

# PM2.5 MAINTENANCE PLAN UPDATE

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May 25, 2016

Agenda Item 3



## Background

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- EPA set standards for fine particles (PM2.5) in 1997 at
  - 15.0 ug/m3 (annual) - changed to 12.0 ug/m3 (2012)
  - 65 ug/m3 (24 hour average) - changed to 35 ug/m3 (2006)
- EPA designated the Washington, DC-MD-VA region as “nonattainment” for the annual PM2.5 standard in 2005
- Washington region submitted PM2.5 SIP (Attainment Plan) in 2008
- After attaining PM2.5 standard, Washington region submitted a request to redesignate the region to attainment and a demonstration to maintain the compliance with standard in 2013 (PM2.5 Redesignation Request & Maintenance Plan)



## Elements of Original PM2.5 Redesignation Request & Maintenance Plan

- **Air Quality Data**
  - Air quality (fine particles or PM2.5) data showed compliance with the 1997 PM2.5 standard
- **Emissions Inventories (Point, Area, Nonroad, and On-road Sources)**
  - **Redesignation Request:**
    - Demonstrated decline in emissions between SIP Base Year 2002 & Attainment Year 2007
  - **Maintenance Plan:**
    - Demonstrated compliance into future by showing lower emissions in 2017 and 2025 compared to 2007
    - Attainment Year 2007, Intermediate Year 2017, Out Year 2025
- **Motor Vehicle Emissions Budgets (MVEBs)**
  - Mobile emissions ceilings for transportation conformity purposes
- **Contingency Measures**
  - In case region exceeds PM2.5 standard in future, these measures would be implemented
- **State Compromise (Appendix D)**
  - Voluntary agreement between DOEE, MDE, and VDEQ to further address PM2.5 and ozone

## Why Update PM2.5 Maintenance Plan?

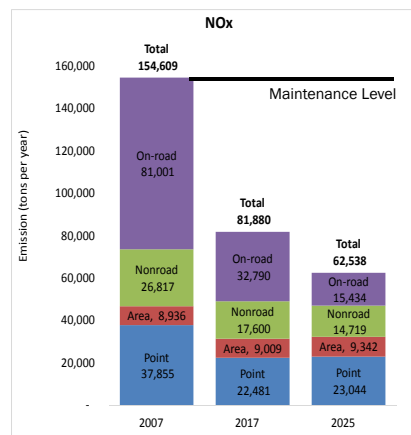
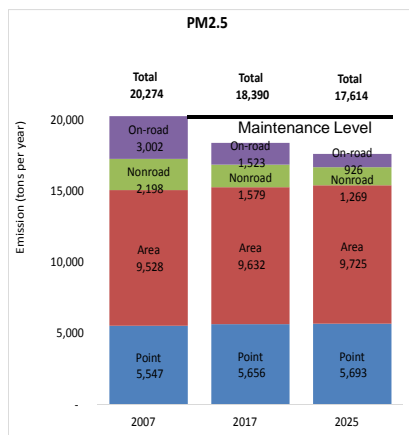
- **State Compromise (Appendix D)**
  - Committed to updating the PM2.5 Maintenance Plan
  - Agreement between states:
    - To evaluate and submit updated annual PM2.5 & NOx MVEBs for 2017 and 2025 by the end of 2015, and
    - To re-evaluate these MVEBs in 2018 to accommodate transportation planning issues when transportation conformity milestone year is extended beyond 2040
  - Agreement was voluntary, not a federal requirement
- **Revision of MVEBs Requires Plan Update**
  - EPA requires that emissions from the other three sectors (point, area, and nonroad) also be updated or that a justification for not updating those sectors be included while submitting revised MVEBs. Plan needs to be updated with revised emissions and emissions and air quality data trends

# Elements of the Updated PM2.5 Maintenance Plan

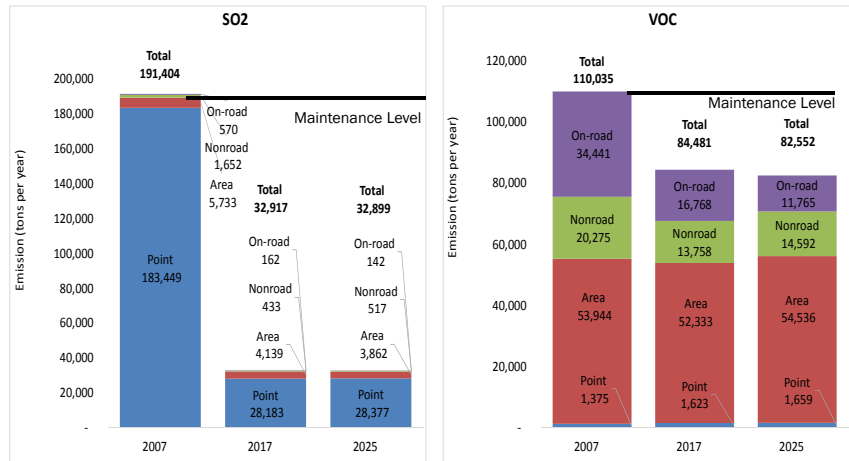
- **State Implementation Plan Overview**
- **Revisions to the On-Road Motor Vehicle Emissions & MEVBs**
  - On-road motor vehicle emissions & MVEBs revised with MOVES2014
  - MVEBs follow the same two-tier (Tier 1 & Tier 2) approach used in the original plan
- **Revisions to the Maintenance Demonstration**
  - Revisions to the 2007 Attainment Year Inventory
  - Revisions to the 2017 and 2025 Projection Inventories
  - Emissions Trend Analysis
  - Air Quality Trend Analysis
- **Revisions to the State Compromise (Appendix C)**
  - Reflects revised MOVES2014 based MVEBs and removal of items that are complete
- **Conclusion**
- **Appendices**
  - Appendix A – Methodology to Develop On-Road Mobile Emission and Motor Vehicle Emissions Budgets
  - Appendix B – Input, RunSpec, and Output files for On-Road Mobile Emissions (by Source Classification Code)
  - Appendix C - Updated State Compromise
  - Appendix D – Notices, Public Hearings & Comments, Technical Corrections, and Responses



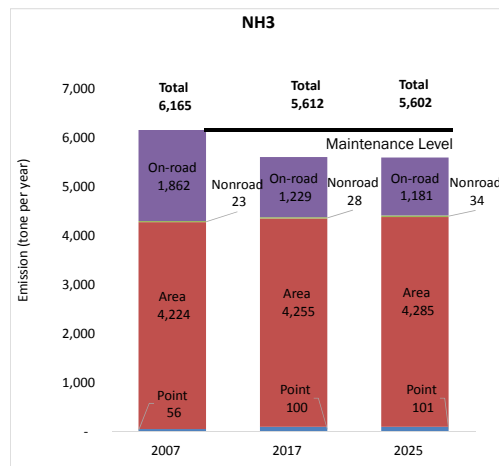
# Updated PM2.5 Maintenance Plan Emissions Continue to be Lower in the Future



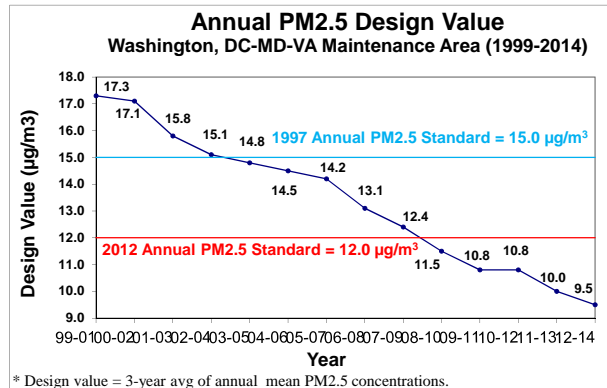
## Updated PM2.5 Maintenance Plan Emissions Continue to be Lower in the Future



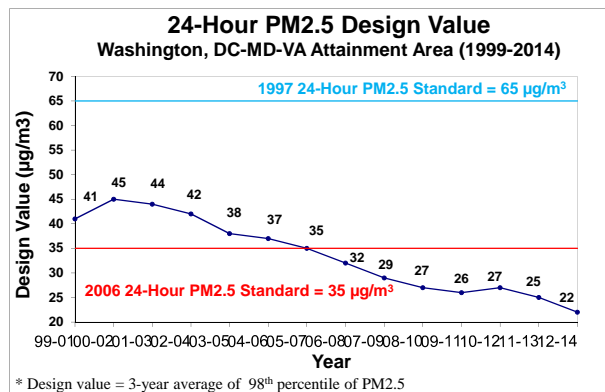
## Updated PM2.5 Maintenance Plan Emissions Continue to be Lower in the Future



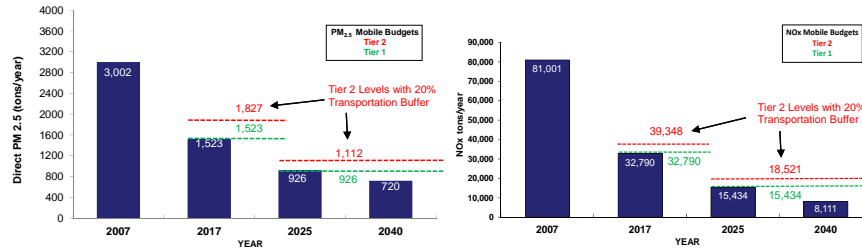
## Updated Data – Trend in Ambient PM2.5 Levels Washington DC-MD-VA PM2.5 Maintenance Area



## Updated Data – Trend in Ambient PM2.5 Levels Washington DC-MD-VA PM2.5 Maintenance Area



## Updated PM2.5 Maintenance Plan Motor Vehicle Emissions Budgets (Two Tier Approach)



## Public Hearings & Comments

Jurisdiction	Public Comment Period	Public Hearing
District of Columbia	April 15-May 16, 2016	May 16, 2016
Maryland	March 4-April 4, 2016	April 4, 2016
Virginia	April 18-May 19, 2016	May 10, 2016

## Public Comments/Technical Corrections & Responses

- No public comments received
- Technical Corrections
  - MDE requested revisions to the 2014 point source emission inventory estimates in Table 3-3 of the plan document. These revisions decreased the annual PM2.5-Pri, NOx, SO2, VOC, and NH3 emissions for Maryland and the region as shown in Table 3-3 (Next slide).
  - Response: MWAQC and the states agree. The changes will be reflected in the final document.

## Table 3-3: Original & Revised 2014 Point Source Emissions

Pollutant/Jurisdiction	Original 2014 Emissions (TPY)	Revised 2014 Emissions (TPY)
<b>PM2.5</b>		
District of Columbia	26	26
Maryland	2,380	1,304
Virginia	205	205
Region Total	2,611	1,535
<b>NOX</b>		
District of Columbia	368	368
Maryland	14,270	8,069
Virginia	3,663	3,663
Region Total	18,301	12,100
<b>SO2</b>		
District of Columbia	49	49
Maryland	15,597	8,245
Virginia	1,018	1,018
Region Total	16,664	9,312
<b>VOC</b>		
District of Columbia	38	38
Maryland	595	458
Virginia	651	651
Region Total	1,284	1,147
<b>NH3</b>		
District of Columbia	0	0
Maryland	5	3
Virginia	51	51
Region Total	56	54

## Maintenance Plan Update Schedule

December 18, 2015	Emissions Inventory Subcommittee Call: Review Inventories for all Sectors and Discuss Updated Mobile Budgets
January 8, 2016	TPB-Technical Committee: Inventory and Updated Mobile Budget Presentation
January 12, 2016	MWAQC-TAC: Inventory and Updated Mobile Budget Presentation
January 20, 2016	TPB: Inventory and Updated Mobile Budget Presentation
February 9, 2016	MWAQC-TAC: Draft Maintenance Plan Approval for MWAQC Consideration
February 24, 2016	MWAQC: Maintenance Plan Approval for Public Comment and Hearing
March-April , 2016	Public Comment and Hearing
May 25, 2016	MWAQC: Final Approval for Submittal to EPA
June, 2016	States Submit Updated Maintenance Plan to EPA

