

# Air Quality Conformity Analysis

FY 2021-2024 Transportation Improvement Program & 2020 Amendment to the Visualize 2045 Long Range Transportation Plan

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MWAQC  
February 26, 2020

Agenda Item #5



## Pollutants

- ❖ Volatile Organic Compounds (VOC)
- ❖ Nitrogen Oxides (NOx)
  
- ❖ 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

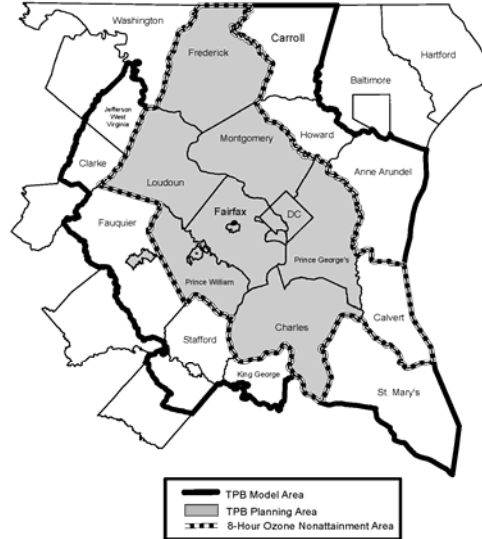
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# Key Technical Inputs and Tools:

- ❖ 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

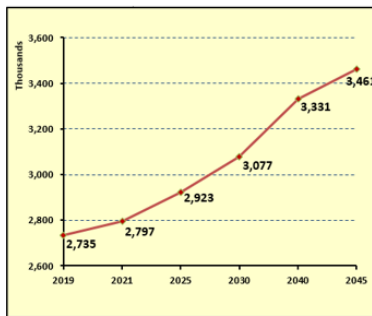


# TPB Planning Areas



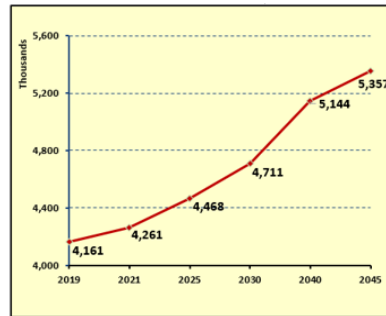
# Round 9.1a Cooperative Forecasts

Households  
(in thousands)



NOTE: Values are for the modeled area

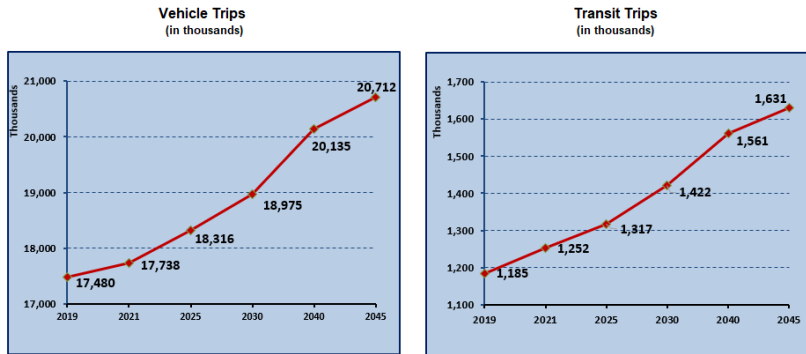
Employment\*  
(in thousands)



\*Includes employment definition adjustment

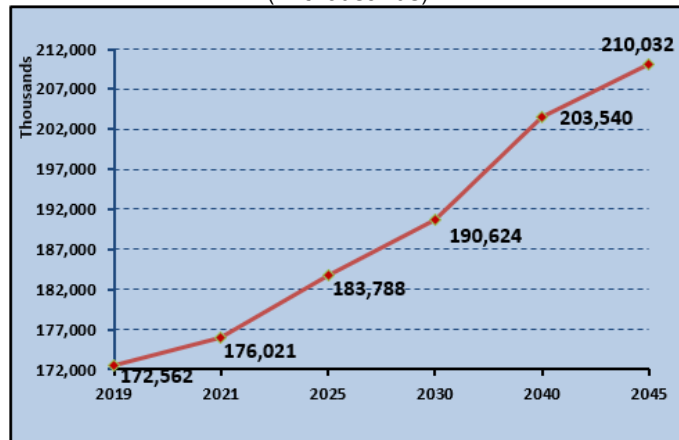
# Travel Demand Summaries

## Modeled Area Trips



# Travel Demand Summary

## Modeled Area Vehicle Miles Traveled (in thousands)



## 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 Budgets

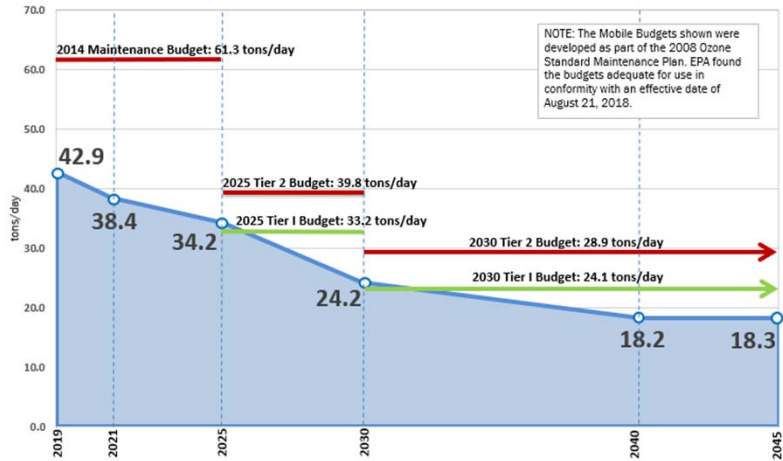
From the August 6, 2018 Federal Register – Notice of Adequacy Finding for the Mobile Budgets in the 2008 Ozone Maintenance SIP:

“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 Source Emissions

## Ozone Season VOC



National Capital Region  
Transportation Planning Board

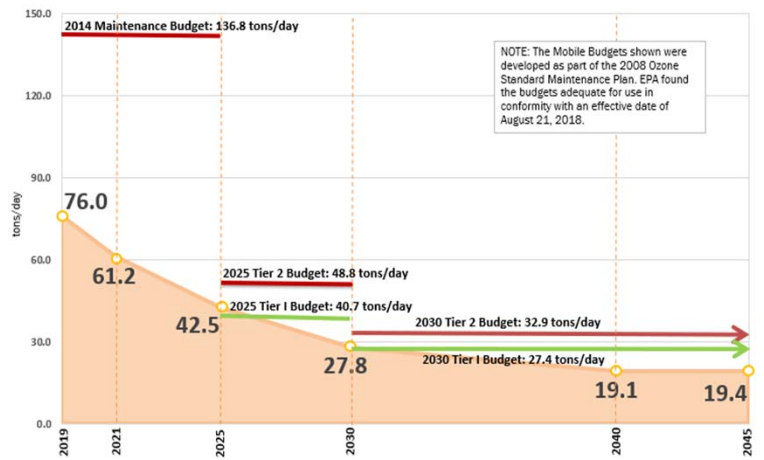
TCMs and TERMS are not included in totals.

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# Mobile Source Emissions

## Ozone Season NOx



National Capital Region  
Transportation Planning Board

TCMs and TERMS are not included in totals.

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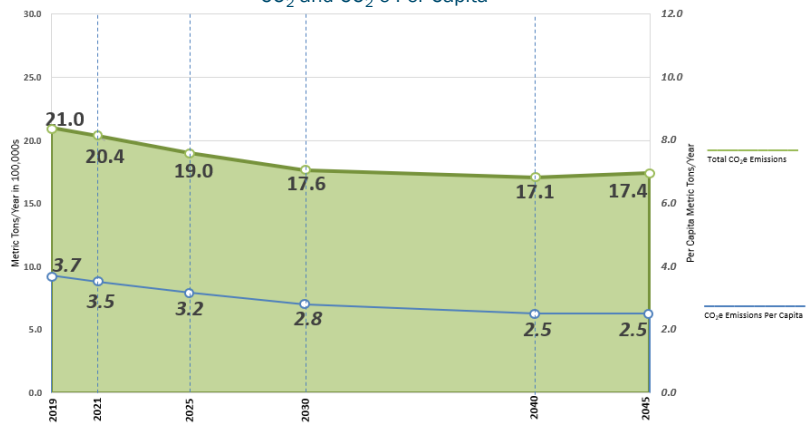
## Air Quality Conformity: Findings

- ✓ Ozone Season VOC within Mobile Budget
- ✓ Ozone Season NO<sub>x</sub> within Mobile Budget



## Greenhouse Gases

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



## Next Steps

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- ❖ Public Comment Jan 31 – Mar 1
- ❖ TPB Briefing: Conformity Findings Feb 19
- ❖ MWAQC Briefing: Conformity Findings Feb 26
- ❖ TPB Action: Conformity Analysis Mar 18  
FY 2021-2024 TIP  
2020 Amendment to Visualize 2045



## CONTACTS

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