COOPERATIVE FORECASTING GROUP

April 22, 2020
10:00 A.M. to 12:00 P.M.

MINUTES

Ms. Kui Zhao, Chair of the Cooperative Forecasting Group (CFG), called the meeting to order at 10:05 a.m.

1. APPROVAL OF MINUTES

After a brief discussion and a few modifications, Ms. Zhao asked for approval of the minutes from the February meeting of the CFG. Mr. Joel Gallihue moved to approve the minutes with Mr. Jeff Bronow seconding the motion. The minutes were unanimously approved.

2. ROUND 9A AND ROUND 9B UPDATES

Mr. Shawn Kimberly provided a status update on the Round 9A dataset. He noted that all participating jurisdictions had submitted their finalized Round 9A forecasts, BMC staff had developed travel demand model inputs from that dataset, and that Round 9A had been forwarded to the agency's modeling group to support air quality conformity testing and Transportation Improvement Program efforts. The next steps for the dataset will be to go before the Technical Committee for recommendation for approval by the Baltimore Regional Transportation Board (BRTB), and finally to the BRTB for their endorsement of the forecasts.

Shifting to Round 9B, Mr. Kimberly said that Round 9B would be the last opportunity for jurisdictions to make adjustments to their forecasts prior to the scheduled 2022 Long Range Transportation Plan (LRTP) update. He noted that participation in Round 9B would be mandatory as the horizon year for the forecasts needs to be extended to 2050 for this LRTP update. Mr. Kimberly outlined the schedule for the Round 9B forecasts stating that the TAZ level forecasts are due to BMC by November 30, 2020, and that draft jurisdictional level totals would be due by June 30, 2020. He added that the Maryland Department of Planning is developing a new set of county level projections (scheduled to be complete by the end of July 2020), and that they would like to incorporate the Round 9B jurisdictional level data developed by the local jurisdictions in the Cooperative Forecasting Group.

Al Sundara, Maryland Department of Planning, suggested that local jurisdictions compare their population estimates and forecasts with the newly released Census Bureau Population

Estimates Program data, and incorporate any necessary adjustments into their Round 9B jurisdictional level totals.

3. CARROLL COUNTY POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTING METHODS

Mr. Cody Spaid, Carroll County Department of Planning, said that he would be presenting on the methods utilized to develop their population and household estimates and forecasts. Mr. Spaid noted that their population and household estimates are updated monthly and are distributed within the planning department and throughout the county, as several departments rely upon the data to support their own efforts. The population is broken down by election district, fire district (emergency service reasons), and by growth area zone for planning purposes.

The model used to develop the population estimates is based upon use and occupancy permits and a few demographic assumptions (Estimated Population = Previous Year Population + (Average Household Size * Death Rate * Use and Occupancy Current Year * Vacancy Rate)). The average household sizes, death rates, and vacancy rates are customized for each election district. The model used to develop the household estimates is based upon use and occupancy permits (to arrive at housing unit estimates) and the application of an assumed vacancy rate of 3.0 percent (Households = Housing Units * 0.97)).

In order to project the number of households, Carroll County Department of Planning staff analyzed the annual issuance of use and occupancy permits for housing units over the course of the past ten years by election district. The ten-year average of the annual number of use and occupancy permits for housing units was applied to project future household growth. Population was then projected based upon the household growth, utilizing an assumed decline in household size into the future. Mr. Spaid noted that a comparison between the 2018 Census Bureau Population estimate for Carroll County and the Round 9 projection revealed a difference of less than 0.1 percent. Upon completion of the presentation, Mr. Sundara clarified that Carroll County staff had utilized the Maryland Department of Planning population projections for the long-term figures (which were developed with the application of the cohort-component method).

[PowerPoint: Population Estimate Presentation CFG_Carroll]

4. BALTIMORE COUNTY POPULATION, HOUSEHOLD, AND EMPLOYMENT FORECASTING METHODS

Ms. Zhao began by explaining that the Baltimore County Department of Planning generally updates the household and population each year, while the employment data may not be revised as frequently. The households are updated first. Occupancy and razing permits are used to arrive at the net new units for a given year, then added to the total from the prior year. Every two to three years, staff will reconcile the numbers going back to the base year,

depending upon the presence of updates from the Office of Information Technology or updates to the occupancy and razing permit data. Next in the process, planning staff includes approved development plans that have a residential component, and considers the expected pace of that growth. The final component of the household forecasts is the holding capacity analysis which incorporates current zoning, existing land use, growth tiers, and environmental constraints into a GIS model (which is updated every three years). Round 9A incorporates the results of the 2017 holding capacity analysis.

The population forecasts are created next, and are based upon the households. Baltimore County utilizes the household size from the 2010 Census by TAZ, and assumes this to remain constant through the forecast horizon. Group quarters population is developed utilizing the figures for that population from the Decennial Census, then adjusting it to account for occupancy and razing permits and approved plans for group quarters facilities within the county. The final component, natural increase, is developed from vital statistics data supplied by the Maryland Department of Health (births and deaths by Census tract).

The county level employment estimates for the base year are derived utilizing the methodology agreed upon by members of the Cooperative Forecasting Group: Wage and Salary Employment (Bureau of Economic Analysis) + Self-employed (from the Census Bureau's Nonemployer Statistics dataset) = Total Employment. Allocation of total county employment to TAZ is achieved with the use of the Master Establishment File. The employment forecasts also consider occupancy and razing permits, as well as approved development for non-residential and mixed uses. Net new square footage of non-residential development is converted to a number of employees with assumptions about space utilization per employee (benchmarked to available sources, primarily the Urban Land Institute). Finally, news articles regarding employment growth from new or relocating establishments are included.

Ms. Zhao shared a land use map from the Baltimore County Master Plan 2020 document, and highlighted a few of the larger projects in the Towson Urban Center, Middle River Redevelopment Area, and the Owings Mills Growth Area. She then provided a thematic map of the Baltimore County Round 9A household growth (2020 to 2045) by TAZ.

Upon completion of the presentation, Mr. Sundara asked if migration had been a consideration in the population forecasts. Ms. Zhao responded to the migration question noting that the consideration of the new housing units would account for this. She added that while the state provides migration data at the jurisdictional level, it is difficult for locals to access the data at the TAZ level. Mr. Sundara added that it would be important to account for Baltimore County losing population due to negative net migration (domestic is negative while international is positive). He said that the jurisdictional level totals for net migration could be distributed to subcounty geographies utilizing a ratio allocation. Ms. Zhao noted that she had discussed with Howard County whether they benchmark their population estimates to the Census Bureau's Population Estimates Program data. Ms. Zhao mentioned that she may use the Population Estimates Program data as a reference in the future, and that it would be particularly helpful as it incorporates the migration component of change. Mr. Sundara stressed that the Census Bureau's Population Estimates Program data is the best available data resource for county level estimates, and is a credible source for use in benchmarking purposes.

[PowerPoint: Baltimore County_Forecast Development]

5. NEW U.S. CENSUS BUREAU POPULATION ESTIMATES PROGRAM DATA

Mr. Kimberly explained that the Census Bureau's Population Estimates Program is an annual data release that provides information on the components of population change over time. He noted that population change can only occur through natural increase (births minus deaths) and migration (domestic and international migration). The Census Bureau estimates this component change and adds it to the last decennial census to produce population estimates each year. These estimates are used in the allocation of federal funds to state, county, and local governments, and serve as control totals for several federal surveys.

Mr. Kimberly then presented a series of six charts for the Baltimore region and for each jurisdiction in the region (all detailing population growth over the 2010 to 2019 timeframe): the first showing the 2019 population estimate; the second showing year-over-year numeric population growth (along with the nine-year average); the third showing the annual year-over-year population growth rates; the fourth displaying annual population change, net natural increase, and net migration; the fifth displaying births, deaths, and net natural increase; and the sixth illustrating net international, net domestic, and total net migration.

The population of the Baltimore region was estimated to be 2,800,053 for 2019. Year-over-year growth in population in the region was negative for the first time from 2018-2019, with an estimated decline of 690 persons (-0.02%). The region's annual growth rate was below that of the state for all years in the 2010-2019 time period, while the state's annual growth rate trailed that of the nation in all years since 2012. While natural increase has been positive throughout the time period, it has been trending downward since 2015, as the number of annual births in the region has fallen and the number of annual deaths continues to increase. Net migration has been trending downward since 2012, with international migration that has remained positive (but has been in decline for the past two years), and fueled by marked domestic out-migration (which has been negative since 2012). While domestic out-migration from the region has fluctuated, it has been more significant in the past four years than at any other point in this decade. The result is a change in year-over-year net migration from a high of 10,177 in 2012 to a low of -6,487 in 2019.

After reviewing the components of change by jurisdiction, Mr. Kimberly presented a series of line graphs (one for each jurisdiction) overlaying the 2010 to 2019 Census Bureau population estimates onto the Round 9A 2015 to 2030 population forecasts. He also provided a table comparing the 2019 population estimates by jurisdiction with the Round 9A 2019 estimates (calculated assuming linear growth between 2015 and 2020). The point of the exercise was to determine whether the trend demonstrated by the Census Population Estimates Program data supports the CFG's current short-term forecasts, or if it suggests further consideration and adjustment may be necessary for the next forecast update.

The results of the exercise at the regional level show both the Census Bureau estimates and Round 9A forecasts with similar estimates at year 2015; then the Census Bureau estimates

plateau in the subsequent years, while the Round 9A forecasts continue with more aggressive growth assumptions. At the regional level, the year 2019 Round 9A population forecast is 43,572 (1.6 percent) higher than the Census Bureau estimate for the same year. The jurisdictions with the largest difference between Census Bureau population estimates and Round 9A population forecasts for 2019 were: Baltimore City, where Round 9A was 23,287 (3.9 percent) higher than the Census Bureau population estimate; and Baltimore County where Round 9A was 20,662 (2.5 percent) higher than the Census Bureau population estimate.

Mr. Kimberly added that the Census Bureau Population Estimates Program will be releasing population estimates by age, sex, and race and Hispanic origin characteristics in June.

[PowerPoint: CFG_PEP_v2019]

6. NEW BUSINESS

Ms. Zhao reminded the group that there would be additional presentations on jurisdictional forecast methodologies at the June meeting, and suggested that data.census.gov training by Census Bureau staff for the CFG would be helpful. Mr. Gallihue proposed that the group discuss their experiences utilizing the various video conferencing platforms at an upcoming meeting.

The meeting adjourned at 11:50 A.M.

ATTENDANCE

Members

Jeff Bronow, Howard County Department of Planning and Zoning
Joel Gallihue, Harford County Department of Planning and Zoning
Deborah Grant, Harford County Department of Planning and Zoning
Sara Paranilam, Baltimore City Department of Planning
Michele Polino, Anne Arundel County Office of Planning and Zoning
Cody Spaid, Carroll County Department of Planning
Al Sundara, Maryland Department of Planning
Jamie Williams, Baltimore City Department of Planning
Kui Zhao, Baltimore County Department of Planning

Staff and Guests

Krishna Akundi, Maryland Department of Planning
Crystal McDermott, BMC
Shawn Kimberly, BMC
Bob Lefenfeld, Real Property Research Group
Nicole Mathison, Real Property Research Group