

# Visualize 2045

## Environmental Justice Analysis

Transportation Planner

Transportation Planning Board  
January 16, 2018

Item #9



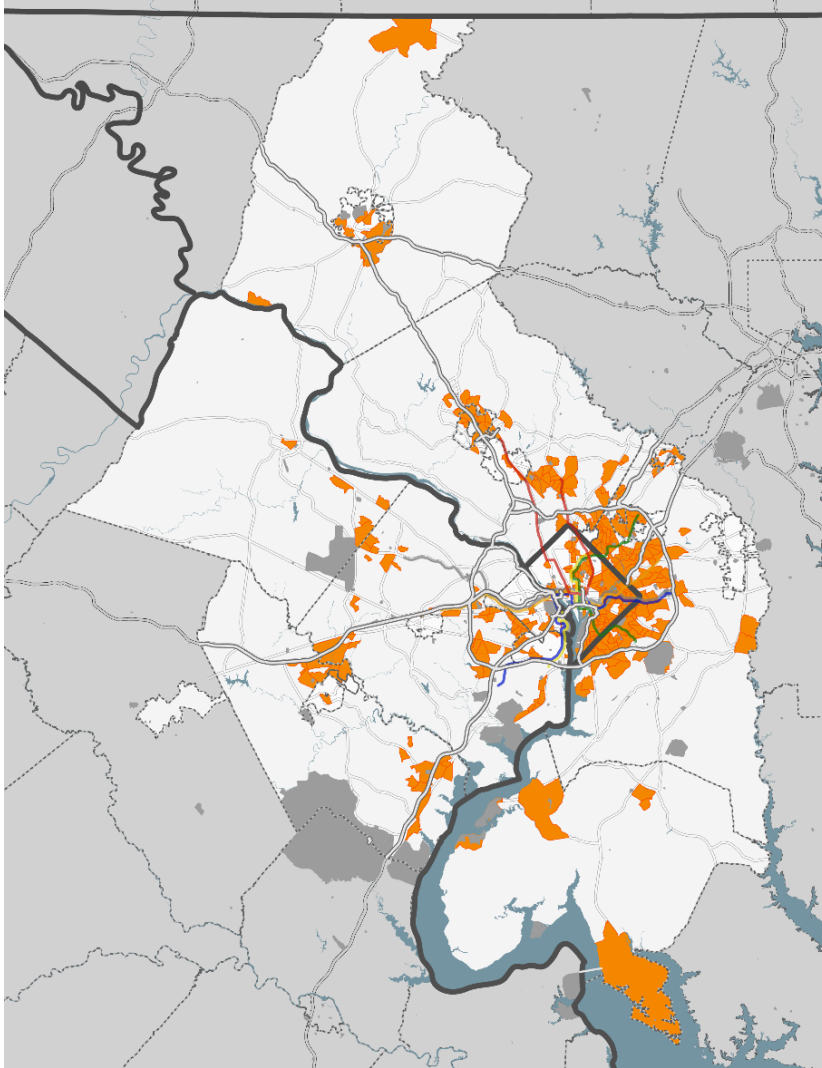
# Purpose

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Share the results of the Environmental Justice (EJ) analysis to determine if the planned projects of Visualize 2045 poses a disproportionately high and adverse impact on low income and minority populations of the region



# Equity Emphasis Areas



U.S. Census Tracts with high concentration of Low-Income residents, Minority residents, or both.

**Method Approved: March 2017**  
**Map Updated: June 2018**



# EJ Analysis Results: Overview

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## Determination

Planned projects of Visualize 2045 would not have a disproportionate and adverse impact on low-income and minority populations

On ten performance measures:

- ✓ **Seven measures:** Similar Benefits for EEs and the Rest of the Region
- ✓ **One measure:** Disproportionate Benefits for EEs
- **Two measures:** Similar Burdens for EEs and the Rest of the Region



# Environmental Justice Analysis Measures

## Accessibility Measures

1. Average number of jobs accessible by auto
2. Average number of jobs accessible by all transit
3. Average number of jobs accessible by High Capacity Transit
4. Average number of jobs accessible by bus
5. Population with walkable access to High Capacity Transit
6. Population with walkable access to bus service

## Mobility Measures

7. Average commute time by auto
8. Average commute time by transit
9. Average travel time to closest hospital by auto
10. Average travel time to closest hospital by transit



# Environmental Justice Test

## Determination Test

Impact would be considered disproportionately high and adverse when:

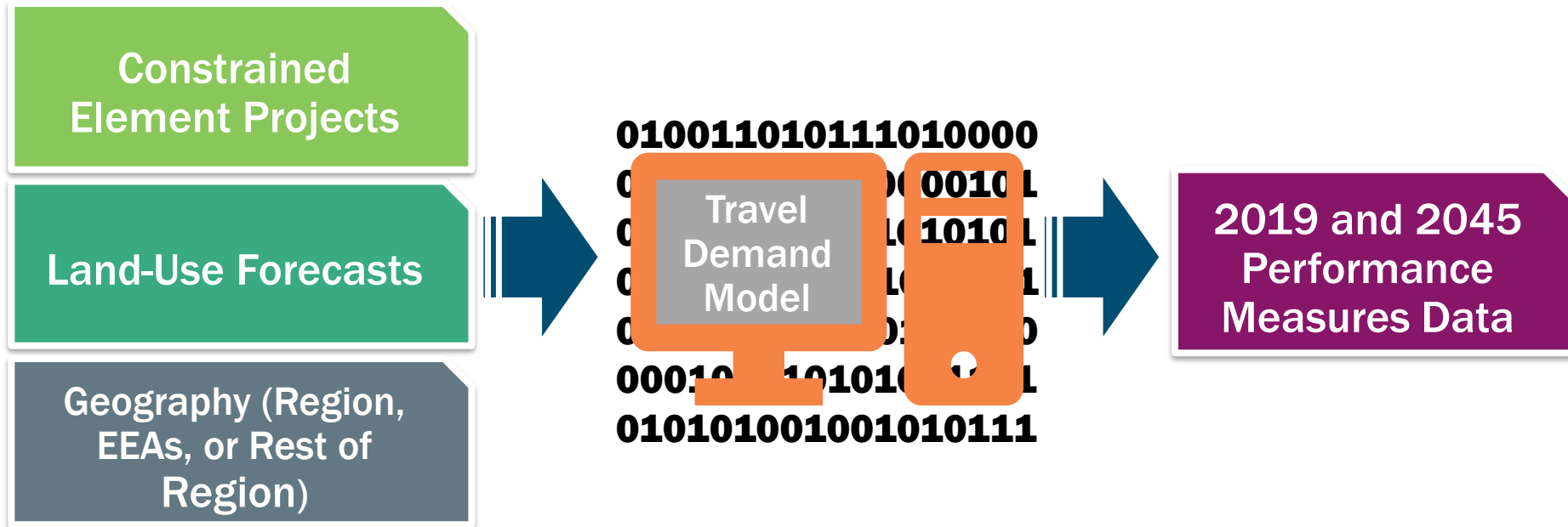
- 1) The burden is predominately borne by EEAs and
- 2) Appreciably more severe or greater in magnitude in EEAs than the Rest of the Region

## Bottom line:

EEAs must experience a **Burden** while the Rest of the Region **Benefits**



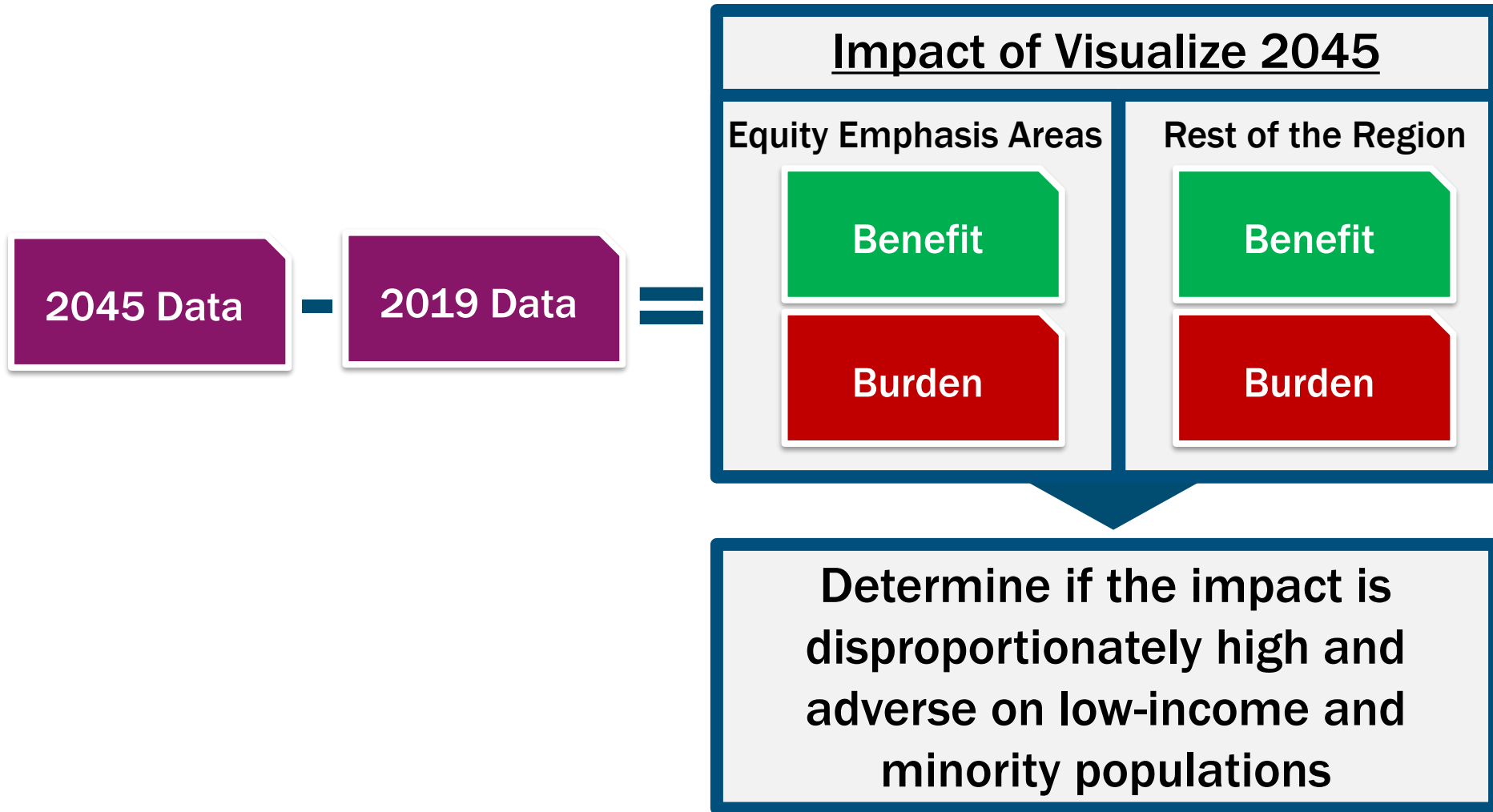
# Environmental Justice Analysis Process



- Round 9.1 Cooperative Forecasts of Population, Households, & Employment
- Version 2.3.75 Travel Demand Model
- Analysis of TPB Planning Area during AM Peak Period

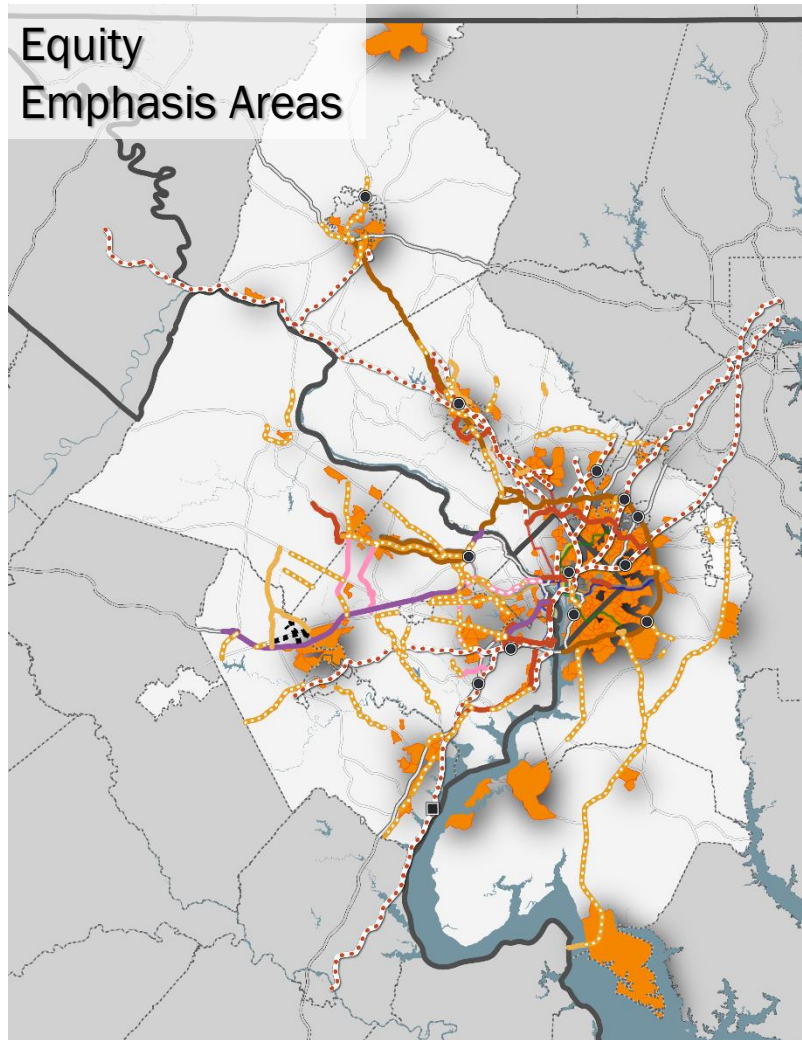


# Environmental Justice Analysis





# Recap of EJ Analysis Process



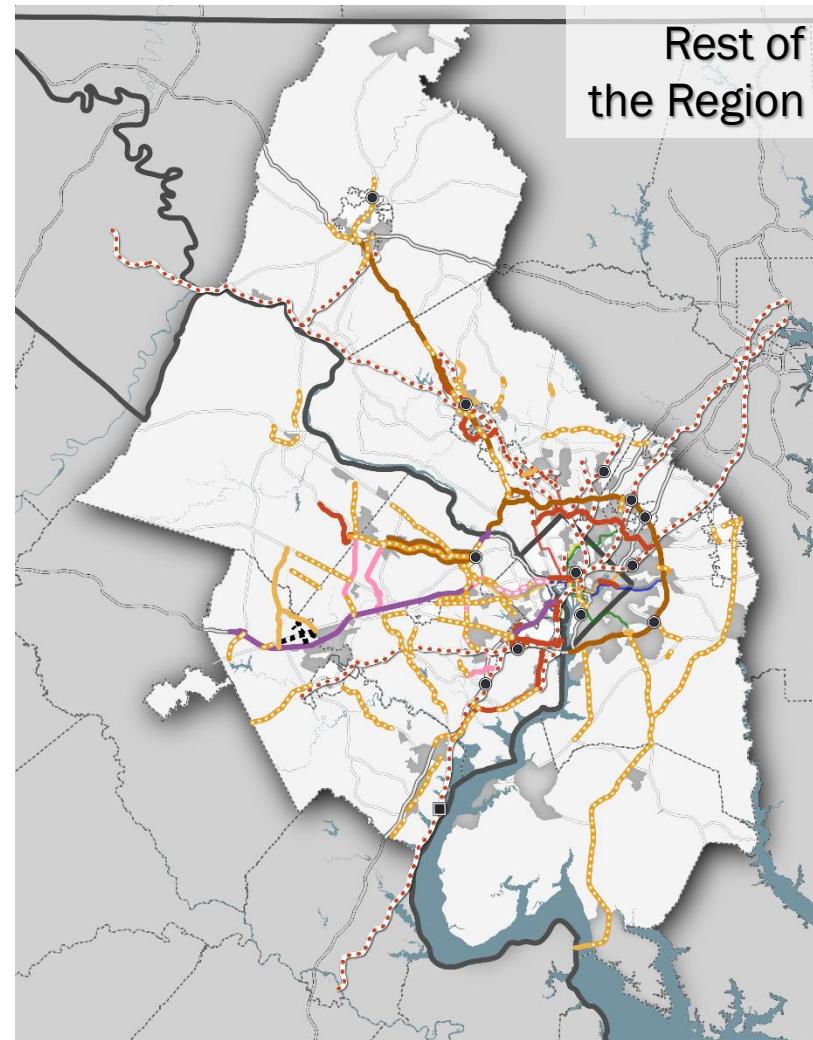
Today



2045  
No-Build



2045  
Build



# EJ Analysis Results: Similar Benefits

Similar **Benefits** for EEAs and the Rest of the Region

		Impact of Visualize 2045	
Measure		Absolute	Percent
Avg. # of jobs accessible by auto	EEAs	+16	+1.6%
	Rest of the Region	+54	+6.8%
Avg. # of jobs accessible by transit	EEAs	+198	+36.7%
	Rest of the Region	+126	+42.0%
Avg. # of jobs accessible by High Capacity Transit	EEAs	+138	+70.2%
	Rest of the Region	+78	+62.9%
Avg. # of jobs accessible by bus	EEAs	+46	+46.3%
	Rest of the Region	+34	+49.4%

Note: Figures in thousands



# EJ Analysis Results: Similar Benefits, cont.

Similar **Benefits** for EEAs and the Rest of the Region

		Impact of Visualize 2045	
Measure		Absolute	Percent
Pop. with walkable access to High Capacity Transit	EEAs	+471	+72.8%
	Rest of the Region	+540	+55.2%
Pop. with walkable access to bus service	EEAs	+380	+25.5%
	Rest of the Region	+594	+22.7%
Avg. travel time to closest hospital	EEAs	-0.3	-0.9%
	Rest of the Region	-0.1	-0.2%

Note: Figures in thousands



# EJ Analysis Results: Benefits and Burdens

Disproportionate **Benefits** for EEAs

		Impact of Visualize 2045	
Measure		Absolute	Percent
Avg. commute time by transit	EEAs	-1.2	-2.2%
	Rest of the Region	+1.0	+1.9%

Similar **Burdens** for EEAs and the Rest of the Region

Avg. commute time by auto	EEAs	+4.7	+11.1%
	Rest of the Region	+5.1	+10.8%
Avg. travel time to closest hospital by auto	EEAs	+1.4	+9.2%
	Rest of the Region	+1.7	+10.1%

Note: Figures in minutes



# Qualifiers for Findings

- Regional-level analysis whose findings are not applicable to particular EEA(s) or attributable to specific project, corridor, or sub-area
- Current location of EEAs remain unchanged in 2045
- Location and number of Hospitals remain unchanged in 2045
- This analysis does not consider more qualitative aspects like:
  1. Safety and comfort
  2. Reliability
  3. Availability of information and ease of use
  4. Language barriers
- Analysis does not examine the availability or quality of off-peak service



# Policy Observations

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- ✓ Visualize 2045 complies with and passes federal EJ determination
- ✓ Parity between EEAs and Rest of the Region on most performance measures
- Opportunities exists for improved outcomes:
  1. EEA's advantage of access to more jobs by auto compared to Rest of Region is forecast to narrow
  2. No. of jobs accessible in EEAs by Bus only travel is half that accessible by High Capacity Transit
  3. Walk access to High Capacity Transit in EEAs and Rest of the Region is half that to Bus



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# Policy Observations

Measure		2019	2045 Plan-Build	Impact of Visualize 2045	
				Absolute	Percent
1. Average number of jobs accessible by auto	EEAs	1,029	1,045	+16	+1.6%
	Rest of the Region	799	853	+54	+6.8%
2. Average number of jobs accessible by transit	EEAs	540	738	+198	+36.7%
	Rest of the Region	302	428	+126	+42.0%
3. Average number of jobs accessible by High Capacity Transit	EEAs	197	335	+138	+70.2%
	Rest of the Region	125	203	+78	+62.9%
4. Average number of jobs accessible by bus	EEAs	99	145	+46	+46.3%
	Rest of the Region	70	104	+34	+49.4%
5. Population with walkable access to High Capacity Transit	EEAs	648	1,119	+471	+72.8%
	Rest of the Region	977	1,517	+540	+55.2%
6. Population with walkable access to bus service	EEAs	1,492	1,872	+380	+25.5%
	Rest of the Region	2,617	3,211	+594	+22.7%

Note: Figures in thousands

