

2008 OZONE MAINTENANCE PLAN UPDATE

New Motor Vehicle Emissions Budgets

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TPB Technical Committee
November 3, 2023



National Capital Region
Transportation Planning Board

Background

- In January 2021, EPA released an updated mobile emissions model, MOVES3, which is now required for use in transportation conformity analyses
- Using the same inputs, MOVES3 results in significant increases in estimated NOx (over 50% in some analysis years) compared to MOVES2014, which was used to develop the region's current motor vehicle emissions budgets (MVEBs)
- Staff recommended updating the MVEBs to ensure that the technical tools used for MVEBs setting and conformity were consistent



MWAQC Action

- The Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC) agreed to update the MVEBs which required an update to the 2008 ozone maintenance state implementation plan (SIP)
- The Metropolitan Washington Air Quality Committee (MWAQC) approved the updated 2008 ozone maintenance SIP in September 2023



Motor Vehicle Emissions Budgets

§93.101– Definition:

“Motor vehicle emissions budget is that portion of the total allowable emissions defined in ...the maintenance plan for a certain dateallocated to highway and transit vehicle use and emissions”

§93.118(e)(4) – Criteria & Procedures:

- iv. “The motor vehicle emissions budget(s), when considered together with all other emissions sources, is consistent with applicable requirements for....maintenance;*
- v. The motor vehicle emissions budget(s) is consistent with and clearly related to the emissions inventory in the submitted maintenance plan.”*



2008 Ozone Maintenance Plan Update: Key Tools and Assumptions

Tools:

- MOVES3.0.4 Model
- Gen2/Version 2.4 Travel Demand Model

Input Assumptions:

- Land Activity: Round 9.2 Cooperative Forecasts
- Transportation Networks: 2022 Update to Visualize 2045



Updated NOx and VOC Inventories for 2008 Ozone Maintenance Plan Update

Using the updated assumptions, updated NOx and VOC inventories and corresponding safety margins are as shown:

Nitrogen Oxides (NOx) tons/day

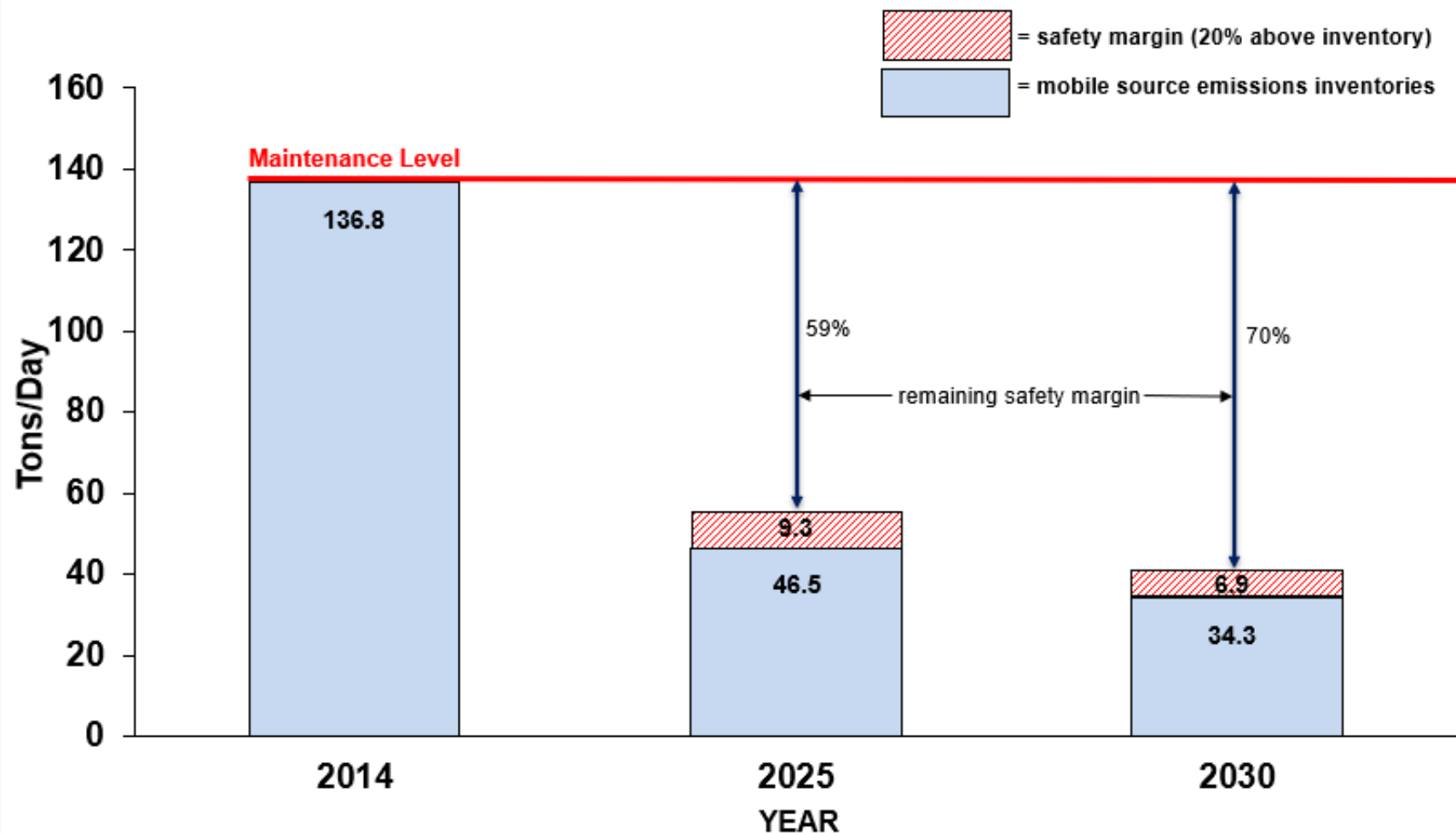
	Inventory	Safety Margin	New MVEBs
2025	46.5	9.3	55.8
2030	34.3	6.9	41.2

Volatile Organic Compounds (VOCs) tons/day

	Inventory	Safety Margin	New MVEBs
2025	27.9	5.6	33.5
2030	21.8	4.4	26.2



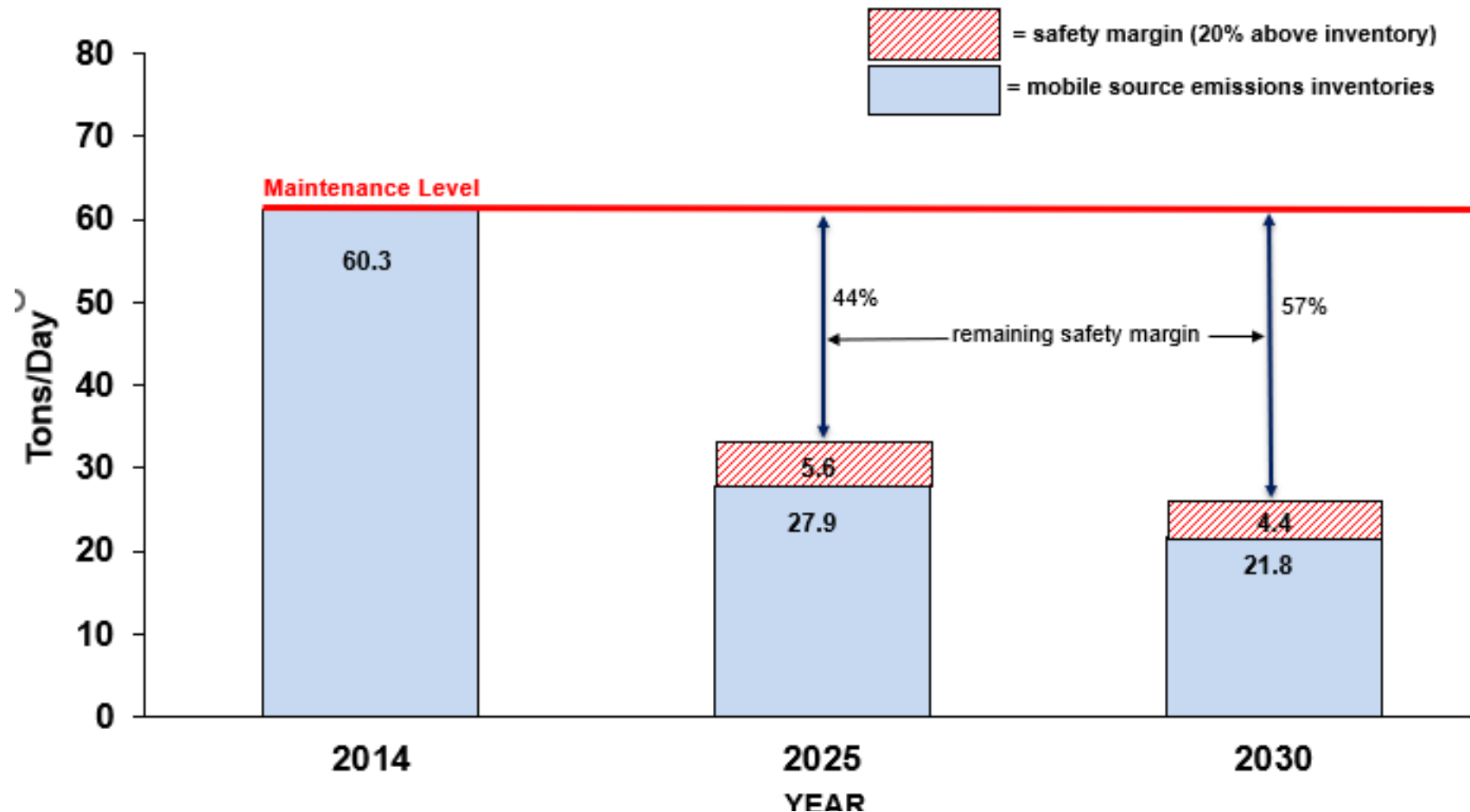
Updated 2008 Ozone Maintenance Plan: 20% Safety Margins for NO_x



SOURCE: 2025 and 2030 inventories were re-estimated using MOVES3.04 for the 2023 update of the 2008 ozone maintenance plan. The 2014 inventory is from the original 2008 ozone maintenance plan (December 20, 2017).



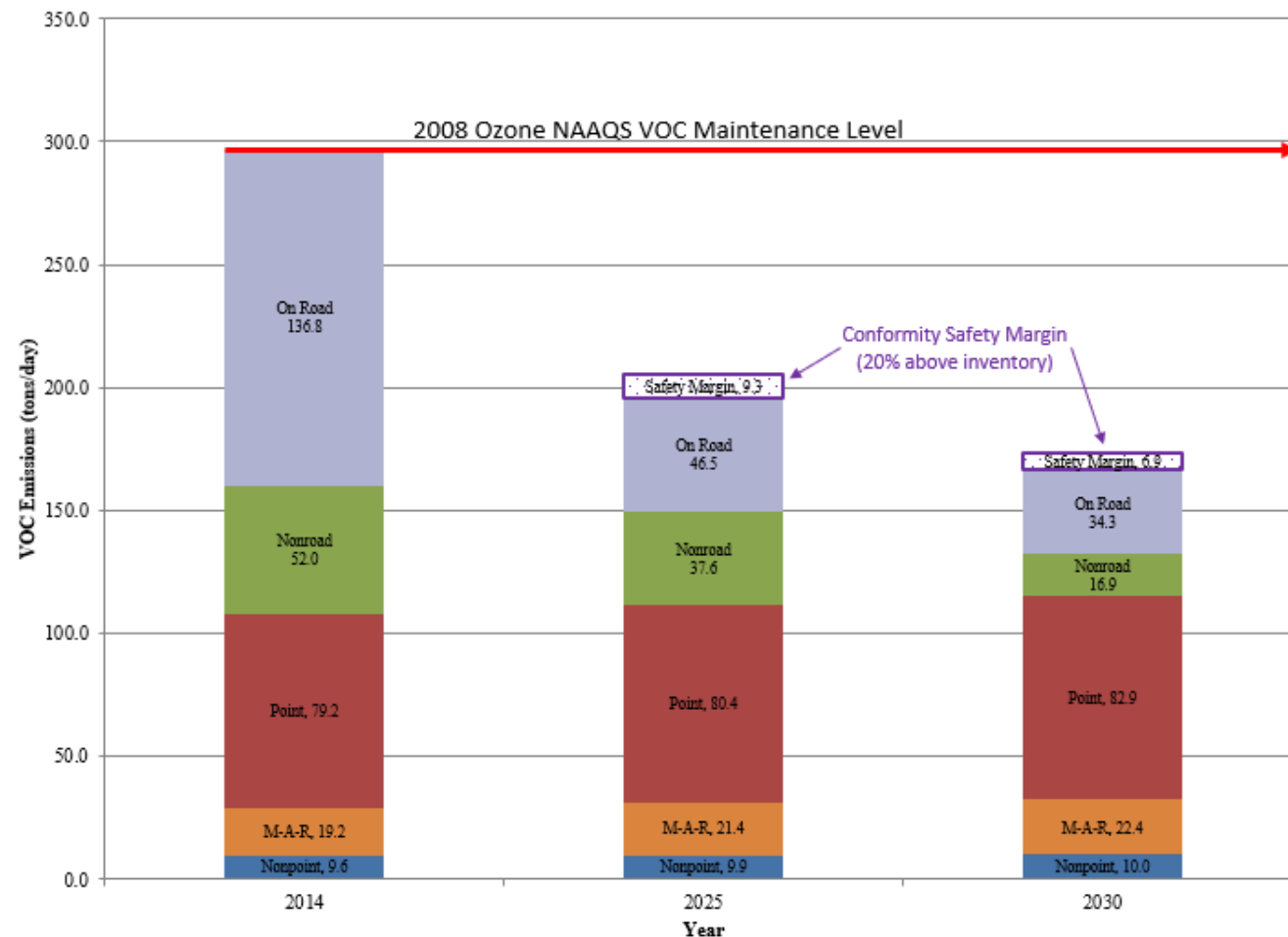
Updated 2008 Ozone Maintenance Plan: 20% Safety Margins for VOC



SOURCE: 2025 and 2030 inventories were re-estimated using MOVES3.04 for the 2023 update of the 2008 ozone maintenance plan. The 2014 inventory is from the original 2008 ozone maintenance plan (December 20, 2017).



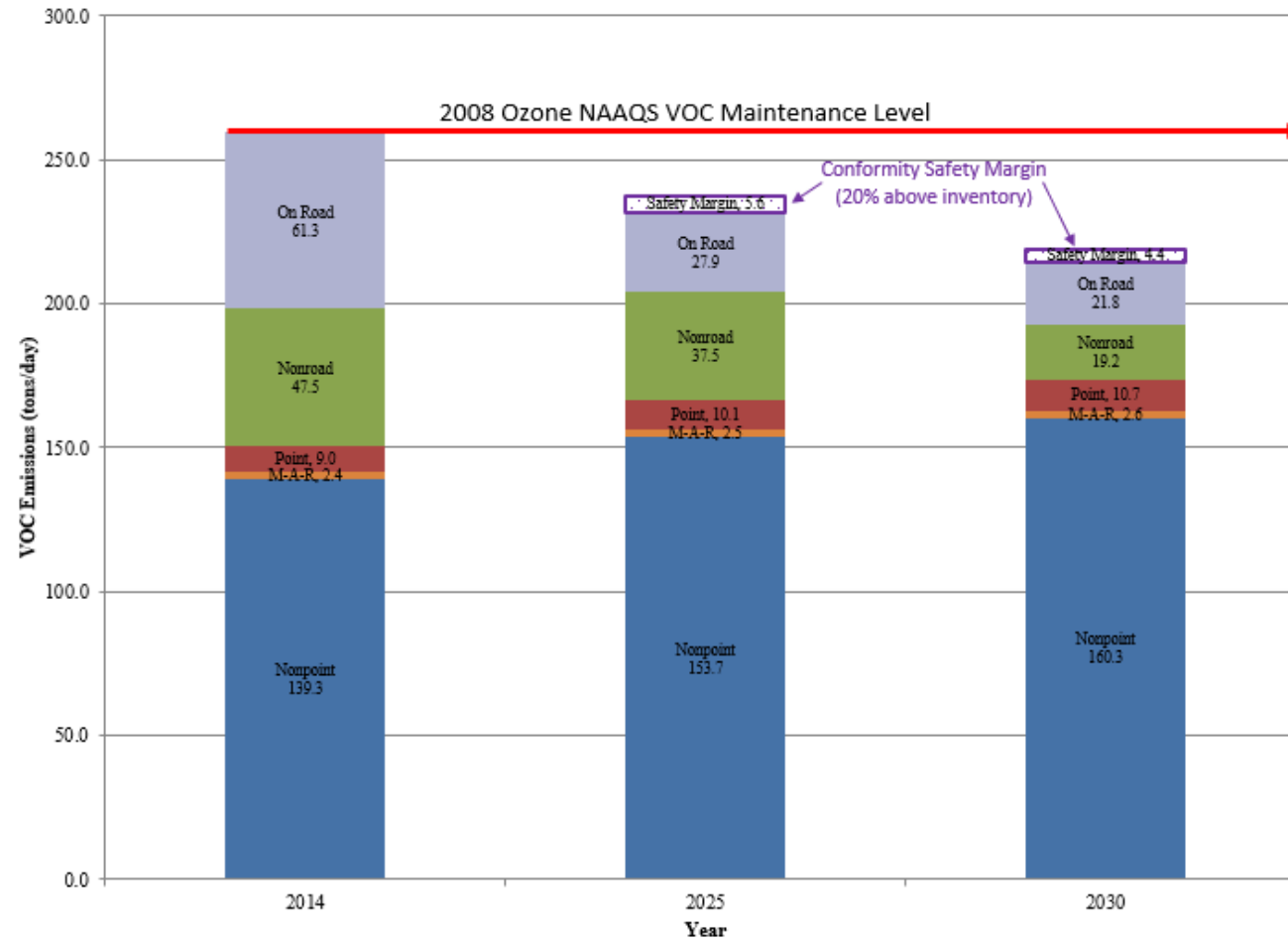
Updated 2008 Ozone Maintenance Plan: NOx with 20% Safety Margins



SOURCE: 2025 and 2030 inventories were re-estimated using MOVES3.04 for the 2023 update of the 2008 ozone maintenance plan. The 2014 inventory is from the original 2008 ozone maintenance plan (December 20, 2017).



Updated 2008 Ozone Maintenance Plan: VOC with 20% Safety Margins



SOURCE: 2025 and 2030 inventories were re-estimated using MOVES3.04 for the 2023 update of the 2008 ozone maintenance plan. The 2014 inventory is from the original 2008 ozone maintenance plan (December 20, 2017).



Updated 2008 Ozone Maintenance Plan

State Implementation Plan Revision:
Motor Vehicle Emission Budget Revisions Based on the
MOVES3 Model

Washington DC-MD-VA
2008 Ozone NAAQS Maintenance Plan

Prepared by:
Metropolitan Washington Council of Governments
for the
District Department of Energy and Environment
Maryland Department of the Environment
Virginia Department of Environmental Quality

on behalf of the
Metropolitan Washington Air Quality Committee

September 27, 2023

[Washington DC-MD-VA 2008 Ozone
NAAQS Maintenance Plan Update |
Metropolitan Washington Council of
Governments \(mwcog.org\)](https://www.mwcog.org/2023/09/27/washington-dc-md-va-2008-ozone-naaqs-maintenance-plan-update/)



Schedule

March	TPB Transmits Mobile Emissions Inventories to MWAQC
March - April	MWAQC Develops New Motor Vehicle Emissions Budgets (MVEBs)
March- April	MWAQC Prepares 2008 Ozone Maintenance Plan (MP) Update Document
May	MWAQC Releases 2008 Ozone MP Update with New MVEBs For Comment
June-August	Public Hearings and Comment Period
September	MWAQC Approves Final 2008 Ozone MP Update with New MVEBs
October	State Air Agencies Submit 2008 Ozone MP Update to EPA
???	EPA Approves Updated 2008 Ozone MP or Finds MVEBs Adequate for Use in Conformity



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