

# 2016 CLRP AMENDMENT

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## Air Quality Conformity Analysis of the 2016 CLRP Amendment and the FY 2017-2022 TIP

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Transportation Planning Board  
October 19, 2016

# Pollutants

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



# Technical Approach

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## Key Technical Inputs and Tools:

- ❖ Round 9.0 Cooperative Forecasts – **NEW**  
(presentations: [TPB Tech March 4](#) & [TPB March 16](#))
- ❖ “Regionally Significant” Transportation Projects - **NEW**  
(presentation: TPB March 16- [major changes](#) & [project input table](#))
- ❖ Version 2.3.66 Travel Demand Model
- ❖ 2014 Vehicle Registration Data (VIN)  
(presentations: [TPB Tech Jan 9 2015](#) & [MWAQC TAC Jan 13 2015](#))
- ❖ EPA’s MOVES2014a Mobile Emissions Model  
(presentation: [MWAQC TAC Feb 10 2015](#) & [TPB Tech April 3 2015](#))

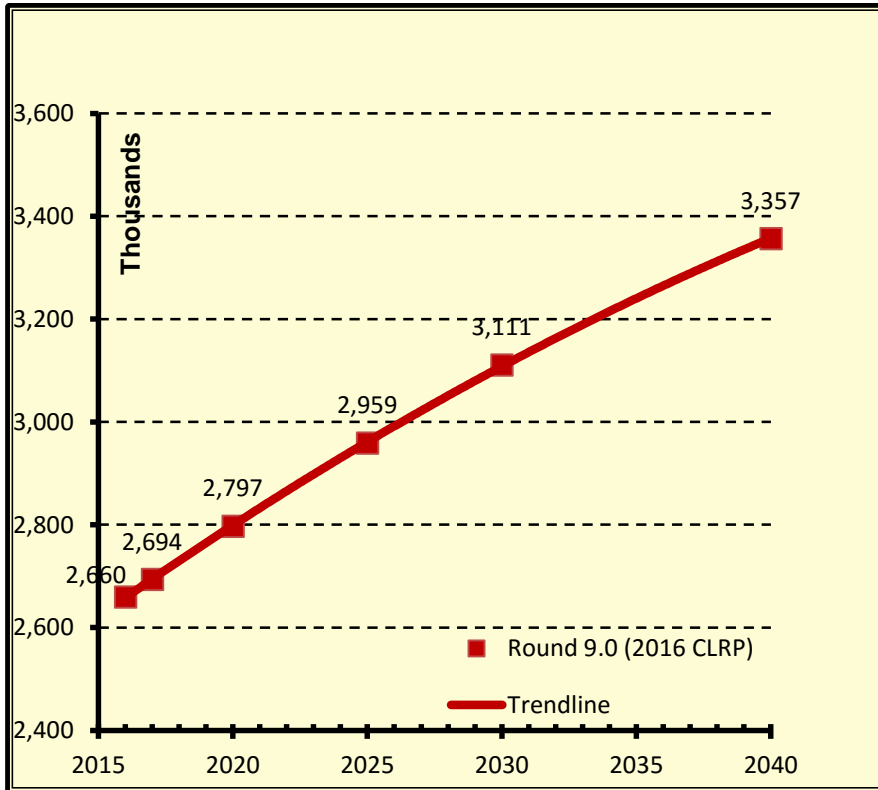
*NOTE: Detailed presentations were given to the TPB, the TPB Technical Committee, and MWAQC TAC on the ‘NEW’ items in the February – March timeframe. VIN data and the MOVES model presentations were made last year. There is not a significant difference between MOVES2014 and MOVES14a. Links to the presentations are included with each item above.*



# Round 9.0 Cooperative Forecasts

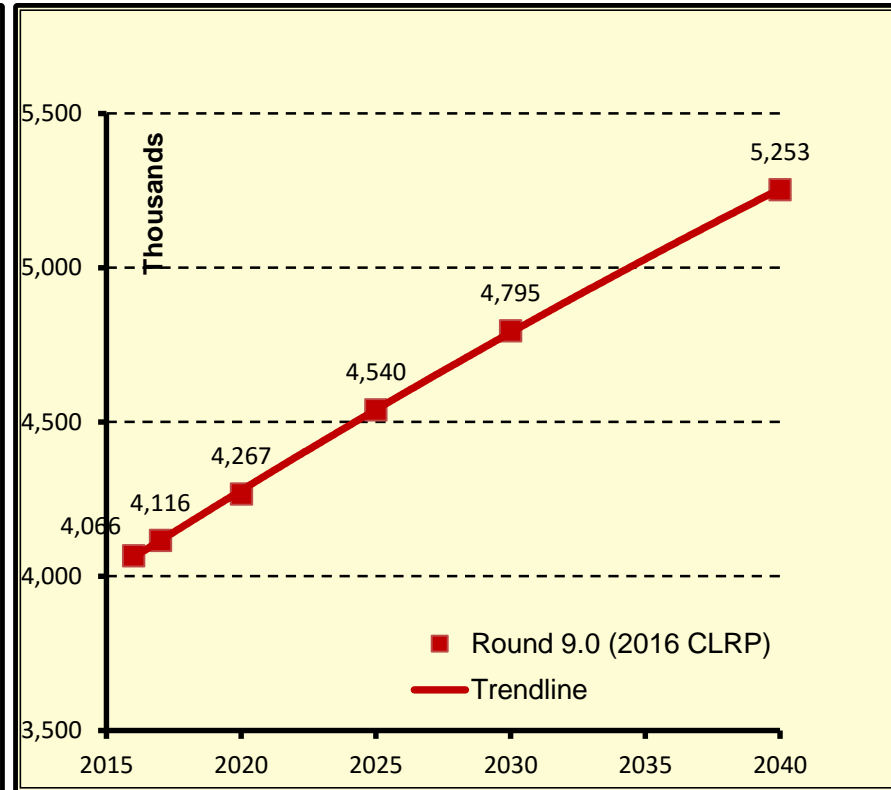
## Households

(in thousands)



## Employment\*

(in thousands)



NOTE: Values are for the modeled area.

\*Includes census adjustment



# Mobile Emissions Model

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MOVES2014a (released in November 2015):

- ❖ Minor update
- ❖ No significant change to emissions results compared to MOVES2014
- ❖ EPA does not consider it a new model for conformity and SIP purposes



# Technical Approach

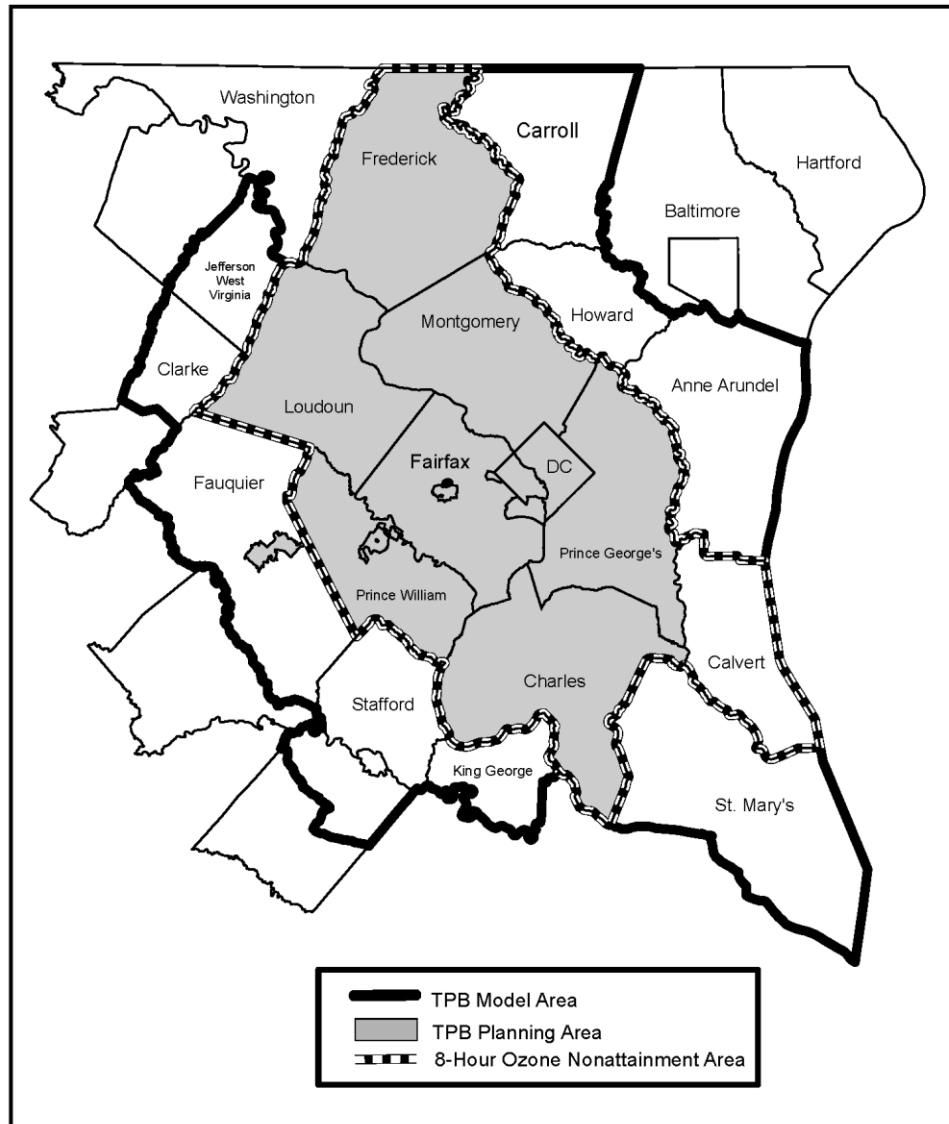
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## Analysis Years:

2016, 2017, 2025, 2030, 2040



# TPB Transportation Planning Areas

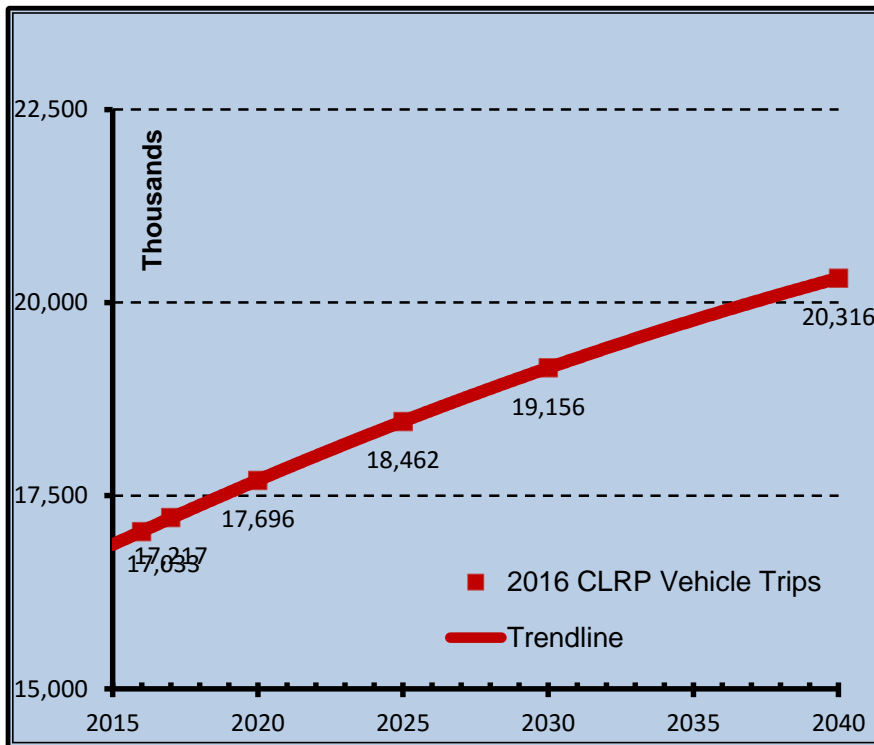


# Travel Demand Summary

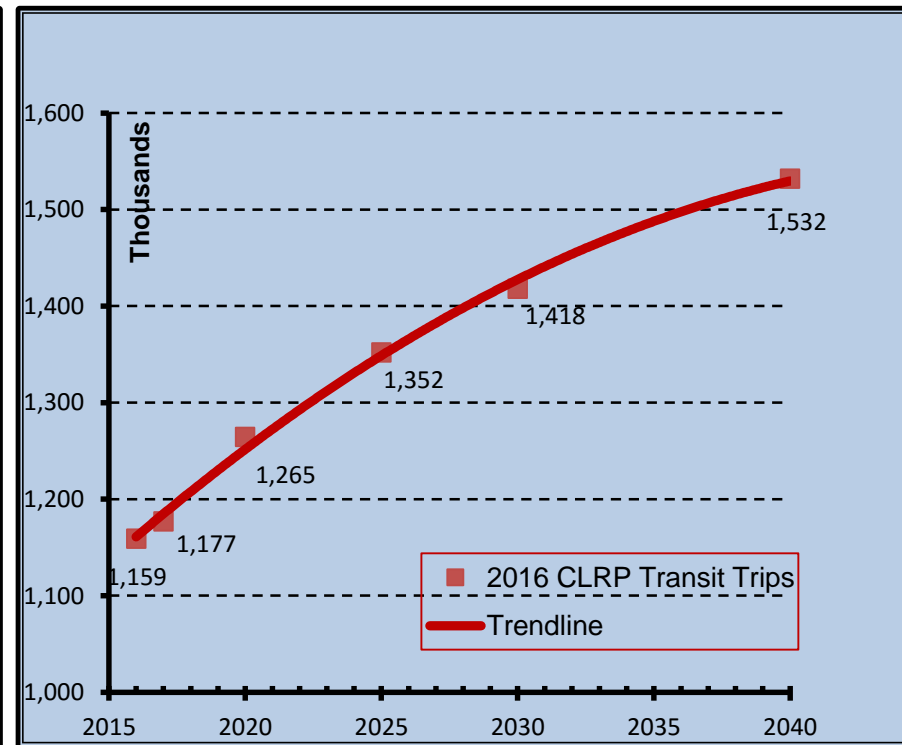
## Average Weekday Traffic

Modeled Area

### Vehicle Trips (in thousands)



### Transit Trips (in thousands)





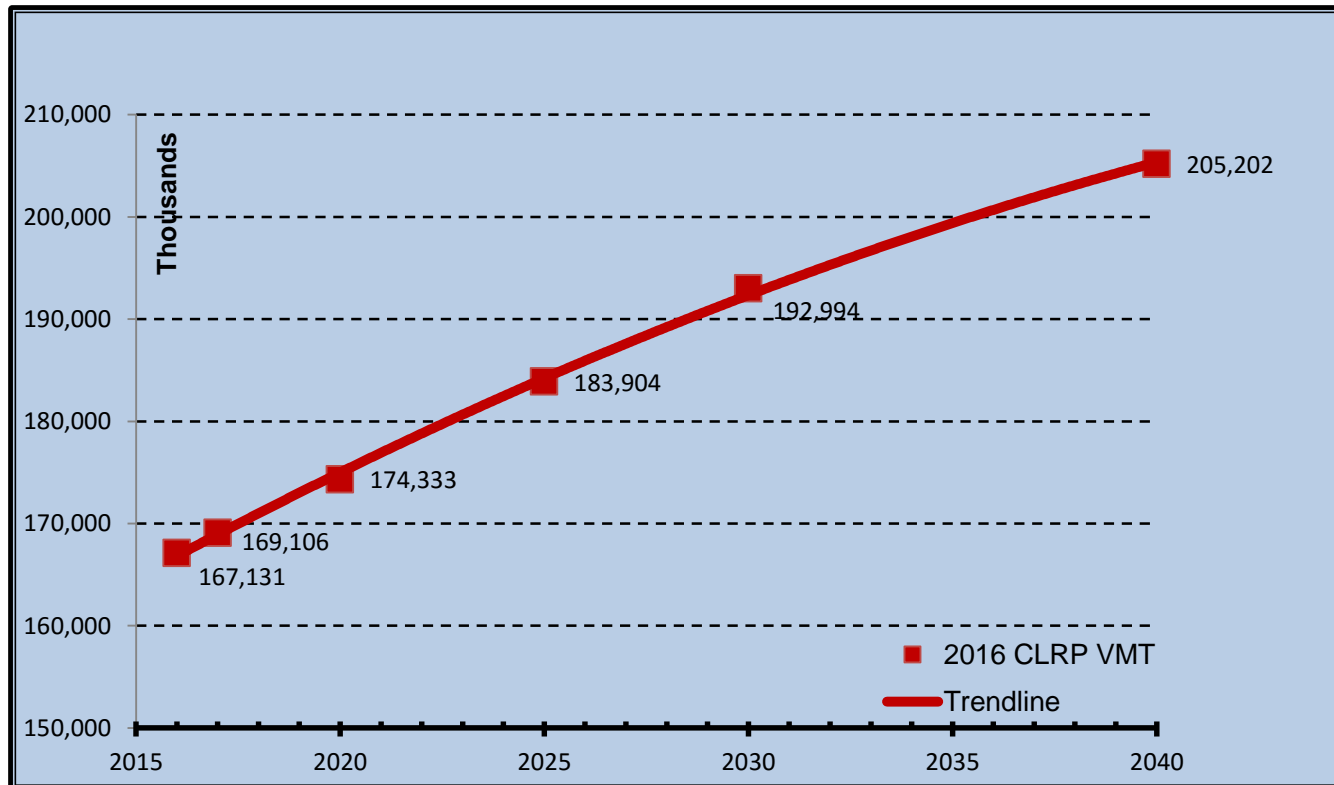
# Travel Demand Summary

## Average Weekday Traffic

Modeled Area

### Vehicle Miles Traveled

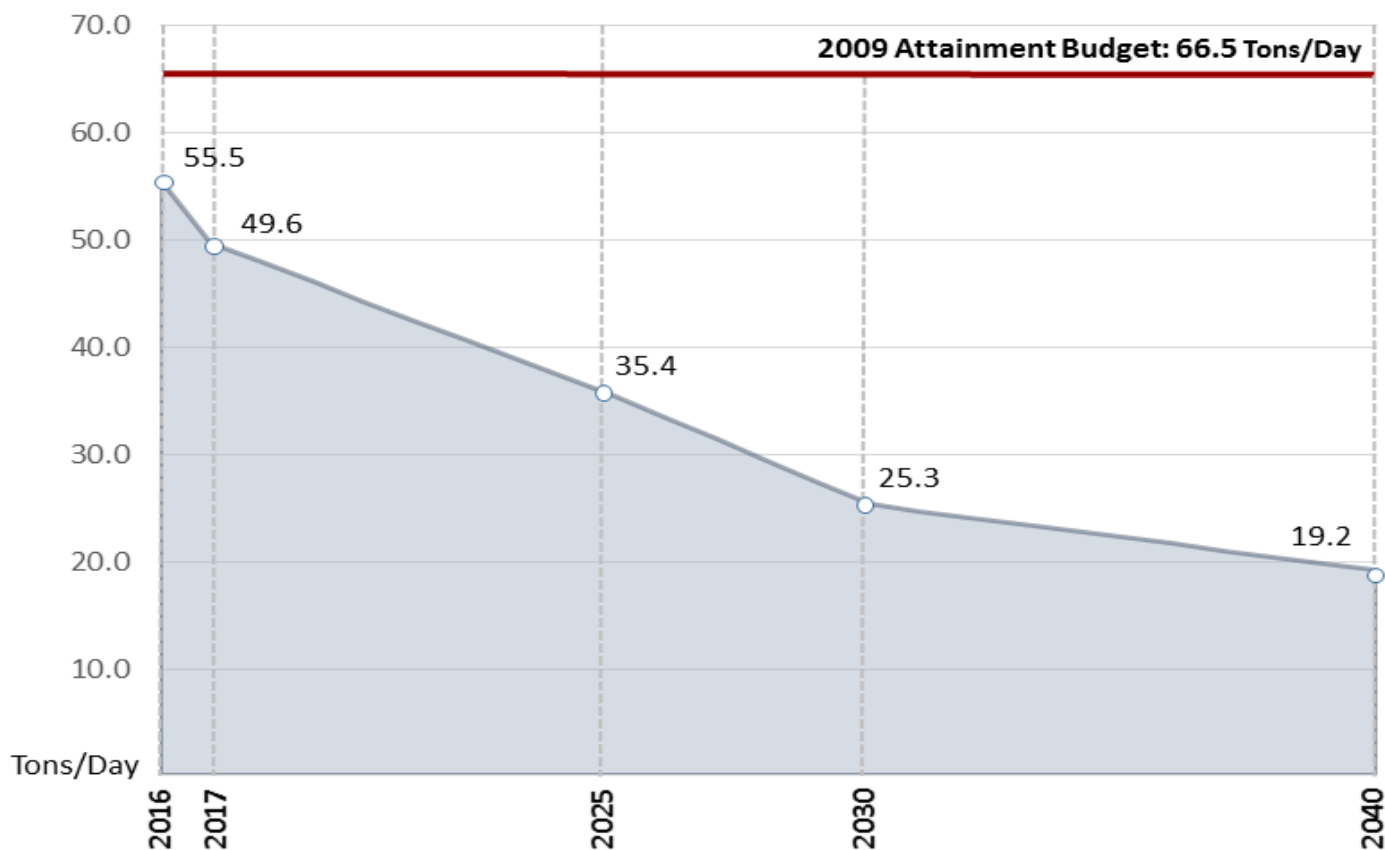
(in thousands)



# Mobile Source Emissions

NOTE: The Mobile Budget shown was developed in 2007, as part of the 8 Hour-Ozone SIP, in response to the 1997 Ozone Standard. This budget, as the most current approved by EPA, is required for use in any conformity analysis assessing ozone season pollutants.

## Ozone Season VOC



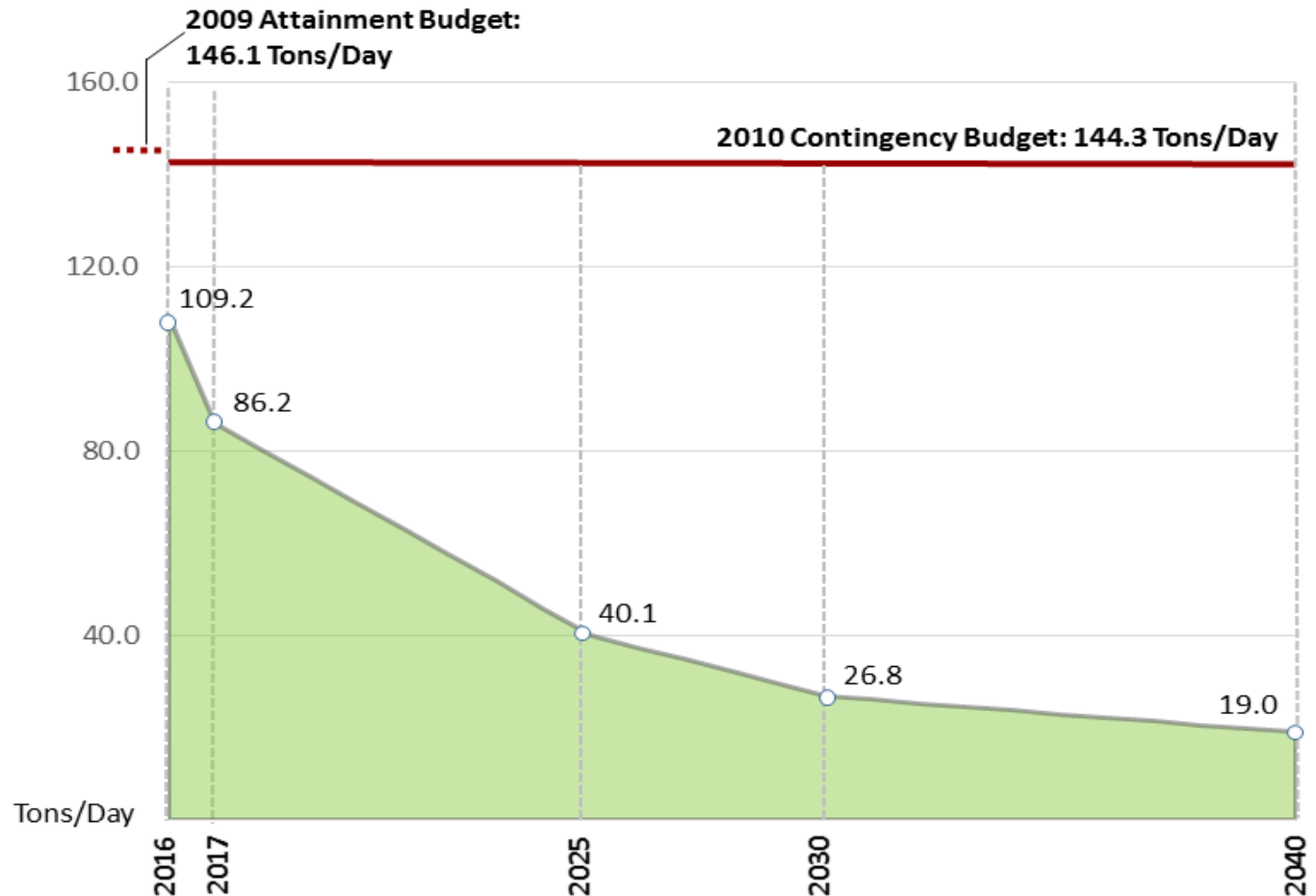
TCMs and TERMS are not included in totals.



# Mobile Source Emissions

NOTE: The Mobile Budgets shown were developed in 2007, as part of the 8-Hour Ozone SIP, in response to the 1997 Ozone Standard. These budgets, as the most current approved by EPA, are required for use in any conformity analysis assessing ozone season pollutants.

## Ozone Season NO<sub>x</sub>



# Findings

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



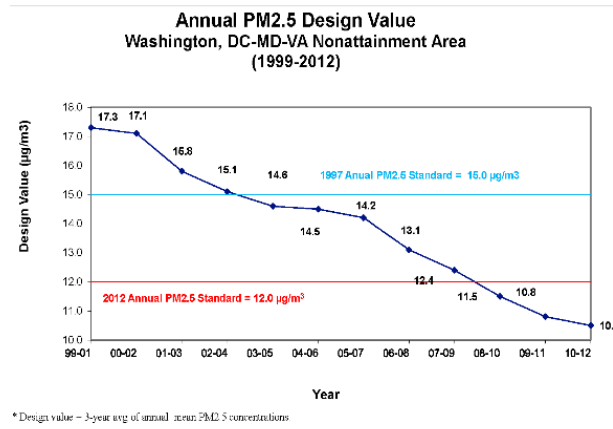
# Pollutants

## What happened to Fine Particles (PM<sub>2.5</sub>) pollutants?

- ❖ EPA revoked the 1997 standard for Fine Particles
  - No more conformity determinations for Fine Particles pollutants (direct PM<sub>2.5</sub> and Annual NO<sub>x</sub>)
  - No update to the PM<sub>2.5</sub> Maintenance Plan



### Annual PM<sub>2.5</sub> Design Value Trend



NOTE: See memo to TPB "Implications of EPA's Revocation of the 1997 PM<sub>2.5</sub> NAAQS" 9/2/2016



# Transportation Emission Reduction Measures (TERMS)

ADDITIONAL EMISSIONS REDUCTIONS- ALL TERMS COMBINED				
Years/Pollutants	Ozone - VOC	Ozone - NOx	PM2.5 Direct	Precursor NOx
	(tons/day)	(tons/day)	(tons/year)	(tons/year)
<b>2016</b>	0.066	0.090	0.95	25.77
<b>2017</b>	0.074	0.083	1.04	23.91
<b>2025</b>	0.097	0.071	1.43	20.84
<b>2030</b>	0.087	0.054	1.63	16.60
<b>2040</b>	0.093	0.043	2.06	15.09

NOTE: Benefits from these TERMS are not included in the emissions totals in this conformity analysis.

# Schedule

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## Next Steps:

- ❖ Public Comment Oct 13 – Nov 12
- ❖ TPB Briefing: Conformity Findings Oct 19
- ❖ TPB Action: Conformity Analysis Nov 16  
2016 CLRP Amendment  
2017-2022 TIP Update

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# QUESTIONS?

