

**ITEM 11 – Information**  
June 20, 2018

Visualize 2045: Update to the Equity Emphasis Areas

**Staff Recommendation:** Briefing on the TPB-approved methodology to update the Equity Emphasis Areas using the most recent survey data in preparation for Visualize 2045.

**Issues:** None

**Background:** Staff have applied the TPB-approved methodology to update the Equity Emphasis Areas using the most recent American Community Survey data in preparation for Visualize 2045. The resulting map will be shared.





## MEMORANDUM

**TO:** Transportation Planning Board  
**FROM:** TPB Transportation Planner  
**SUBJECT:** Updated Equity Emphasis Areas  
**DATE:** June 14, 2018

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The TPB adopted the methodology for Equity Emphasis Areas (EEAs) and the resulting map in March 2017 after a thorough consultation process with the TPB Technical Committee and COG's Planning Directors Technical Advisory Committee as the first step to enhance the approach to analyze the long-range transportation plan for Title VI and Environmental Justice (EJ) considerations. In preparation for Visualize 2045, the Equity Emphasis Areas were updated with the most recent Census estimates using the TPB-approved methodology. The TPB will be briefed on the changes and asked for feedback.

TPB staff used the 2012-2016 5-year estimates from the American Community Survey (ACS) from the U.S. Census Bureau to update the Equity Emphasis Areas. The 2010-2014 5-year estimates were used to prepare the map initially. Although the methodology is unchanged, using updated demographic estimates has resulted in some minor changes to the original EEAs. Figure 2 identifies which of the original EEAs have been removed as well as the new EEAs that have been added as a result of using updated data within the same methodological framework. Figure 3 contains the updated EEA map.

TPB staff briefed the TPB Technical Committee (Tech) and COG's Planning Directors Technical Advisory Committee (PDTAC) on the updated Equity Emphasis Areas at its May 4 and April 10 meeting, respectively. As of today, no comments were received from the TPB Technical Committee and comments from PDTAC members at the meeting indicated support for and understanding of the updated Equity Emphasis Area using more recent data. TPB staff invited the Technical Committee and Planning Directors Committee members to continue to provide additional comments following the meeting and offered to consult further, if desired. To date, no further comments have been received.

## BACKGROUND AND CONTEXT

Federal regulations require the TPB to analyze the long-range transportation plan for disproportionately high and adverse impacts on low-income and minority populations. The TPB's primary purpose for the Equity Emphasis Areas is for use as an analytical tool to identify *regional* impacts of the planned transportation projects as whole by comparing accessibility and mobility measures for the Equity Emphasis Areas collectively with the rest of the region.

Additionally, for all TPB-administered project selection programs, including the Transportation and Land Use Connections Program (TLC), the Transportation Alternatives Set-Aside Program (TAP), and the Enhanced Mobility Program, TPB staff have incorporated applicable initiatives into the selection criteria or priorities.

The EEAs GIS layer and associated data have been made available to local jurisdictions to use at their discretion in efforts considering equity in initiatives such as education, health, and green space.

## THE TPB-APPROVED METHODOLOGY

The TPB-approved methodology relies on the U.S. Census Bureau American Community Survey (ACS) data on income, race and ethnicity to determine what Census tracts are considered Equity Emphasis Areas. A 5-year time series of ACS is used because ACS data are updated using a revolving geographic sample and using a 5-year series ensures estimates for the entire region are included. Federal regulations require the TPB to consider both low-income and minority populations when examining the long-range transportation plan for disproportionate impacts. Four population groups are considered: Low-Income, African-American, Asian, and Hispanic/Latino.

To normalize and compare the data across the four population groups and in the region, the EEA methodology entails assigning a value to each of the demographic factors for every Census tract. Higher estimates of each of the demographic factors receive higher values. For each tract, those values determine the index score for each population group and then the index scores are added together, and the tract is considered to be an EEA if the total score exceeds an established threshold. Income is weighted more heavily to reflect the assumption that income is a more significant predictor of an individual's ability to access transportation than race or ethnicity. The interactive online map of the original Equity Emphasis areas as well as the TPB-approved methodology can be found at:

[mwcog.org/transportation/planning-areas/fairness-and-accessibility/environmental-justice/equity-emphasis-areas](http://mwcog.org/transportation/planning-areas/fairness-and-accessibility/environmental-justice/equity-emphasis-areas).

## UPDATING EQUITY EMPHASIS AREAS

TPB staff updated the Equity Emphasis Areas with latest available 5-year ACS data (2012 - 2016) to support analysis of Visualize 2045. In the future, EEAs will be updated in conjunction with each major long-range transportation plan update using the latest-available Census or ACS data available at that time. Major plan updates, like Visualize 2045, occur at least once every four years in accordance with federal regulations.

The spatial patterns in the updated EEAs are similar to the original map, and the clusters of EEAs remain generally unchanged, as shown in Figure 2. While some tracts dropped off and others were added when applying the TPB-approved methodology with latest ACS data, the difference at the regional level is negligible.

Table 1 shows the updated EEAs comprise 351 tracts, or 28.5 percent of the 1,230 tracts in the region. This is slightly lower compared to the original EEA map developed using 2010-2014 data, which included 360 tracts, or 29.2% of the total tracts in the region. Table 2 shows that EEAs accounted for 28 percent of the region's population when 2010-2014 data were used. This share increased slightly to 28.2 percent in the update.

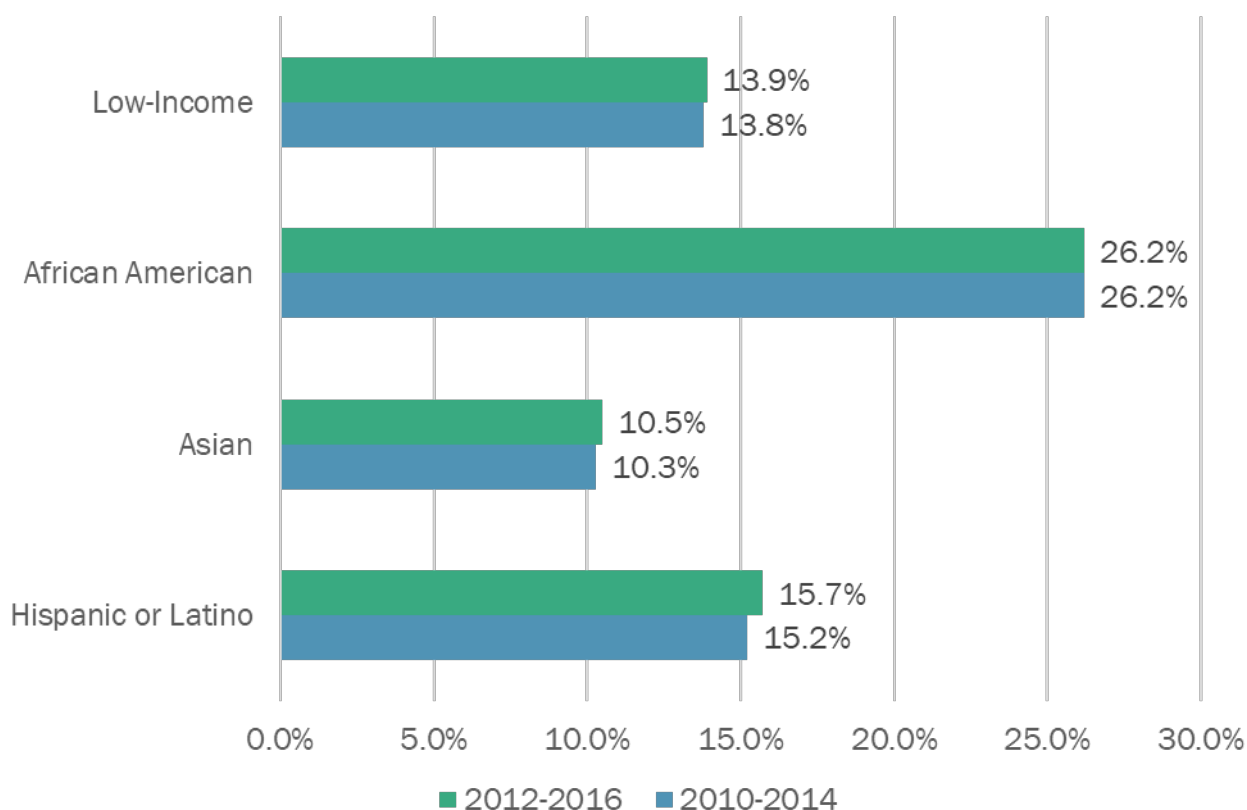
Minor changes in the demographic data included in the update resulted in some localized changes in EEAs because the values already were very close to the methodological threshold used to determine what constitutes an EEA or not. In the updated EEAs, there were no new clusters of EEAs. Moreover, no large clusters of EEAs in original map were eliminated in the update. Figure 1 shows that the regional averages for the four population groups used in the EEA methodology change very little between the two datasets. At the tract level, changes in the low-income population was a predominant reason that a tract was either removed or added as an EEA in the updated map.

Individual maps and data tables of the updated Equity Emphasis Areas for TPB member jurisdictions are available.

## NEXT STEPS

Following the June TPB meeting, staff will revise the online interactive map to reflect the updated Equity Emphasis Areas (EEAs). The Title VI/Environmental Justice analysis of Visualize 2045 will occur later this year and examine regional mobility and accessibility measures for the EEAs compared to the rest of the region for disproportionately high and adverse impacts. Staff expects to brief the TPB and Technical Committee between October and December on the results from this analysis.

**Figure 1: Regional Averages by Population Group**  
2010-2014 versus 2012-2016 American Community Survey 5-Year Estimates



**Table 1: Changes in Equity Emphasis Area Tracts by Jurisdiction**

	Number of Tracts in Original EEA's	Number of Tracts in Updated EEA's	Net Change	Number of Tracts Added	Number of Tracts Removed
Alexandria City, VA	11	9	-2	1	-3
Arlington County, VA	10	12	2	4	-2
Charles County, MD	4	5	1	2	-1
District of Columbia	106	97	-9	2	-11
Fairfax City, VA	1	0	-1	-	-1
Fairfax County, VA	46	43	-3	7	-10
Falls Church City, VA	0	0	-	-	-
Fauquier County, VA	0	0	-	-	-
Frederick County, MD	11	9	-2	1	-3
Loudoun County, VA	5	5	-	2	-2
Manassas City, VA	3	1	-2	-	-2
Manassas Park City, VA	1	1	-	-	-
Montgomery County, MD	46	49	3	9	-6
Prince George's County, MD	103	103	-	11	-11
Prince William County, VA	13	17	4	7	-3
Total	360	351	-9	46	-55

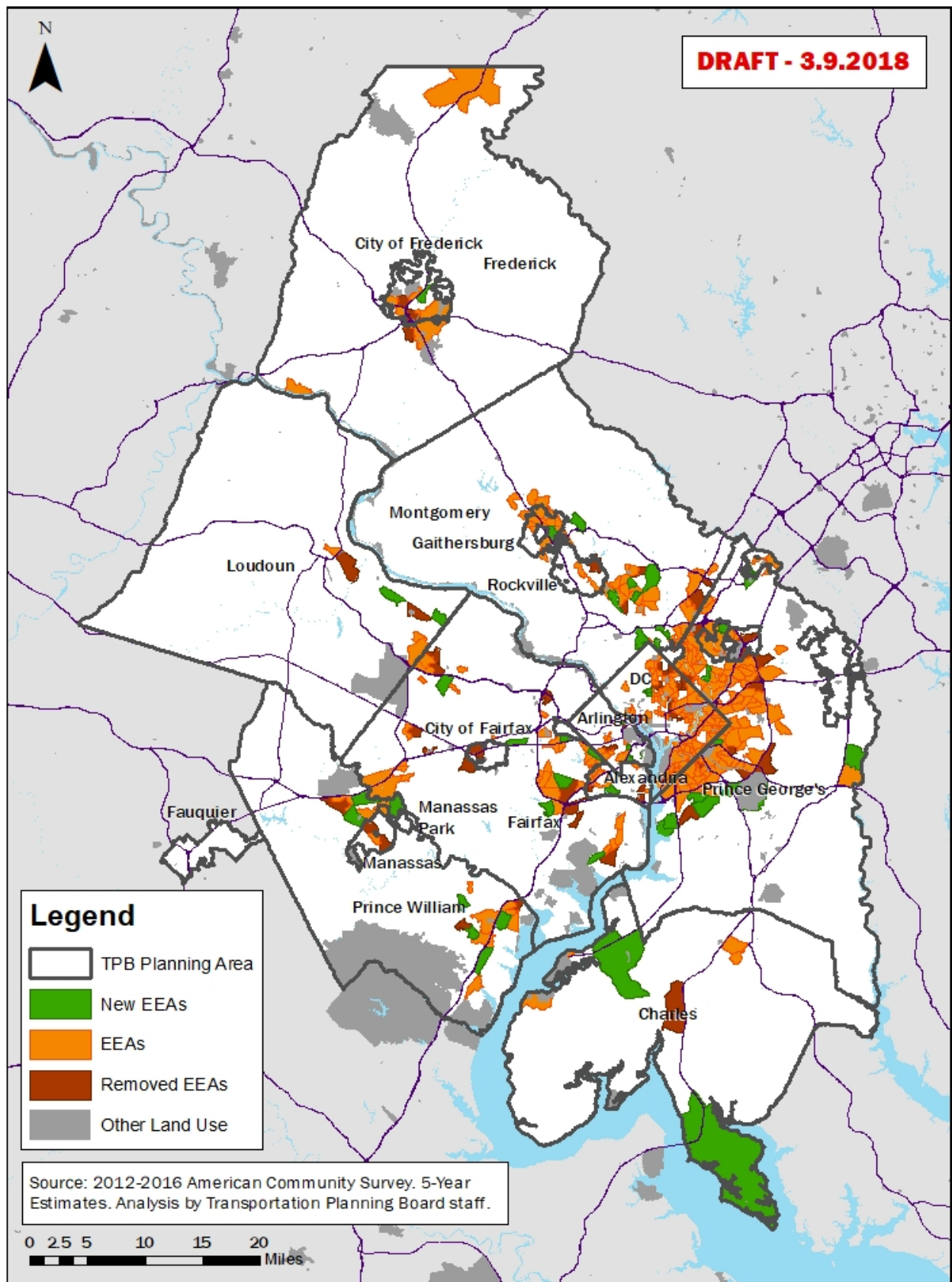
Source: The original EEA's are based on data from the 2010-2014 American Community Survey (ACS) 5-Year Estimates and the updated EEA's are based on the 2012- 2016 ACS 5-Year Estimates.

**Table 2: Population in Equity Emphasis Areas by Jurisdiction**

	Original Equity Emphasis Areas		Updated Equity Emphasis Areas		Change in Population in EEA's	
	Original Population	Percent of Population	Population	Percent of Population	Population Change	Percent Change
Alexandria City, VA	50,411	34.4%	45,072	29.8%	-5,339	-4.7%
Arlington County, VA	43,449	19.7%	46,778	20.7%	3,329	1.0%
Charles County, MD	14,846	9.8%	18,058	11.7%	3,212	1.9%
District of Columbia	367,379	59.2%	355,176	55.0%	-12,203	-4.2%
Fairfax City, VA	4,788	20.4%	0	0.0%	-4,788	-20.4%
Fairfax County, VA	213,594	19.1%	214,326	18.9%	732	-0.2%
Falls Church City, VA	0	0.0%	0	0.0%	-	-
Fauquier County, VA	0	0.0%	0	0.0%	-	-
Frederick County, MD	49,869	20.8%	39,929	16.4%	-9,940	-4.4%
Loudoun County, VA	25,631	7.6%	25,837	7.1%	206	-0.4%
Manassas City, VA	17,627	43.6%	7,556	18.4%	-10,071	-25.2%
Manassas Park City, VA	6,865	45.8%	6,765	42.7%	-100	-3.0%
Montgomery County, MD	211,704	21.1%	254,559	24.8%	42,855	3.7%
Prince George's County, MD	404,364	45.7%	412,062	45.9%	7,698	0.2%
Prince William County, VA	67,173	15.7%	101,648	22.9%	34,475	7.2%
Total	1,477,700	28.0%	1,527,766	28.2%	50,066	0.2%

Source: The original EEA's are based on data from the 2010-2014 American Community Survey (ACS) 5-Year Estimates and the updated EEA's are based on the 2012- 2016 ACS 5-Year Estimates.

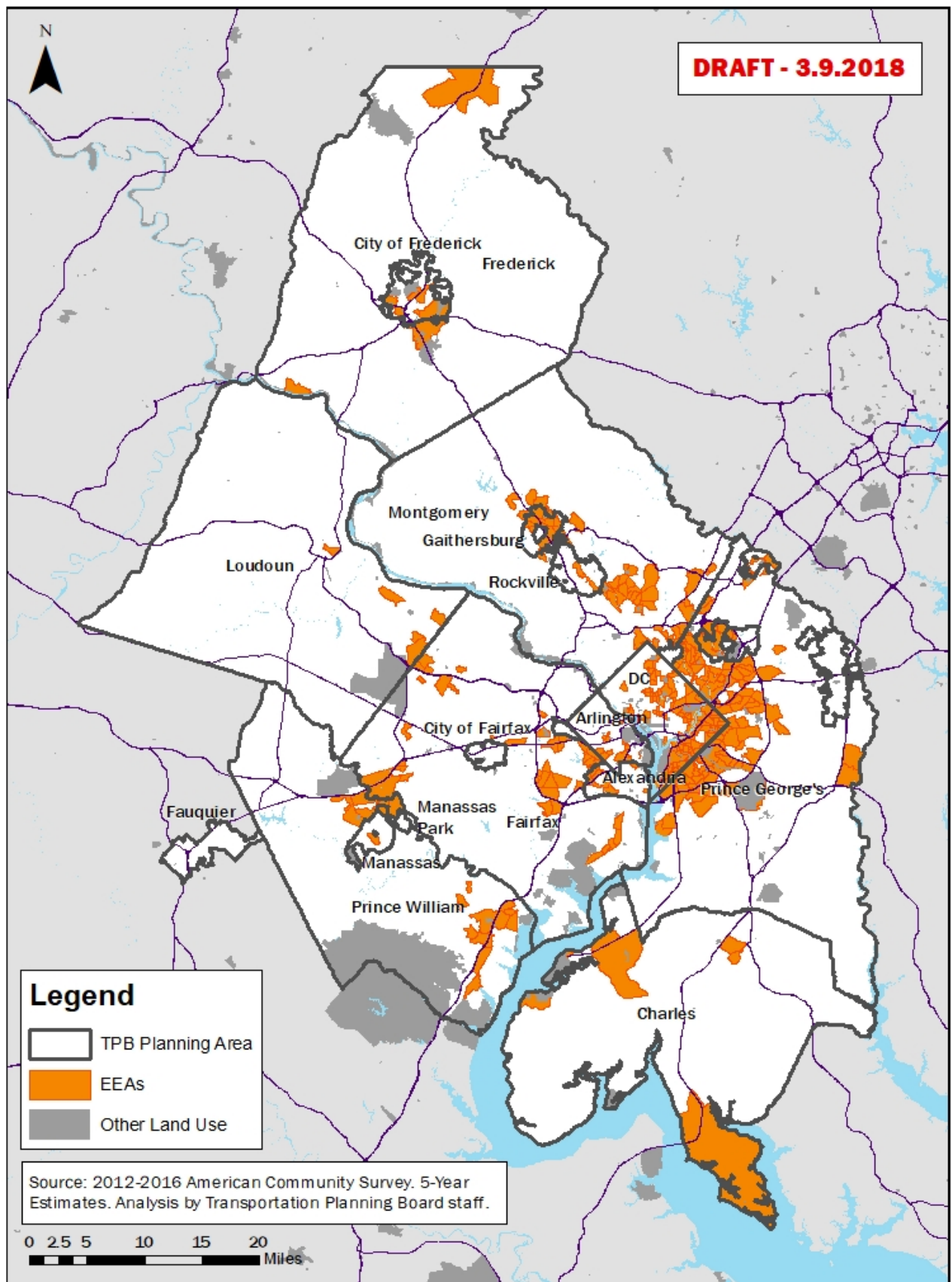
**Figure 2: Change in Equity Emphasis Areas (EEAs)**  
 Between Original EEAs and Updated EEAs  
 Based on 2012- 2016 ACS 5-Year Estimates and the TPB-Approved Methodology





**Figure 3: Equity Emphasis Areas (EEAs)**

Based on 2012- 2016 ACS 5-Year Estimates and TPB-Approved Methodology





# Visualize 2045: Update to the Equity Emphasis Areas

Transportation Planner

Transportation Planning Board  
June 20, 2018

Item #11



National Capital Region  
Transportation Planning Board



## Purpose

- Briefing on updated Equity Emphasis Areas (EEAs)



# Background

- The TPB adopted EEA methodology in March 2017 to enhance how the long-range plan is analyzed for Title VI and Environmental Justice (EJ) considerations
- Using the TPB-approved methodology, the EEAs were updated with the most recent American Community Survey data
- The EEA's will be used to analyze Visualize 2045 for disproportionate impacts on low-income and minority populations
- TPB staff will update the EEAs with the latest data in conjunction with each major plan update (every 4 years)



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## TPB Approved Methodology

- American Community Survey data by Census tract for 4 groups: Low-Income, African American, Asian, and Hispanic/Latino
- Index scores determined for every tract based on regional averages for the 4 groups
- Index scores are totaled and a tract is an EEA if the total score exceeds established thresholds
- Income is weighted more heavily than race or ethnicity



For more detail:

<https://www.mwcog.org/transportation/planning-areas/fairness-and-accessibility/environmental-justice/equity-emphasis-areas/>



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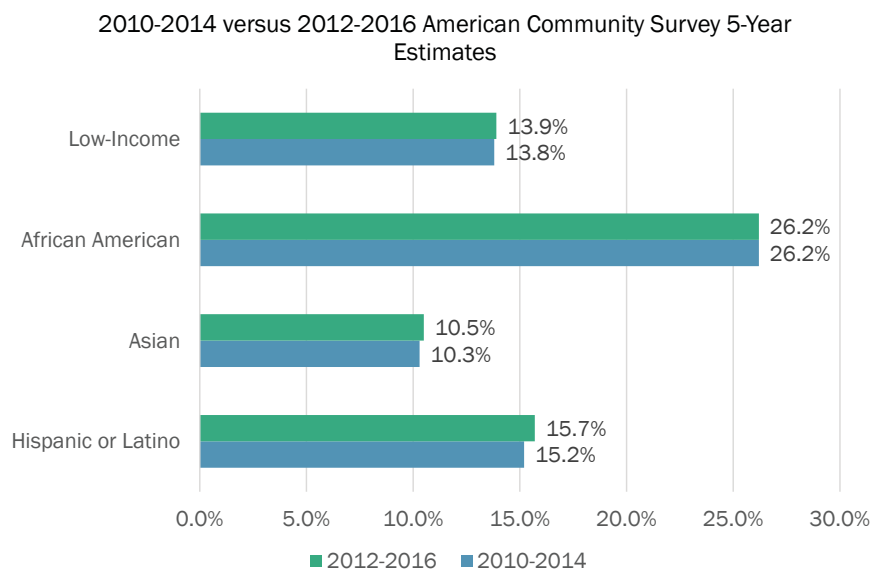
# EEAs for Visualize 2045

- The original EEA map produced in 2017 used 2010-2014 5-year estimates from the American Community Survey (ACS)
- In preparation for Visualize 2045 analysis, staff updated the EEAs using the latest ACS data: 2012-2016 5-year estimates
- The updated EEA map shows:
  - Some localized changes because values already were close to thresholds
  - Minimal change at the regional level; clusters remain largely the same



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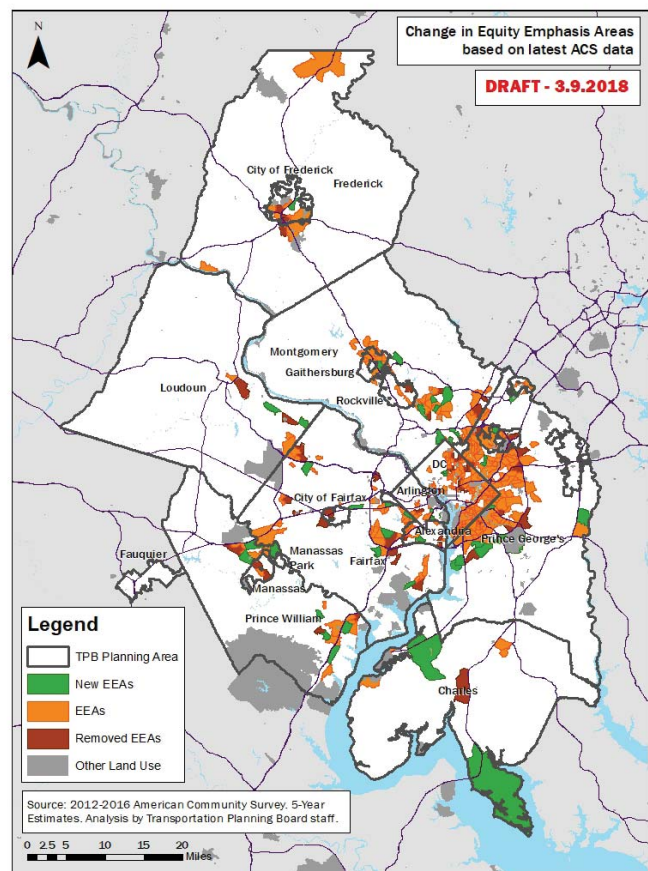
## Changes in Regional Average between American Community Survey datasets



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# Changes to the EEAs

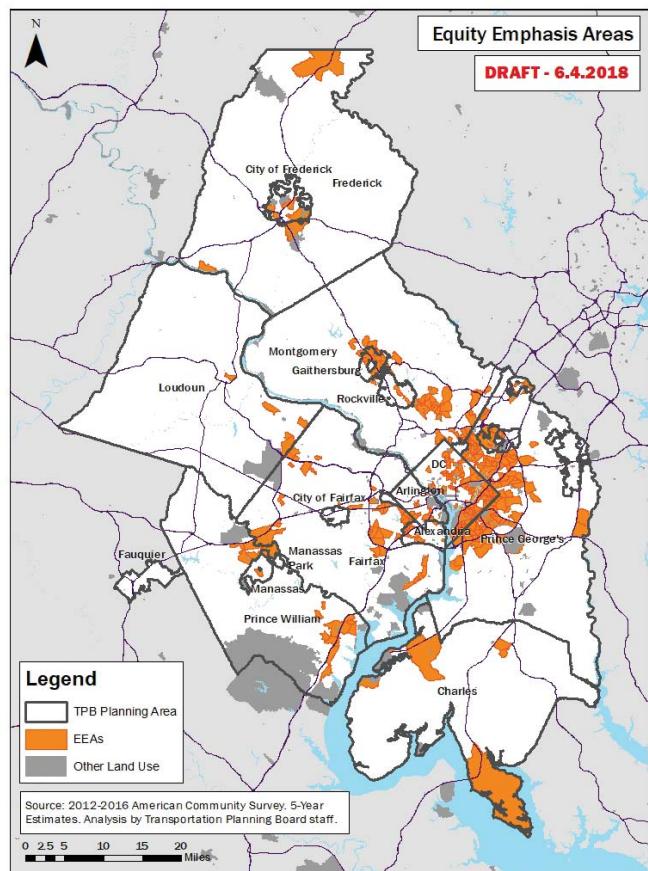
Between Original and Updated EEAs



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# Updated EEAs

Based on 2012- 2016 ACS 5-Year Estimates and TPB-Approved Methodology

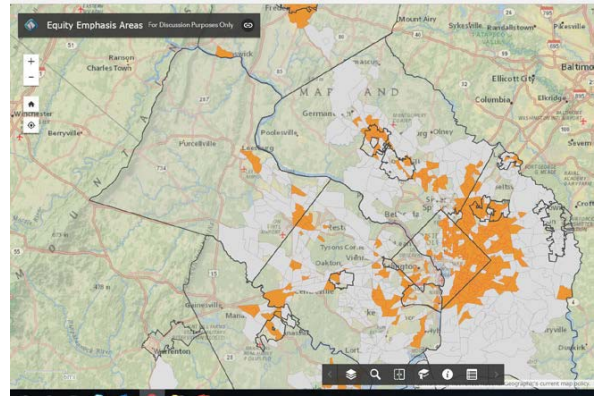


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# EEA's and Visualize 2045 Analysis

- Staff will revise the online interactive map
- Staff will conduct the analysis of Visualize 2045 and compare regional accessibility and mobility in EEA's versus the rest of the region
- TPB will be briefed on the results in the Oct/Nov/Dec timeframe



Online interactive map: [gis.mwmcog.org/webmaps/tpb/clrp/ej/](https://gis.mwmcog.org/webmaps/tpb/clrp/ej/)



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[visualize2045.org](https://visualize2045.org)

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