

# FY 2021-2024 Transportation Improvement Program (TIP)

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## 2020 Amendment to the Visualize 2045 Long Range Transportation Plan and the Air Quality Conformity Analysis

Andrew Austin  
TPB Transportation Planner

Jane Posey  
TPB Transportation Engineer

TPB Technical Committee  
February 7, 2020



# The Year of the TIP

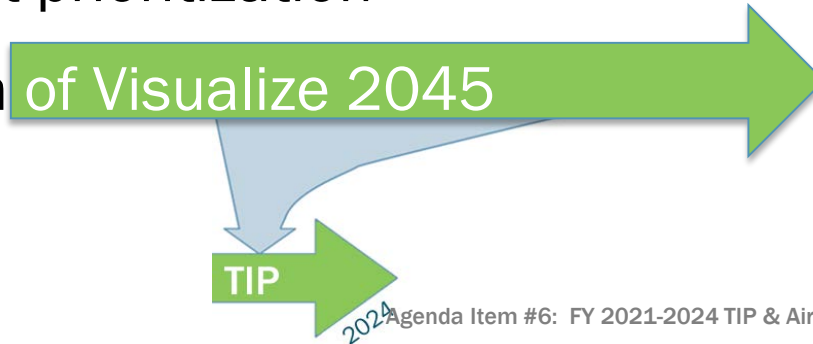
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- The TPB produces a new TIP every two years
- Every new TIP requires a conformity analysis
- Issued a call for minor updates to Visualize 2045 to keep the plan as current as possible
- Revisions to the plan requires the TPB to self-certify its planning process
- The Harmonic Convergence of 2020



# What is the TIP?

- A key for states to access federal funding for transportation infrastructure in metropolitan areas
- Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) provide formula funding based on population, population density, geography, and many other factors
- Requires the state DOTs to demonstrate fiscal constraint
- Highlight project prioritization
- Implementation of Visualize 2045



# Federal Requirements of the TIP

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- Must cover at least a **4-year period** and be updated every 4 years
- Funding in the first two fiscal years must be “available and committed”
- Project funding in the TIP should be based on a investment plan to attain a set of federally approved performance targets



# Input Sources for the FY 2021-2024 TIP

Those investment plans are found in the states' and the District's State Transportation Improvement Programs or STIPs and their's and WMATA's respective 6-year budgets

<b>DDOT</b>	<ul style="list-style-type: none"><li>• Concurrently developing their FY 21-24 STIP</li></ul>
<b>MDOT</b>	<ul style="list-style-type: none"><li>• Inputs held over from FY 19-24 Consolidated Transportation Plan and the FY 19-24 TIP</li><li>• Development of their FY 21-24 STIP expected later this year</li></ul>
<b>VDOT</b>	<ul style="list-style-type: none"><li>• Inputs from their draft FY 21-24 STIP to be finalized and approved this fall</li></ul>
<b>WMATA</b>	<ul style="list-style-type: none"><li>• Inputs from their DRAFT FY 21-26 Capital Improvement Program – currently out for review.</li></ul>



# Development Schedule for the TIP

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- May 2019:** Technical Inputs Solicitation issued for the FY 2021-2024 TIP and the 2020 update to the Visualize 2045 long-range transportation plan
- July 2019:** TPB approves projects submitted for air quality conformity analysis of the TIP and plan update
- Dec. 20, 2019:** Programming data for TIP projects due
- Jan. 31, 2020:** 30-day Public comment period (concludes March 1)
- March 2020** TPB approves the FY 2021-2024 TIP, 2020 updates to Visualize 2045 and air quality conformity analysis.



# STIPs and the TPB's TIP

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Following TPB approval, the District of Columbia, Maryland, and Virginia incorporate their respective portions of the TPB's TIP into their own Statewide Transportation Improvement Programs (STIPs)

- Opportunities for public involvement at statewide level
- STIPs are submitted to Federal Highway Administration and Federal Transit Administration for approval
  - Must remain consistent with TPB's TIP

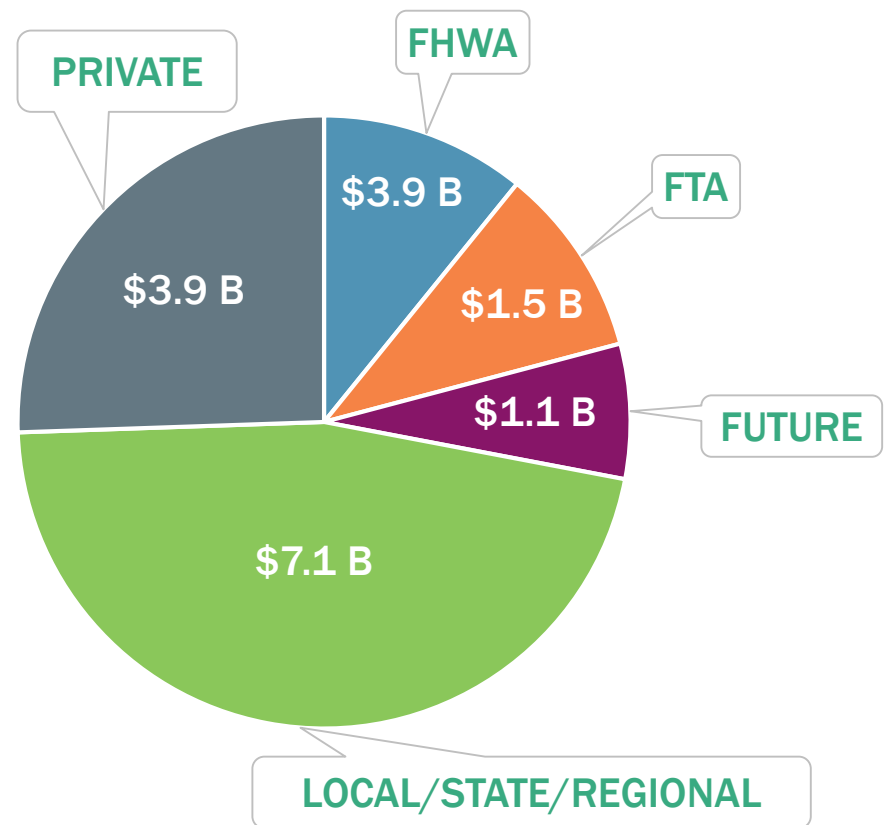


# Financial Plan for the FY 2021-2024 TIP

## Four Year Funding Totals

**\$15.3 Billion**

- \$1.6 B – Federal Highway Administration (Title I)
- \$1.5 B – Federal Transit Administration (Title III)
- \$1.1 B – Future Federal (Advanced Const., GARVEE)
- \$7.1 B – State and Local
  - \$5.19 to WMATA
- \$3.9 B – Private, P3





# Additional Analysis of the TIP

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- Performance-Based Planning and Programming (PBPP)
  - Highway Safety Performance
  - Pavement and Bridge Condition Performance
  - Highway System Performance
  - Congestion Mitigation and Air Quality Program Performance
  - Transit Asset Management Performance
- Complete Streets Documentation
- Bicycle and Pedestrian Accommodations



# Air Quality Conformity: Findings

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- Ozone Season VOC within Mobile Budget
- Ozone Season NOx within Mobile Budget



# Minor Update to the Plan

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- No Financial Analysis
- No Performance Analysis



# Pollutants

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- Volatile Organic Compounds (VOC)
- Nitrogen Oxides (NO<sub>x</sub>)
  
- Greenhouse Gases

NOTE: Greenhouse gases are analyzed to track regional trends. They are not officially part of the conformity analysis.



# Technical Approach

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## Analysis Years:

2019, 2021, 2025, 2030, 2040, 2045



# Technical Approach

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## Key Technical Inputs and Tools:

- Round 9.1a Cooperative Forecasts – *NEW*
- “Regionally Significant” Transportation Projects - *NEW*
- Version 2.3.78 Travel Demand Model
- 2016 Vehicle Registration Data (VIN)
- EPA’s MOVES2014b Mobile Emissions Model



# Major Project Changes- District of Columbia

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## Bicycle Lanes, Districtwide

- 9<sup>th</sup> St. NW from Florida Ave. to Constitution Ave.
- Dalecarlia Pkwy. NW from Loughboro Rd. to Westmoreland Circle
- Florida Ave. NE from 2<sup>nd</sup> St. to 14<sup>th</sup> St.
- K St. NE from 1<sup>st</sup> St. to 8<sup>th</sup> St.
- M St. SE from Half St. to 11<sup>th</sup> St.
- Mount Olivet Rd. NE from Brentwood Pkwy. to West Virginia Ave.
- Nebraska Ave. NW from New Mexico Ave. to Loughboro Rd.
- Pennsylvania Ave. SE from 2<sup>nd</sup> St. to 17<sup>th</sup> St.



# Major Project Changes- District of Columbia (Continued)

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## Peak Period Bus-Only Lanes

- H St. NW from 14th St. to 19th St.
- I St. NW from 13th St. to Pennsylvania Ave.

## K ST. NW Transitway

- Construct two segments from 9th St. to 12th St. and from 12th St. to 21st St.





# Major Project Changes- Virginia

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- Modify I-495 Capital Beltway Express Lanes
  - Construct 3 additional ramps near Dulles Toll Road interchange
  - Continuation of Peak Period NB Shoulder Lane
- Construct reversible ramp from I-95 at Opitz Dr.
- Construct VA 28 Manassas Bypass from VA 234 Sudley Rd. to VA 28 Centreville Rd.



# Major Project Changes- Virginia (Continued)

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- Widen VA 55 from US 29 to the Town of Haymarket
- Widen VA 123 from VA 267 Dulles Access Rd. to VA 634 Great Falls St.
- Widen VA 286 Fairfax County Parkway from US 29 Lee Hwy. to Rolling Rd.
- Construct West End Transitway Phase II (Southern Segment) from Van Dorn Street Metro to Landmark Mall



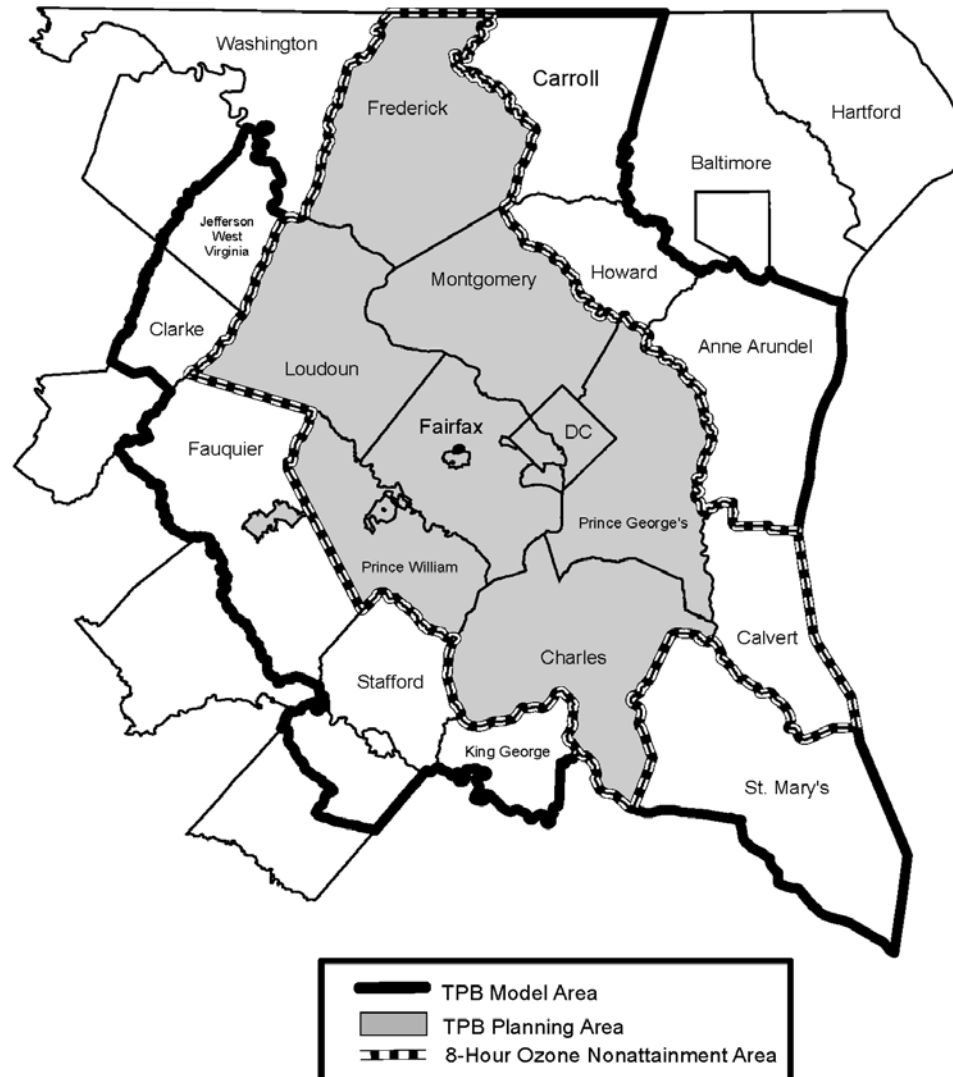
# Round 9.1a Cooperative Forecasts

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- Updates to BMC & FAMPO Planning Areas Only
- Adjustments to Employment Factors
  - Provide Consistent Definition For All Jurisdictions
  - Based on 2015 Bureau of Labor Statistics Data, Census Bureau Data, and Military Personnel Data
- Updated External, Miscellaneous, and Airport Trip Forecasts

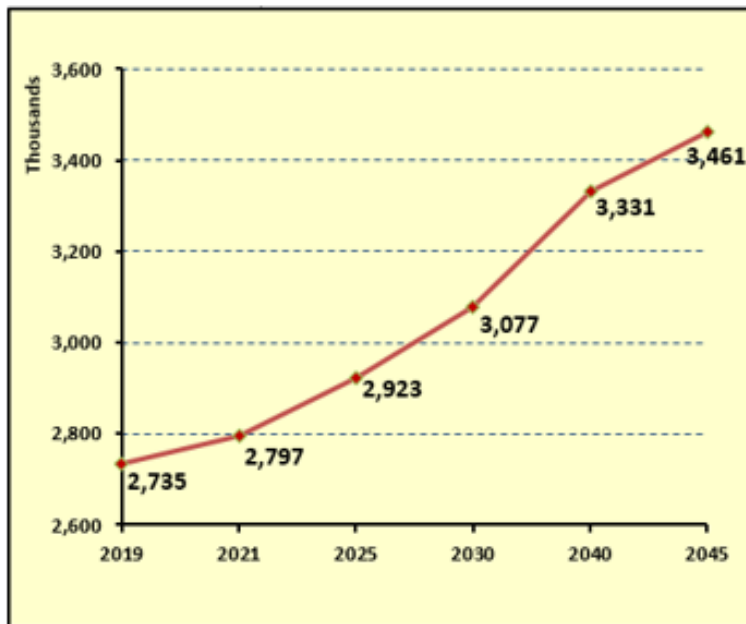


# TPB Planning Areas



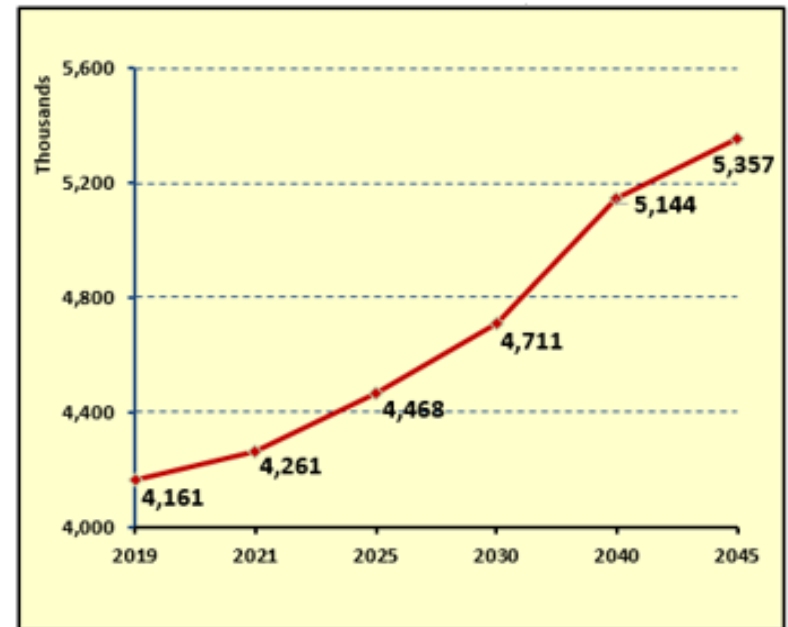
# Round 9.1a Cooperative Forecasts

Households  
(in thousands)



NOTE: Values are for the modeled area

Employment\*  
(in thousands)



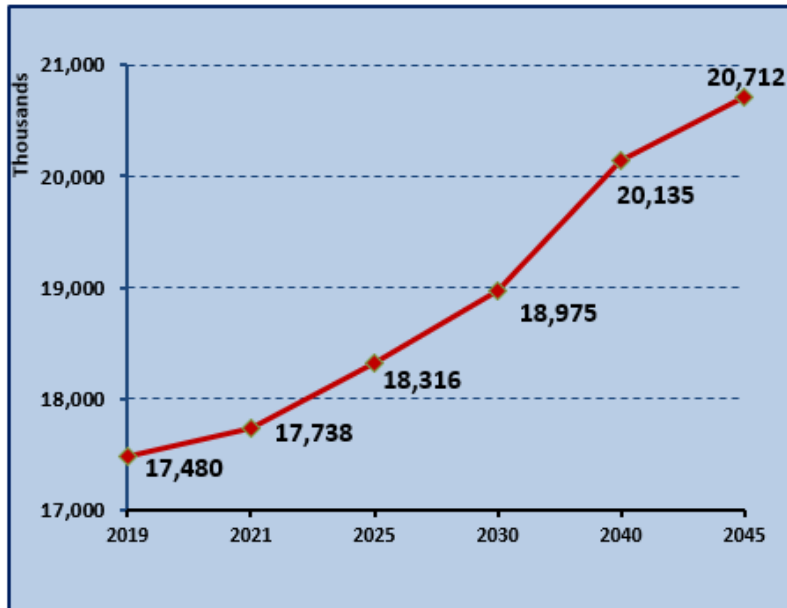
\*Includes employment definition adjustment



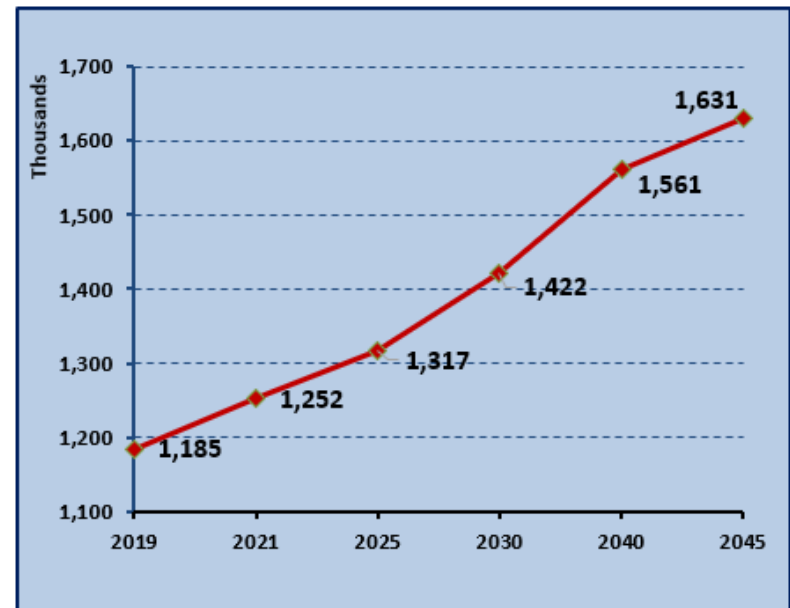
# Travel Demand Summaries

## Modeled Area Trips

**Vehicle Trips**  
(in thousands)

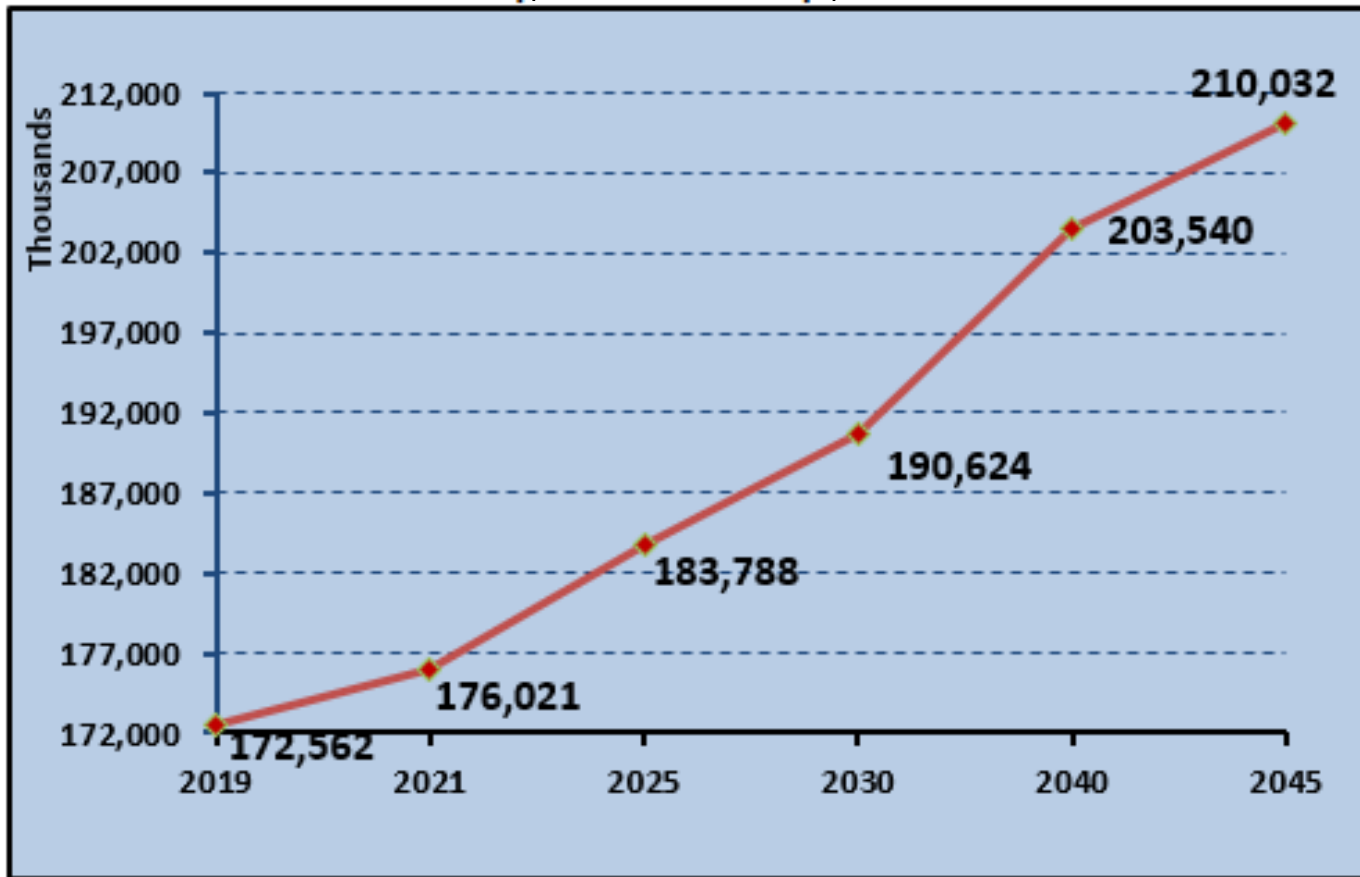


**Transit Trips**  
(in thousands)



# Travel Demand Summary

Modeled Area Vehicle Miles Traveled  
(in thousands)



# Mobile Budgets

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From the August 6, 2018 Federal Register – Notice of Adequacy  
Finding for the Mobile Budgets in the 2008 Ozone Maintenance SIP:

“The MVEBs ...that include a transportation buffer will be used only as needed in situations where the conformity analysis must be based on *different data, models, or planning assumptions, including, but not limited to, updates to demographic, land use, or project-related assumptions,* than were used to create the first set of MVEBs in the maintenance plan”





# Mobile Budgets vs. Conformity

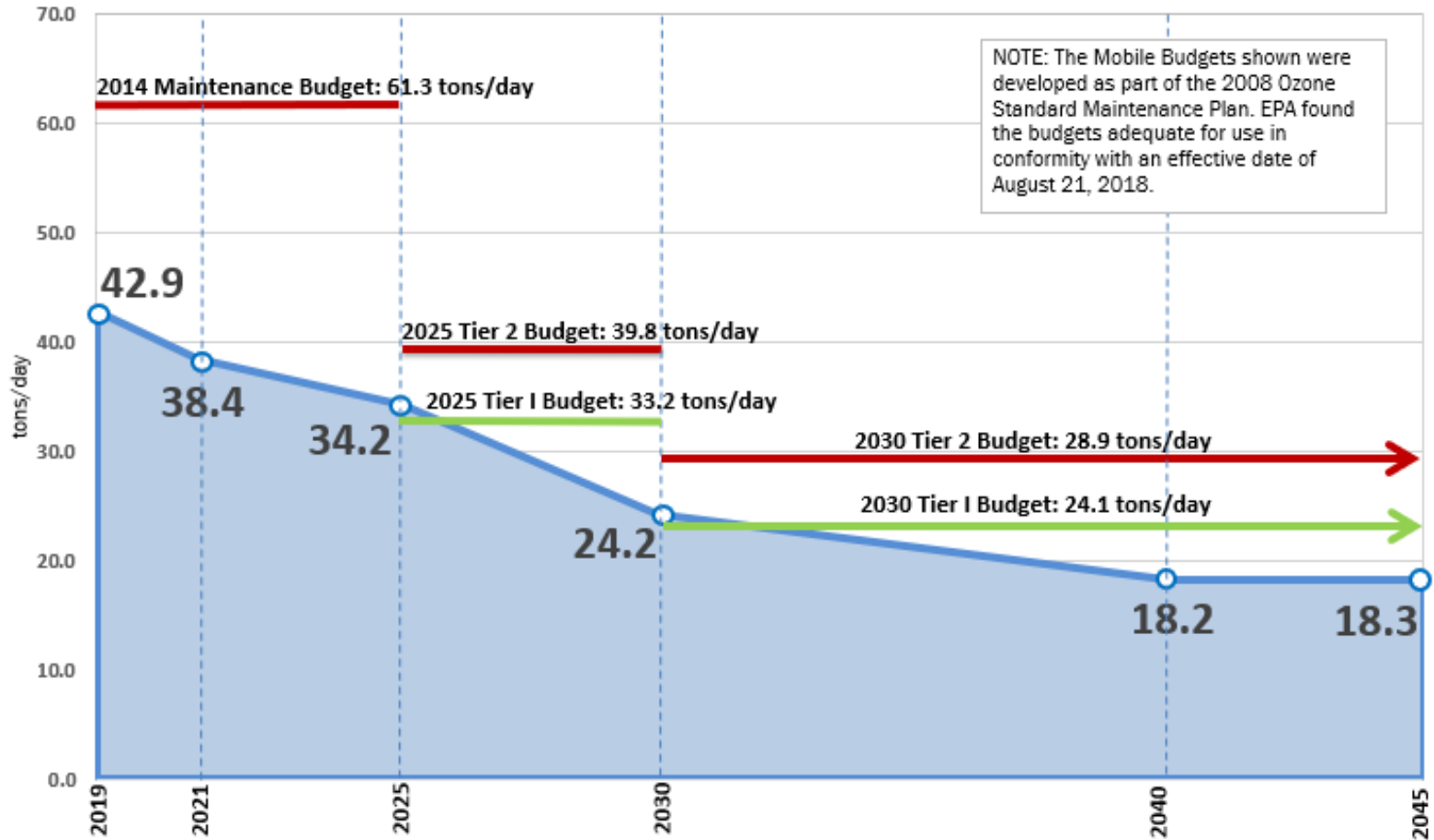
	Maintenance Plan Mobile Budgets	2020 Amendment to Visualize 2045 Conformity Emissions
Cooperative Forecasts	Round 9.0	Round 9.1a
Vehicle Fleet	2014 VIN	2016 VIN
Travel Demand Model	Version 2.3.66	Version 2.3.78
Project Inputs	2016 CLRP	2020 Amendment to Visualize 2045
Metrorail Constraint	yes	no

NOTE: A sensitivity analysis conducted in 2018 showed that the change to the vehicle fleet had the most significant impact on changes to emissions.



# Mobile Source Emissions

## Ozone Season VOC

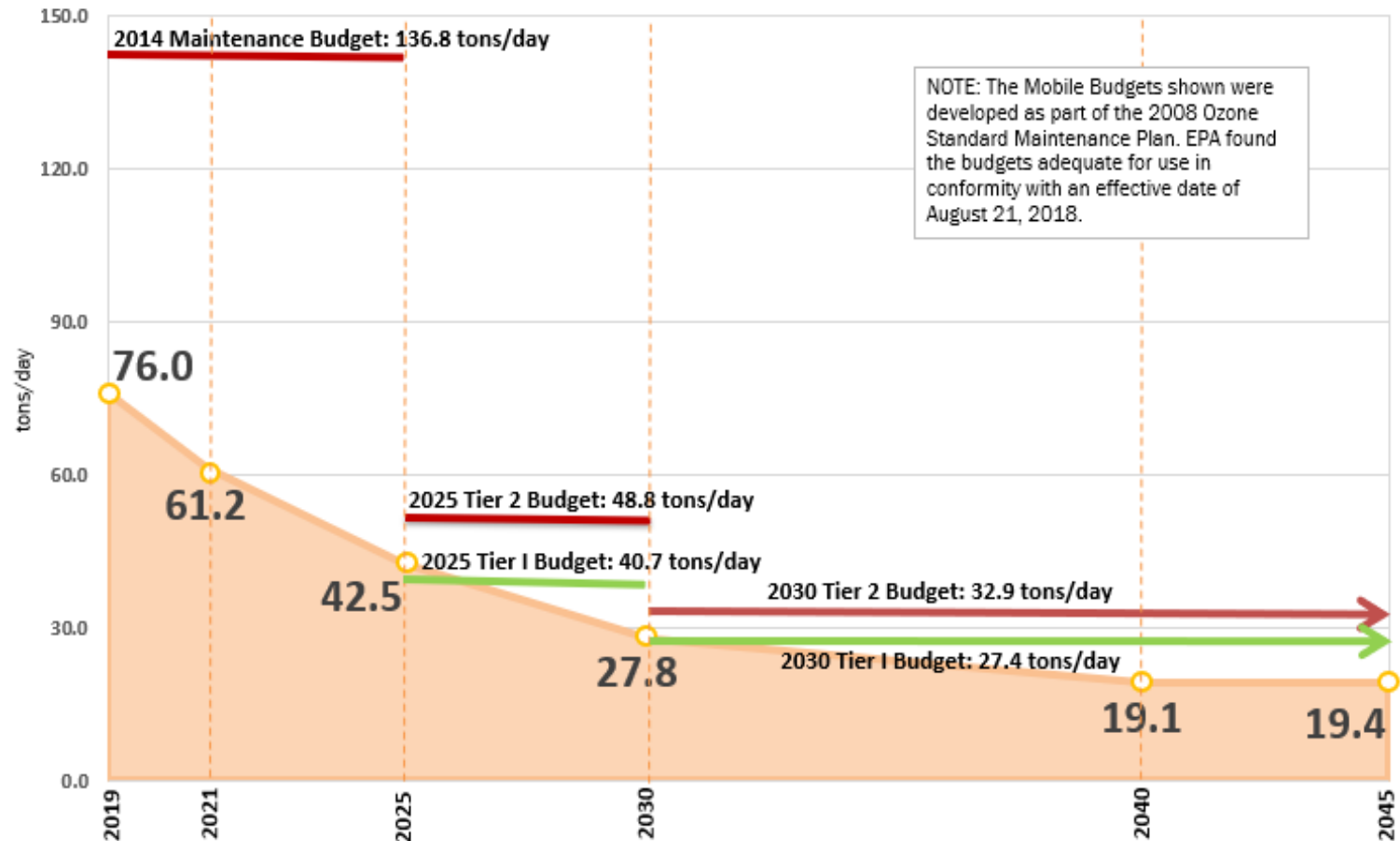


TCMs and TERMS are not included in totals.



# Mobile Source Emissions

## Ozone Season NOx

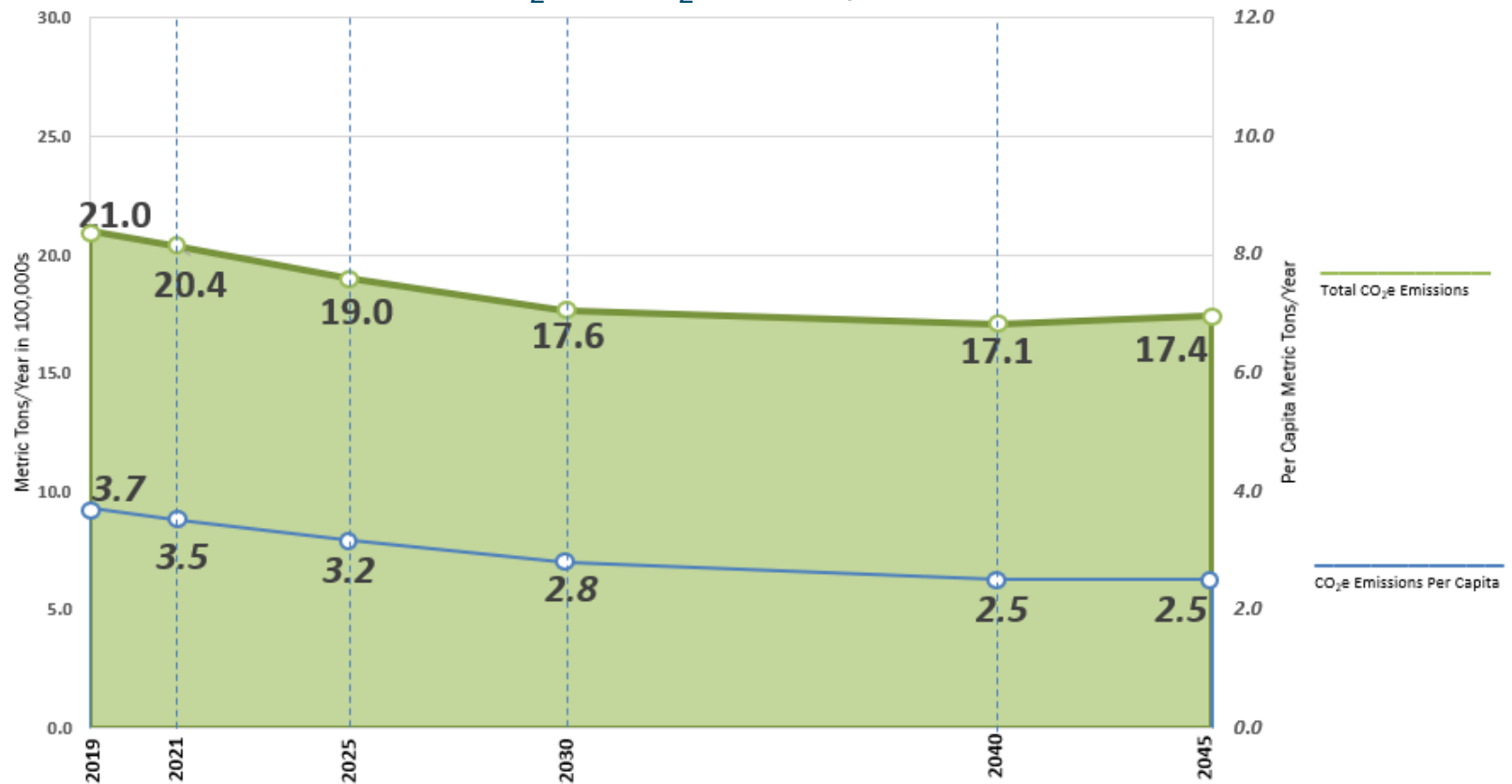


TCMs and TERMS are not included in totals.



# Greenhouse Gases

2020 Amendment to Visualize 2045  
Greenhouse Gas  
Mobile Source Emissions  
CO<sub>2</sub> and CO<sub>2</sub> e Per Capita



# Project Updates

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- Long Bridge
- Franconia-Ococoquan 3<sup>rd</sup> Track
- Alexandria 4<sup>th</sup> Track



# Next Steps

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- Public Comment Jan 31 – March 1
- TPB Briefing: Conformity Findings Feb 19
- MWAQC Briefing: Conformity Findings Feb 28
- TPB Action: March 18
  - ✓ Conformity Determination
  - ✓ 2020 Amendment to Visualize 2045
  - ✓ FY 2021-2024 TIP
  - ✓ Statement of Certification



## Jane Posey

TPB Transportation Engineer

(202) 962-3331

[jposey@mwkog.org](mailto:jposey@mwkog.org)

## Andrew Austin

TPB Transportation Planner

(202) 962-3353

[aaustin@mwkog.org](mailto:aaustin@mwkog.org)

[mwkog.org/tpb](http://mwkog.org/tpb)

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Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region  
Transportation Planning Board