

# Air Quality Conformity Analysis

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

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Travel Forecasting Subcommittee



# 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

(2017 will also be available for request, but was not officially part of the conformity analysis)



# 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

\*Version 2.3.78 gives the exact same results as Version 2.3.75



# 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.

## ❖ 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

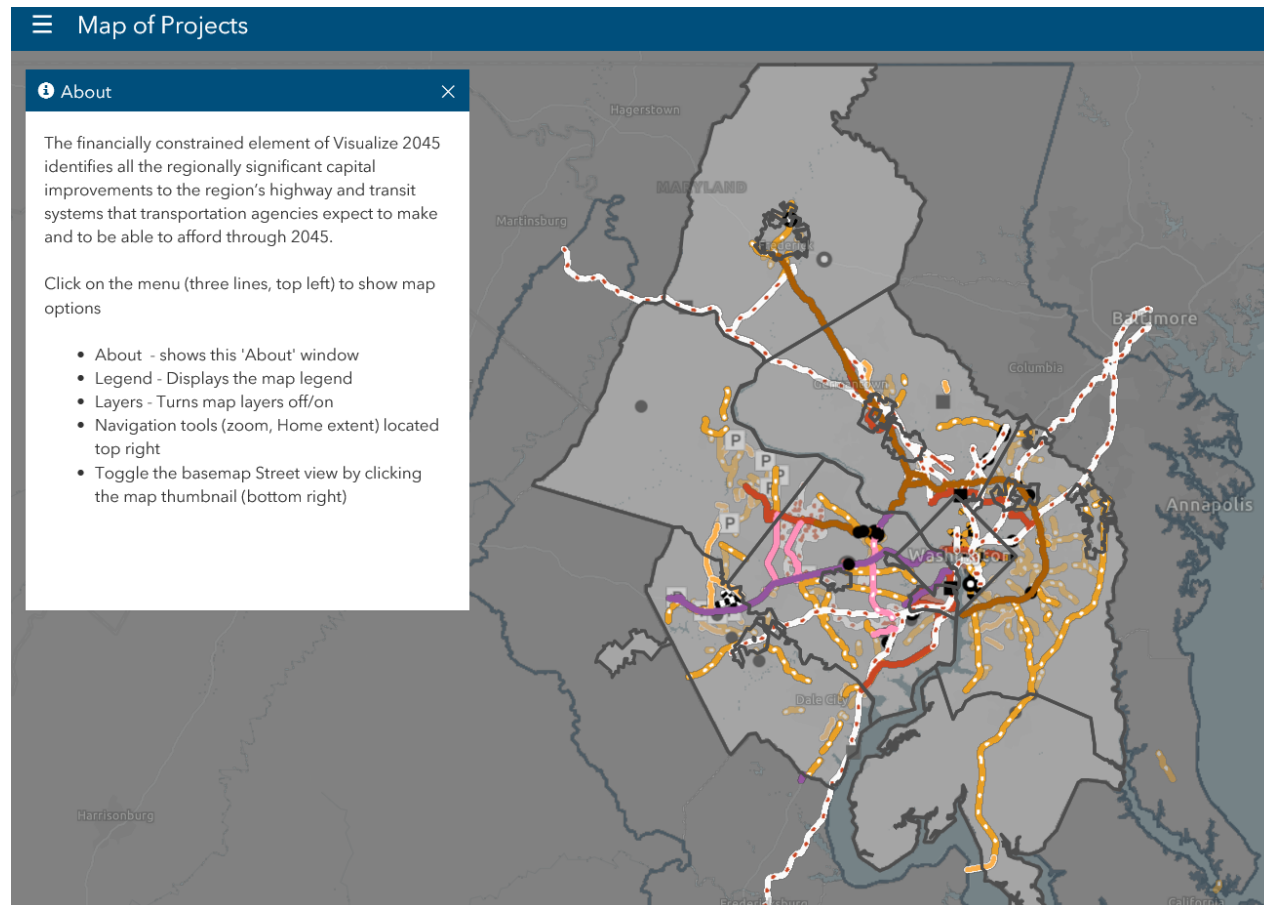
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- ❖ Modify I-495 Capital Beltway Express Lanes
  - Construct 3 additional ramps near Dulles Toll Road interchange
  - Continuation of Peak Period NB Shoulder Lane
  
- ❖ Construct reversible ramp from I-95 at Opitz Dr.
  
- ❖ Construct VA 28 Manassas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



# Online Projects Map

[https://www.mwcog.org/maps/map-listing/visualize-2045-2020\\_amendment\\_projects\\_map/](https://www.mwcog.org/maps/map-listing/visualize-2045-2020_amendment_projects_map/)



# Round 9.1a Cooperative Forecasts

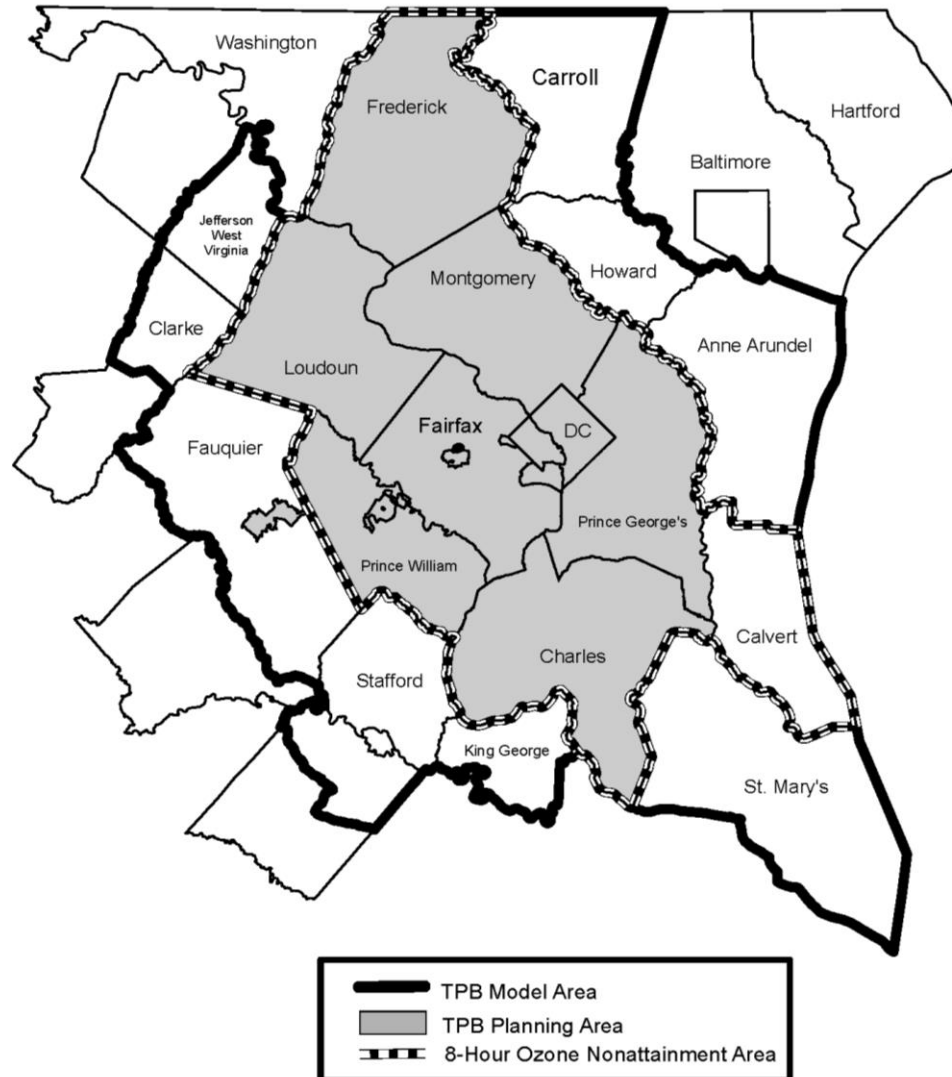
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- ❖ Updates to BMC & FAMPO Planning Areas Only
- ❖ Adjustments to Employment Factors
  - Provide Consistent Definition For All Jurisdictions
  - Based on 2015 Bureau of Labor Statistics Data, Census Bureau Data, and Department of Defense Data
- ❖ Updated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



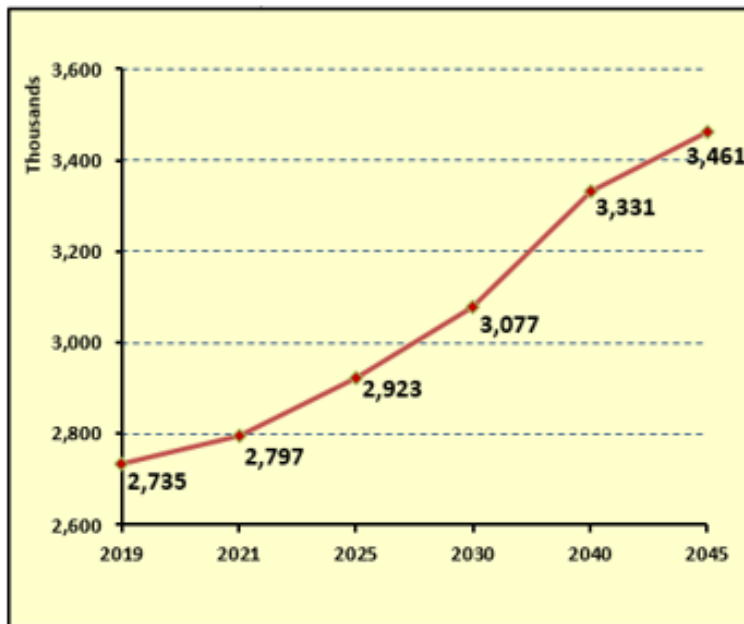


# TPB Planning Areas



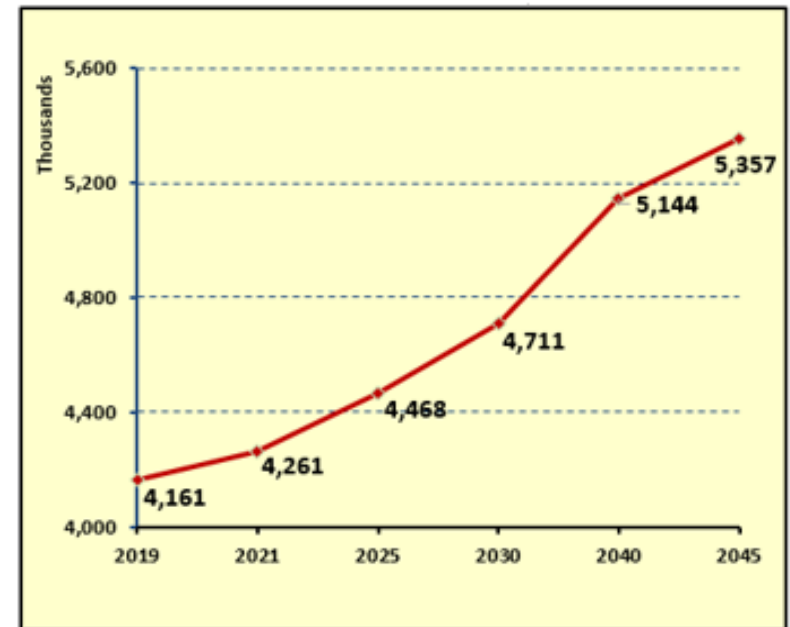
# Round 9.1a Cooperative Forecasts

Households  
(in thousands)



NOTE: Values are for the modeled area

Employment\*  
(in thousands)



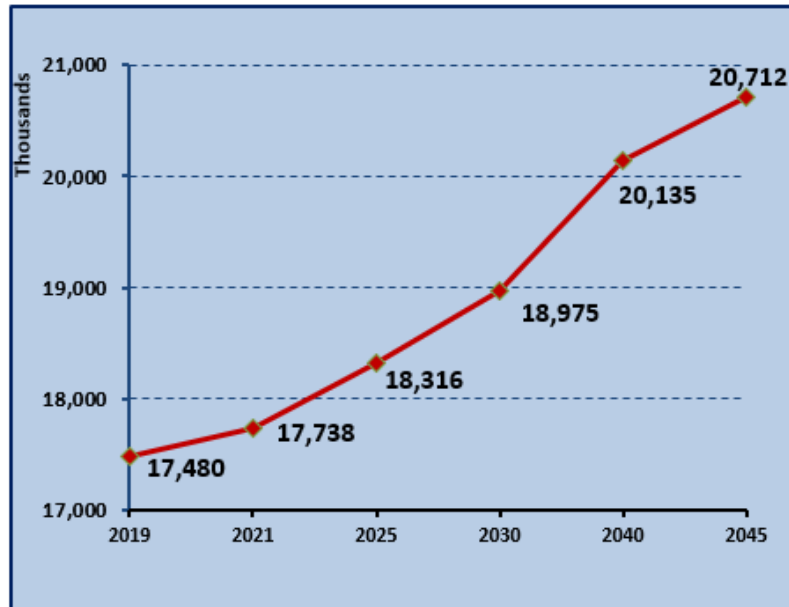
\*Includes employment definition adjustment



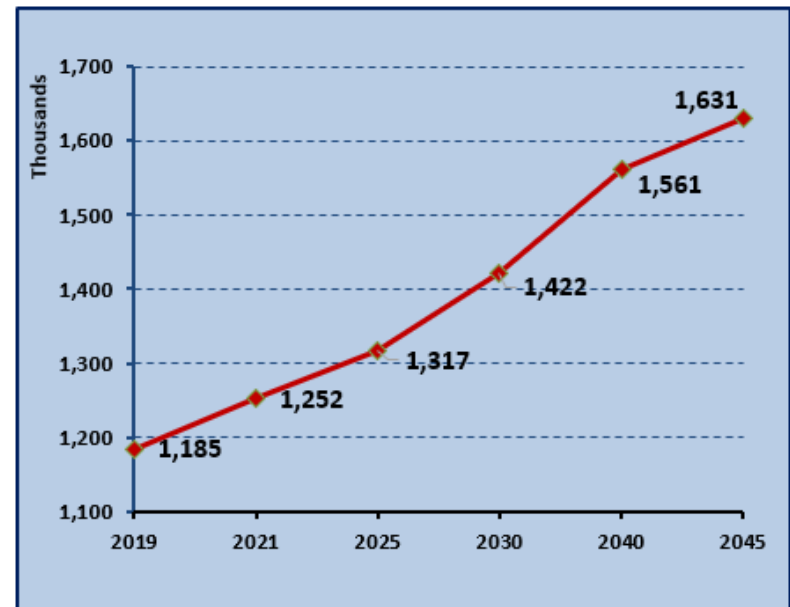
# Travel Demand Summaries

## Modeled Area Trips

**Vehicle Trips**  
(in thousands)

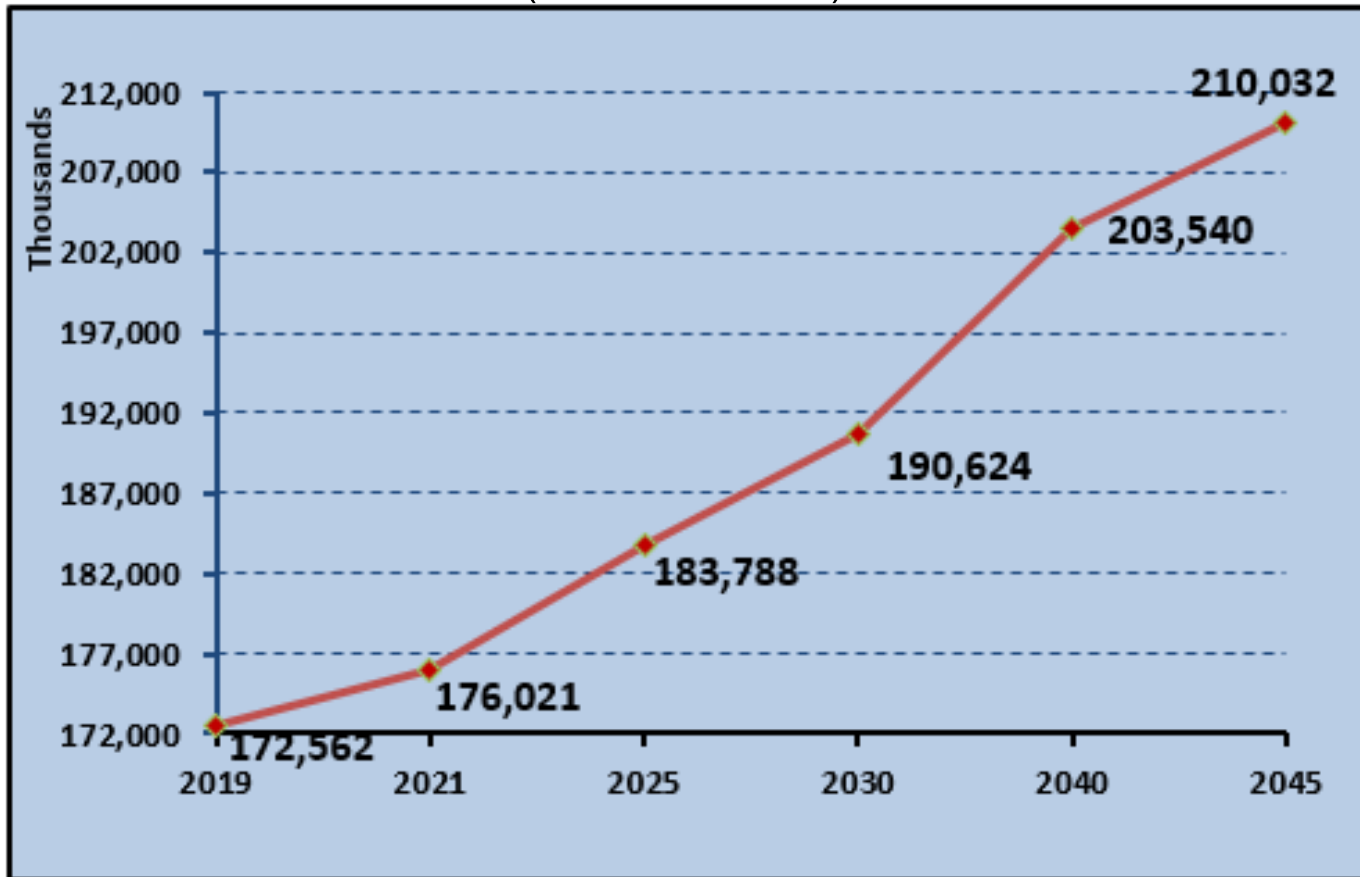


**Transit Trips**  
(in thousands)



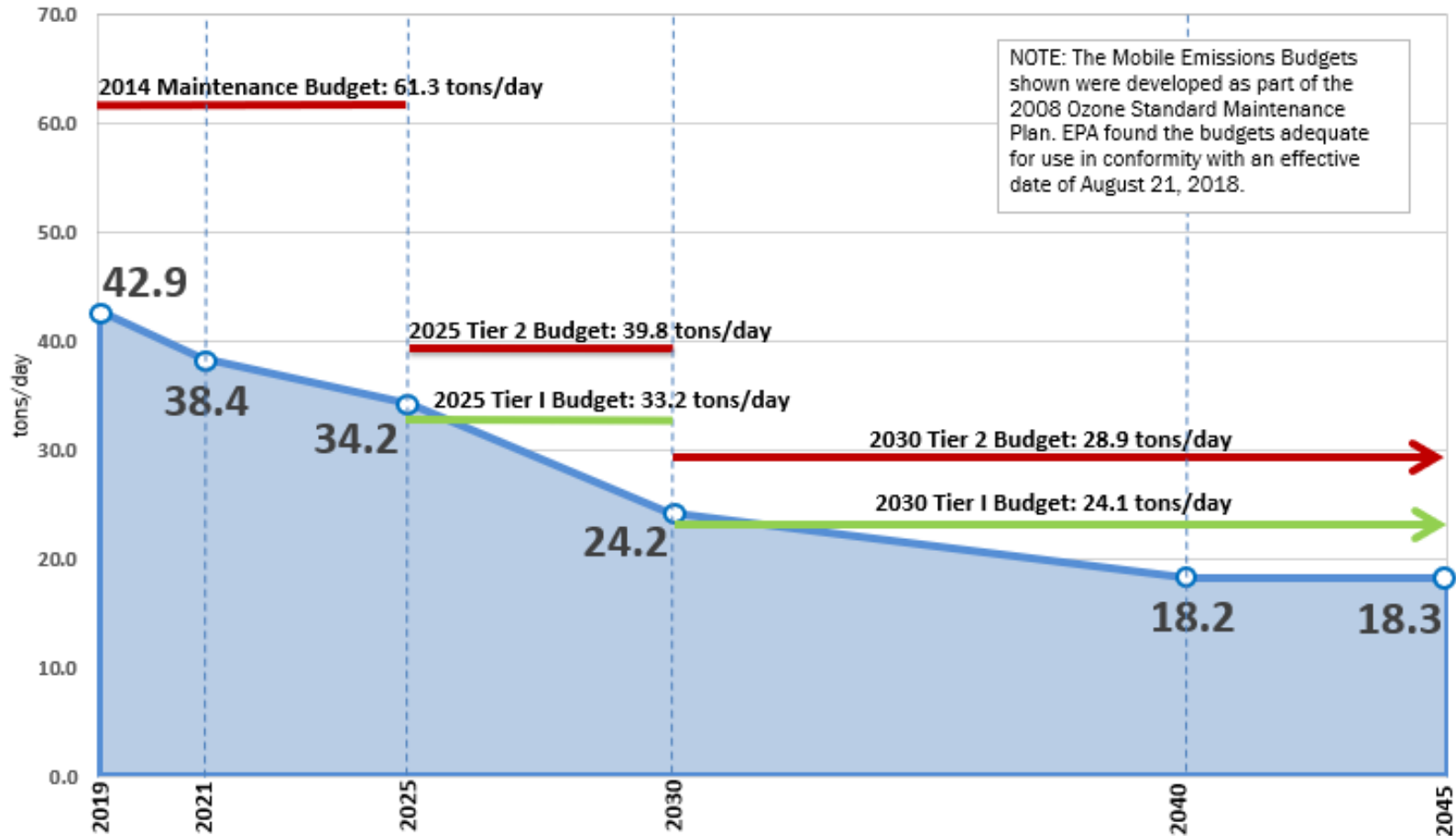
# Travel Demand Summary

Modeled Area Vehicle Miles Traveled  
(in thousands)



# Mobile Source Emissions

## Ozone Season VOC

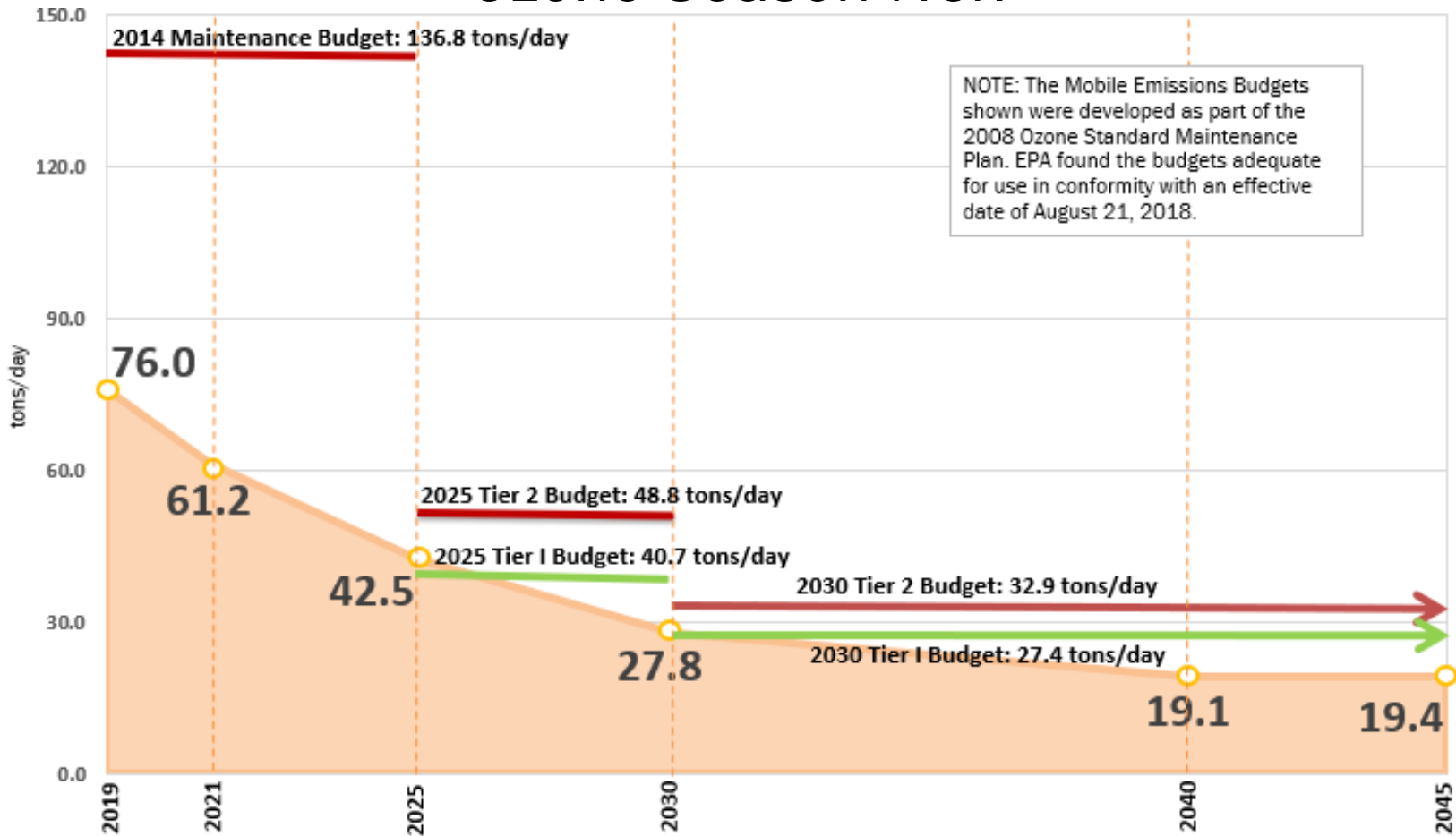


TCMs and TERMS are not included in totals.



# Mobile Source Emissions

## Ozone Season NOx



TCMs and TERMS are not included in totals.



# Air Quality Conformity: Findings

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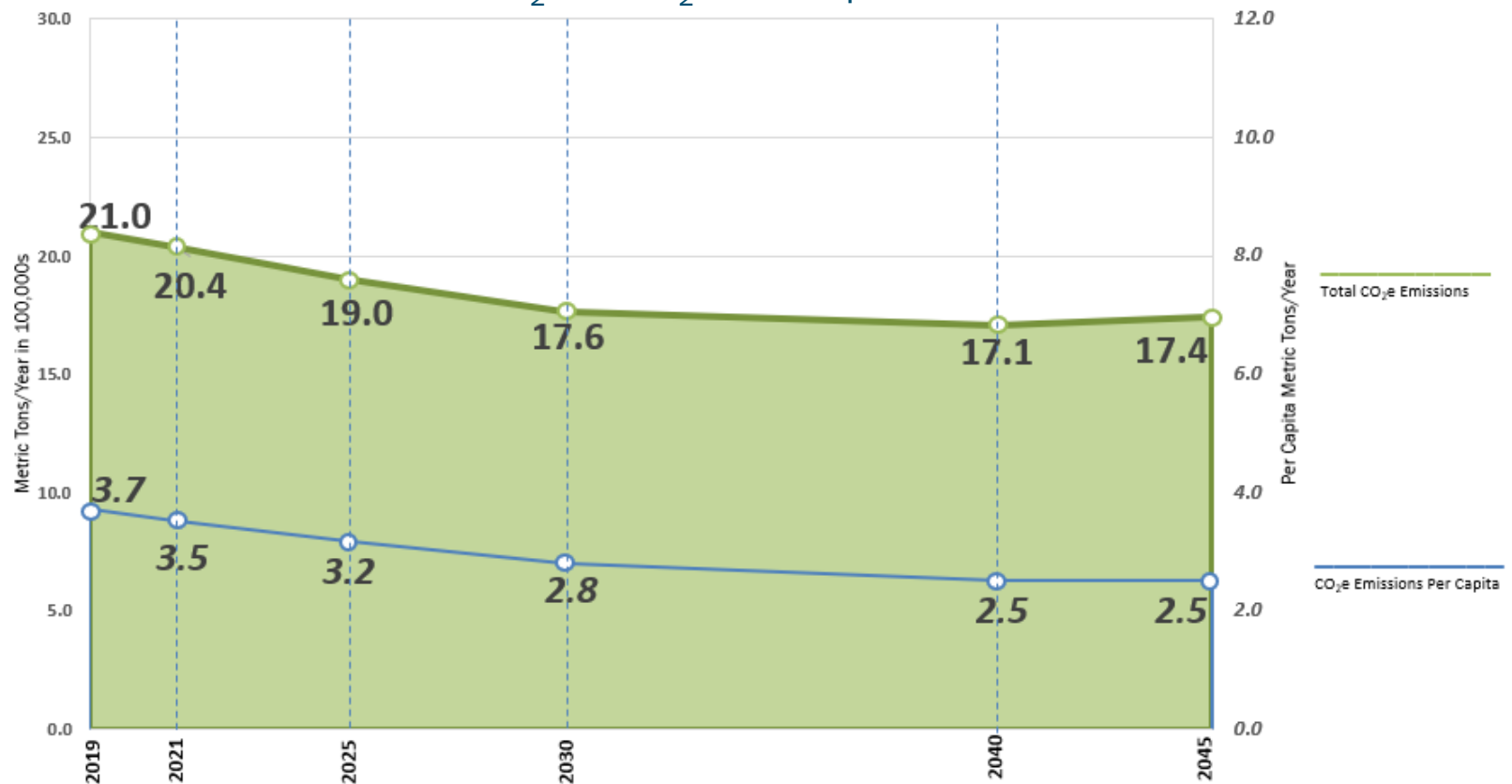
- ✓ Ozone Season VOC within Mobile Budget
- ✓ Ozone Season NOx within Mobile Budget



# Greenhouse Gases

2020 Amendment to Visualize 2045

Greenhouse Gas  
Mobile Source Emissions  
CO<sub>2</sub> and CO<sub>2</sub> e Per Capita





# CONTACTS

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