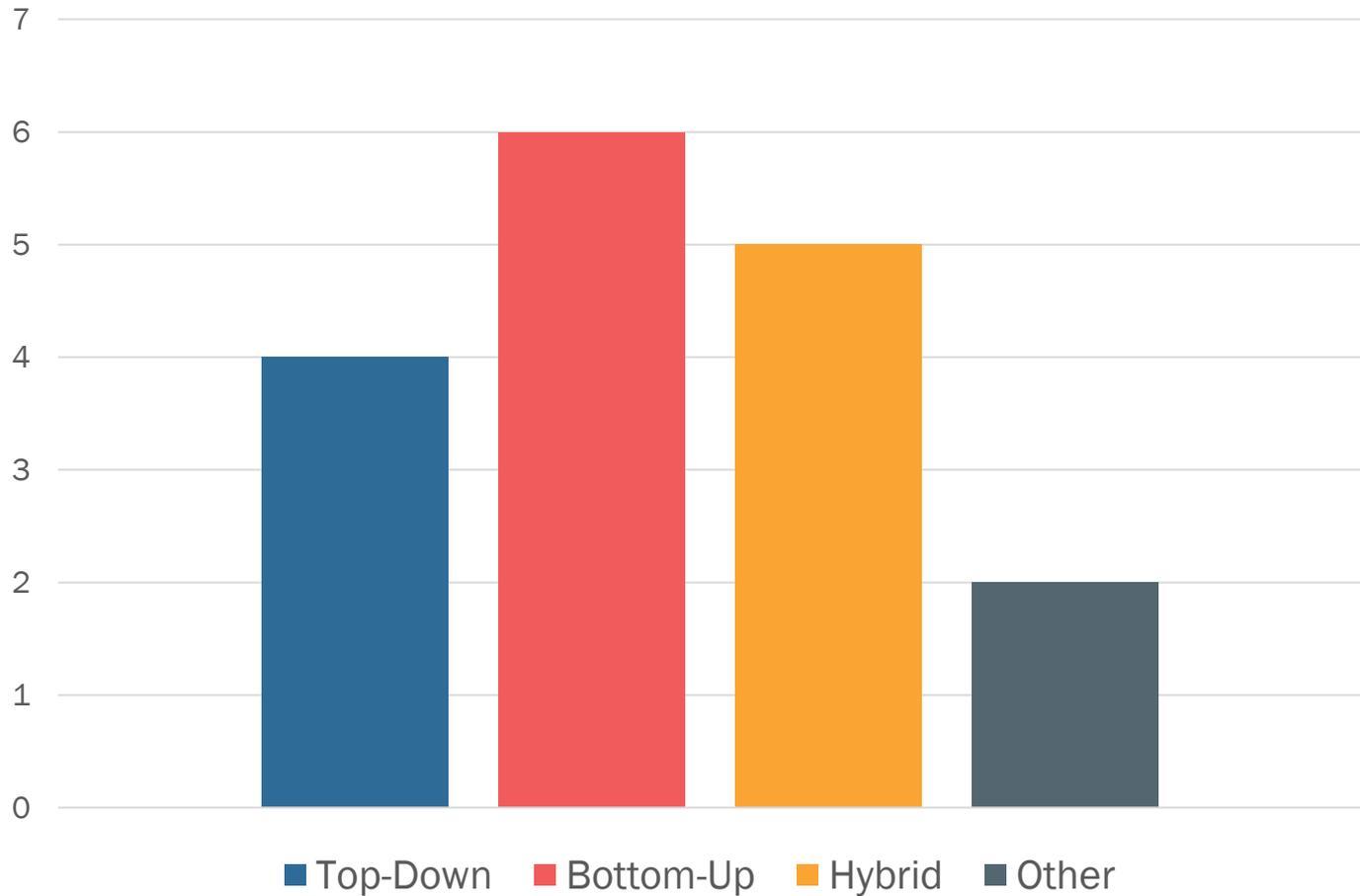
Household *forecast "Other" responses:*

- *Typically use bottom-up for the first five years and then top-down for the out-years*

- *I don't do household forecast*

My jurisdiction has the following approach to developing our employment forecast:

Employment forecast "Other" responses:

- *Typically use bottom-up for the first five years and then top-down for the out-years*

- *We do not work on employment - the Department of Planning and Development work on the employment data*

Detail provided for three previous questions:

- **City of Alexandria:** *Hybrid, the majority is bottom-up aggregating information from buildings to TAZ and then that is adjusted by top-down benchmark totals.*

- **Arlington County:** *Forecast is first prepared at the parcel level to determine growth/density potential. Then it is summarized at the census block level and factors are applied to determine households, population, and jobs. This block level data is then joined to the TAZ level and provided to MWCOG.*

- **Fairfax County:** *Methodology provided on how we estimate and forecast housing units, households and population at the link below in Appendix A. (link provided in chat)*

Detail provided for three previous questions:

- *City of Gaithersburg: (For all three) we start with a bottom-up approach for each parcel, based on existing dwelling units & non-residential SF by type. For population & households: baseline based on parcel-level info. For employment: parcel-level info is adjusted based on other sources, such as the Economic Census, LEHD, QCEW, and MWCOG-provided data. For all projections, the growth in the outer years is compared to Montgomery County's overall growth and adjustments are made if needed. For example: if it appears the City is accounting for too large a proportion of the County's overall projected growth. Also, because we take a bottom-up approach, we usually generate the TAZ-level projections at the same time we provide our jurisdiction-wide totals, though time constraints may require us to provide a draft estimate for the jurisdictional total, which is then revised once the parcel (and TAZ) level information is complete.*

Detail provided for three previous questions:

- **Loudoun County:** *Currently use "top down" approach; may shift towards a hybrid approach. One merit of the top-down approach is the ability to reflect changes in the overall level and demand for development over time – in considering options, Loudoun will continue to incorporate that sort of thinking. As Loudoun becomes more developed, the ability to reflect trends and capacity in small areas earlier in the process is increasingly helpful.*

- **Montgomery County:** *We use a cohort-survival demographic model to project countywide population by sex & age - and a headship-rate model to develop household projections. Employment projections use a combination of bottom-up calculations based on existing & forthcoming land-uses as well as top-down calculations that allocate projected jobs based on industry forecasts (using NAICS category conversion factors).*

Detail provided for three previous questions:

- ***Prince William County:*** *Households are projected using a logistic curve model. Employment uses a Shift-Share model. Population is derived from households using average household sizes developed from the American Communities Survey.*

How much time do you typically need to develop your jurisdictional control totals/benchmark totals?

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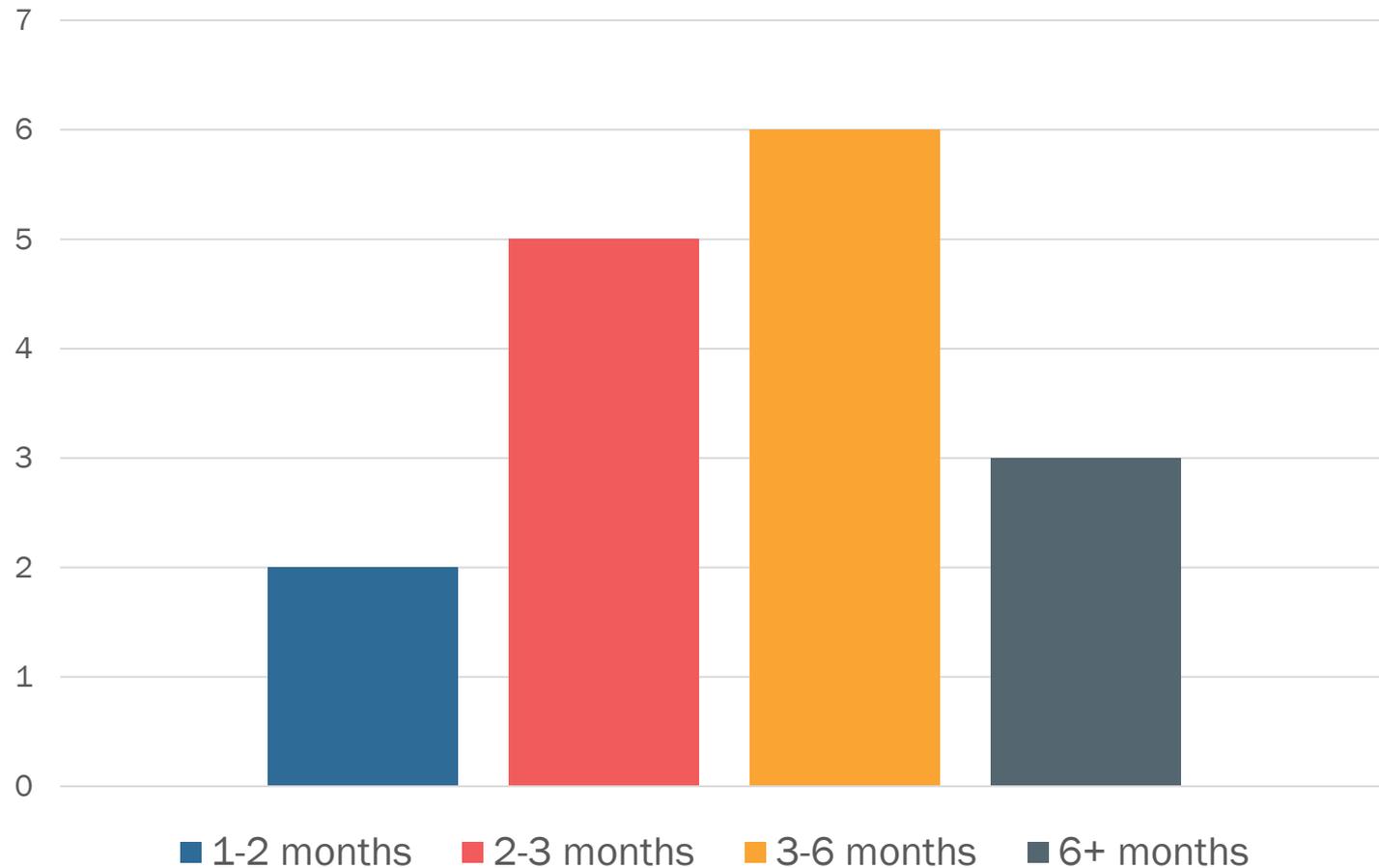
How much time do you typically need to develop your TAZ level data after establishing the jurisdictional control totals/benchmark totals?
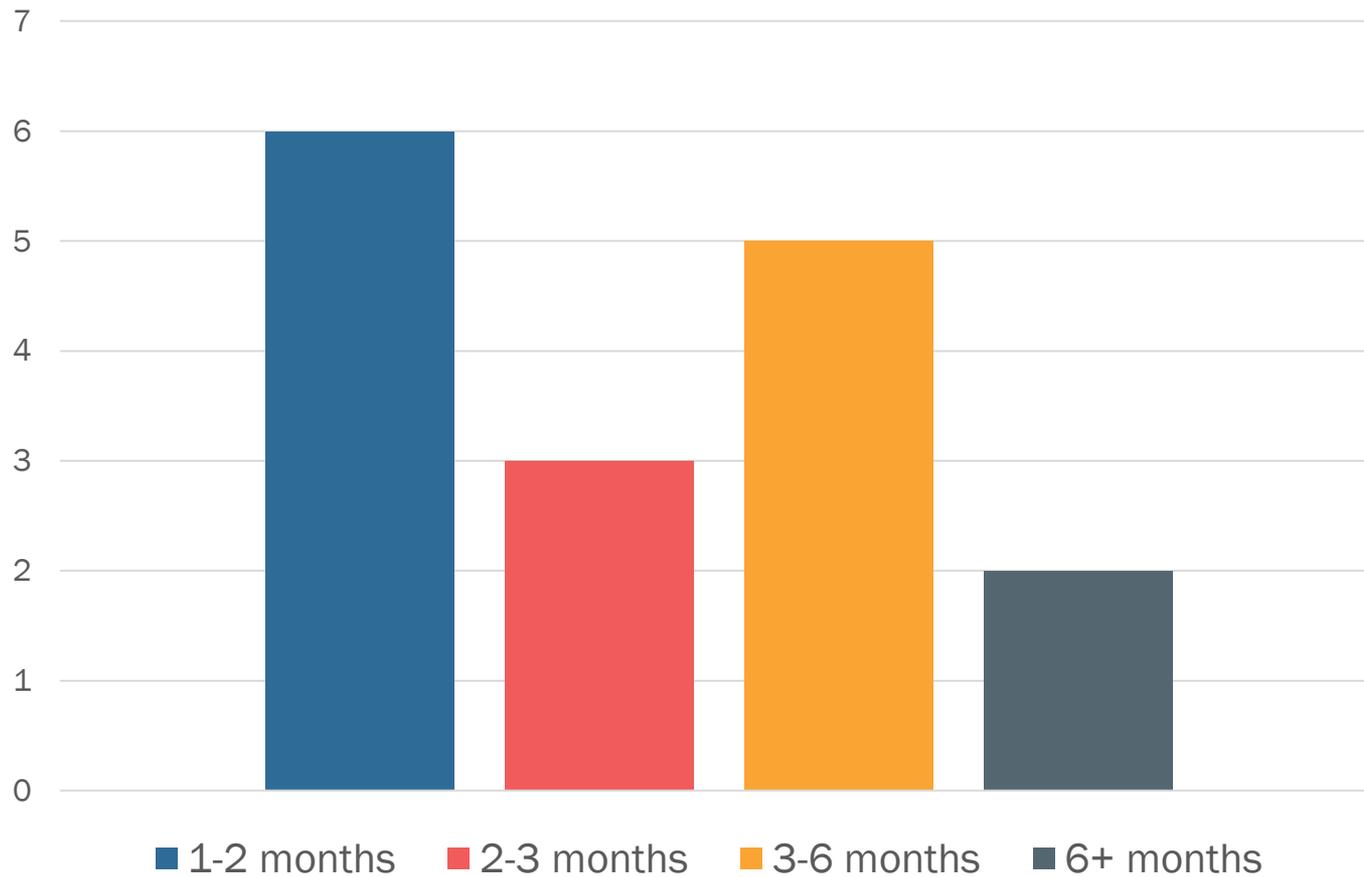
■ 1-2 months   ■ 2-3 months   ■ 3-6 months   ■ 6+ months

Please explain how (if at all) the COVID-19 pandemic (and any related ripple effects) has impacted your ability to conduct your forecast.

- **No significant difference:**

  - Arlington County

  - Charles County

  - Fairfax County - *Note: We were not impacted by COVID-19 but working with 50% staff made it difficult to get some tasks completed in time.*

  - City of Rockville

Please explain how (if at all) the COVID-19 pandemic (and any related ripple effects) has impacted your ability to conduct your forecast.

- **City of Alexandria:** *Conducting reliable forecasts and projections using data from 2020 is difficult due to how transient the population was during that time.*

- **District of Columbia:** *The COVID-19 pandemic continues to create a very uncertain economic climate that has far reaching impacts on current and future population, households and jobs. There will be a need for a thorough analysis of relevant data and cautious use of assumptions to develop near term and long-term forecast that are reliable and within range of probable outcomes.*

Please explain how (if at all) the COVID-19 pandemic (and any related ripple effects) has impacted your ability to conduct your forecast.

- **Frederick County:** *We have not analyzed our local data within the COVID-19 timeframe. We think awaiting the release of the 2020 Census data will provide us a better understanding of this impact.*

- **City of Gaithersburg:** *The pandemic has not affected the ability to conduct the projections, but it has resulted in other areas of work picking up, such as site plan reviews and plats, which will likely require additional time to complete the projections.*

- **Loudoun County:** *Our department has had to take on other tasks, negatively impacting our resources available for this effort.*

Please explain how (if at all) the COVID-19 pandemic (and any related ripple effects) has impacted your ability to conduct your forecast.

- *Montgomery County: Interruptions in data accessibility (late arrival of Census & inaccessibility to QCEW data due to teleworking); High uncertainty around data trends/interruption of trends being tracked (for vital data as well as economic data).*

- *Prince George's County: Concerned about employment. But our greater challenge will be our new zoning code.*

- *Prince William County: Created a revenue shortfall for the County and we had a hiring freeze. Vacant positions strained capacity; little/no resources could be spent on forecasts.*

- *St. Mary's County: Uncertainties.*

What are the post-COVID impacts that we should be quantifying and tracking over time as a region? How should these trends be incorporated into the cooperative forecast?

- Employment

- Telework

- Land use by building type

- Transportation

- Migration & Household Size

Employment

- Reductions in hospitality & retail employment
  - Online sales growth impacting retail employment and space

- Growth in biotech and life sciences-related employment

- Growth in industries and uses that take up a lot of land/buildings but don't generate a lot of jobs (data centers, self-storage centers, distribution centers, etc.)

- Employment shifts
  - Job re-filling (jobs lost that are now re-gained)
  - Job industry shifts (employees shifted sector careers)
  - Workforce participation (unemployment and retirement)

- Closer examination of employment comparison by NAICS sectors

Telework

- How can the forecasts capture the evolving nature of hybrid working?
  - Currently employment is assigned as a whole number and to a single TAZ - how should this flex to accommodate splitting time between home and office, or other locations?
  - Flexible work style may affect the way to calculate office employment; we may need to rethink the factors.

- Some jurisdictions use employment numbers to estimate elements such as daytime population, or traffic patterns, but with increased telework likely, this all needs adjustment.

Land Use by Building Type

- Construction trend shifts: Track permit data by jurisdiction

- Retail space
  - Demand shifts due to telework and online shopping
  - Track vacancy rates by jurisdiction

- Office space
  - Demand shifts due to telework
  - Track vacancy rates by jurisdiction

- Commercial Space: Increase in data/distribution centers

- Housing
  - Shifts in type/size/location preference
  - Shifts in cost/value

Transportation

- Shifts in demand and frequency of service

- Shifts in developments and demand for living adjacent to transit/in more walkable versus auto-centric environments

- Land use shifts between office, retail, and commercial space significantly impact the transportation model
    - Changes must be tracked, and trends must be analyzed to inform transportation model updates

Migration & Household Size

- Domestic migration
  - Urban → suburban and rural migration
  - Telework ripple effects, especially for young professionals with newfound relocation flexibility; moving to new (often more affordable and/or less urban locations) or returning home to be with family/save money

- International migration
  - Economic downturn and government capacity backlogs impacting visa renewal rate

- Household size
  - Births and deaths
  - Telework/remote learning-related migration shifts

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Preferred Discussion Topics

1. Short/long-term impacts of COVID-19 on the forecast
2. 2020 employment base year
3. Changes in average household size
4. Continuation of telework trends
5. Housing production trends in the Washington region
6. Industrial/office/retail space utilization/multiplier rates
7. The future of retail
8. Changes in domestic migration patterns
9. What to do about "differential privacy"
10. CoStar Trends (ex. vacancy rates)
11. Changes in fertility rate
12. Changes in family formation rate
13. Cooperative forecasts and the transportation model
14. Changes in foreign-born population growth
15. Transportation projects included in Visualize 2045

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Preferred Discussion Topics – Top 8

1. Short/long-term impacts of COVID-19 on the forecast

2. 2020 employment base year

3. Changes in average household size

4. Continuation of telework trends

5. Housing production trends in the Washington region

6. Industrial/office/retail space utilization/multiplier rates

7. The future of retail

8. Changes in domestic migration patterns

What Discussion Topics Are We Missing?

- Future training hosted by MWCOG

- Equity Emphasis Areas and how they relate to the forecast

- International migration rate (in the region)

- Household composition shifts (& impacts on housing demand)

- Jobs/industry makeup:
    - Compare across region and by each jurisdiction
    - Compare region to nation & 10 most populous metro areas

- Categorization of employment into Office, Retail, Industrial, Other

- Labor force participation

What is this Survey Missing?

- Resetting base year to 2020 (residential & non-residential)
  - What additional work/time requirements given the release of the 2020 Census data and the switch to a "0" Round

- Subject related to future training by US Census Bureau & BLS on accessing and calculation method for local data

- Changing employment landscape

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Additional Comments

Cooperative Forecasting and the Housing planners at MWCOG are super capable staff - you ROCK! Paul D. together with Greg Goodwin and his staff are rare breed of professionals I've worked with over the years. Thank you.

Questions?

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