

2015 OZONE STANDARD

State Implementation Plan Development and New Mobile Emissions Budgets

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TPB Technical Committee
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Agenda Item #10



National Capital Region
Transportation Planning Board

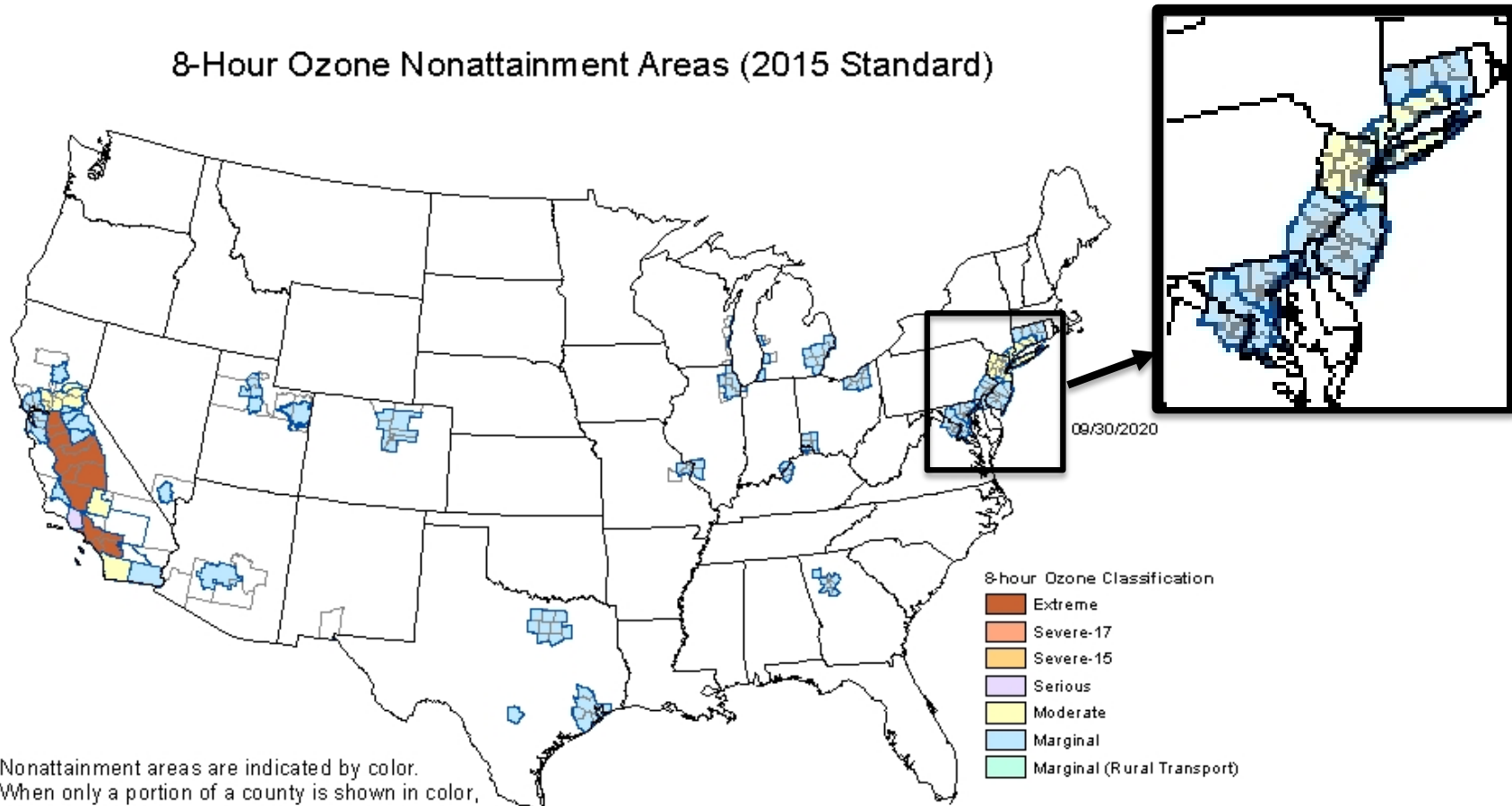
2015 Ozone Standard

- The current 2015 National Ambient Air Quality Ozone Standard (“NAAQS” or “Standard”) is 70 parts per billion (ppb)
- Areas that exceed the standard ("nonattainment areas") are classified into 5 levels, based on observed ozone levels:
 - Extreme
 - Severe
 - Serious
 - Moderate
 - Marginal
- Each designation includes specific requirements and an allotted time to attain the Standard with higher pollution areas receiving a longer time period



2015 Ozone Standard

8-Hour Ozone Nonattainment Areas (2015 Standard)



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

SOURCE: EPA Greenbook: https://www3.epa.gov/airquality/greenbook/map8hr_2015.html



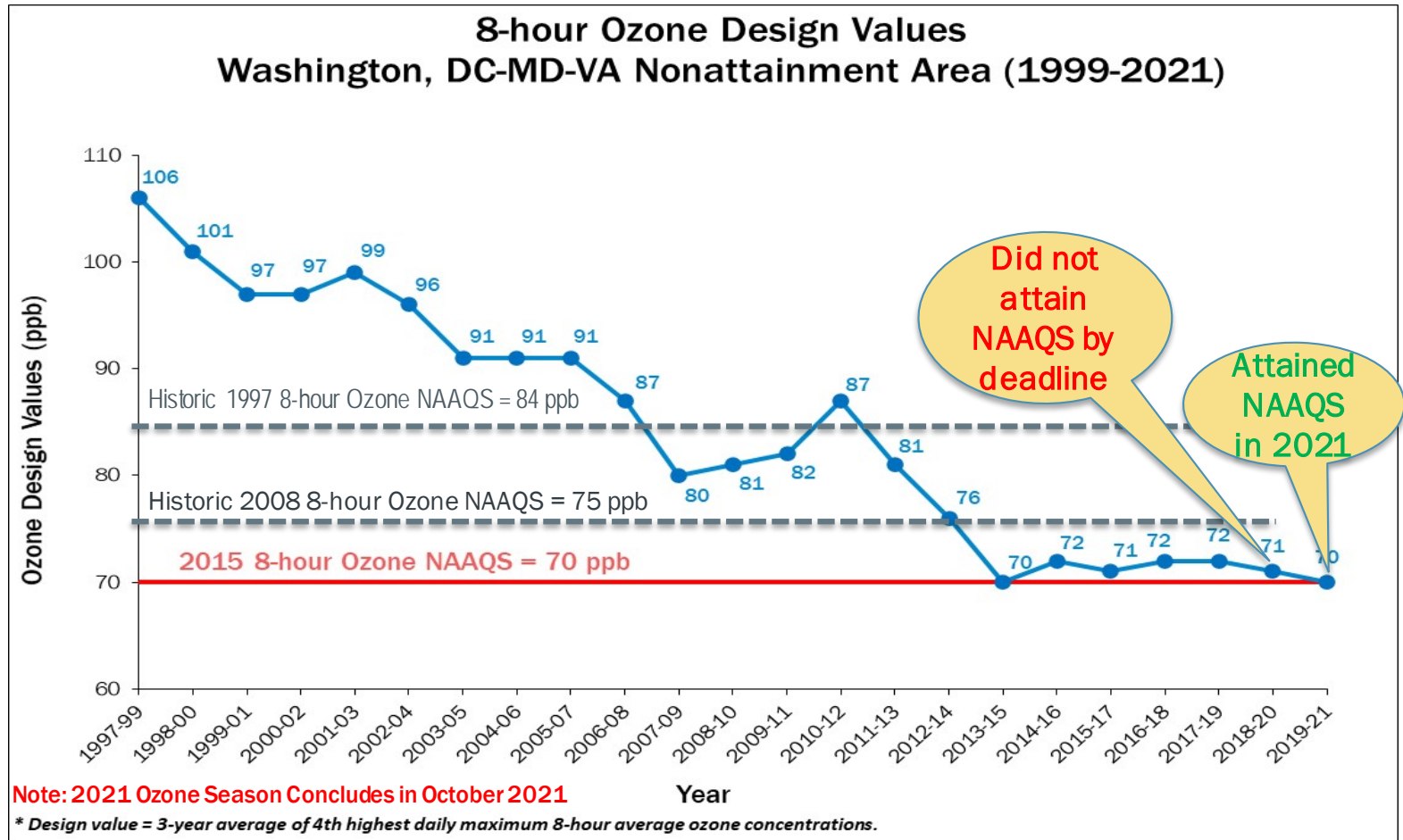
Washington DC-MD-VA Region

The Washington DC-MD-VA Region:

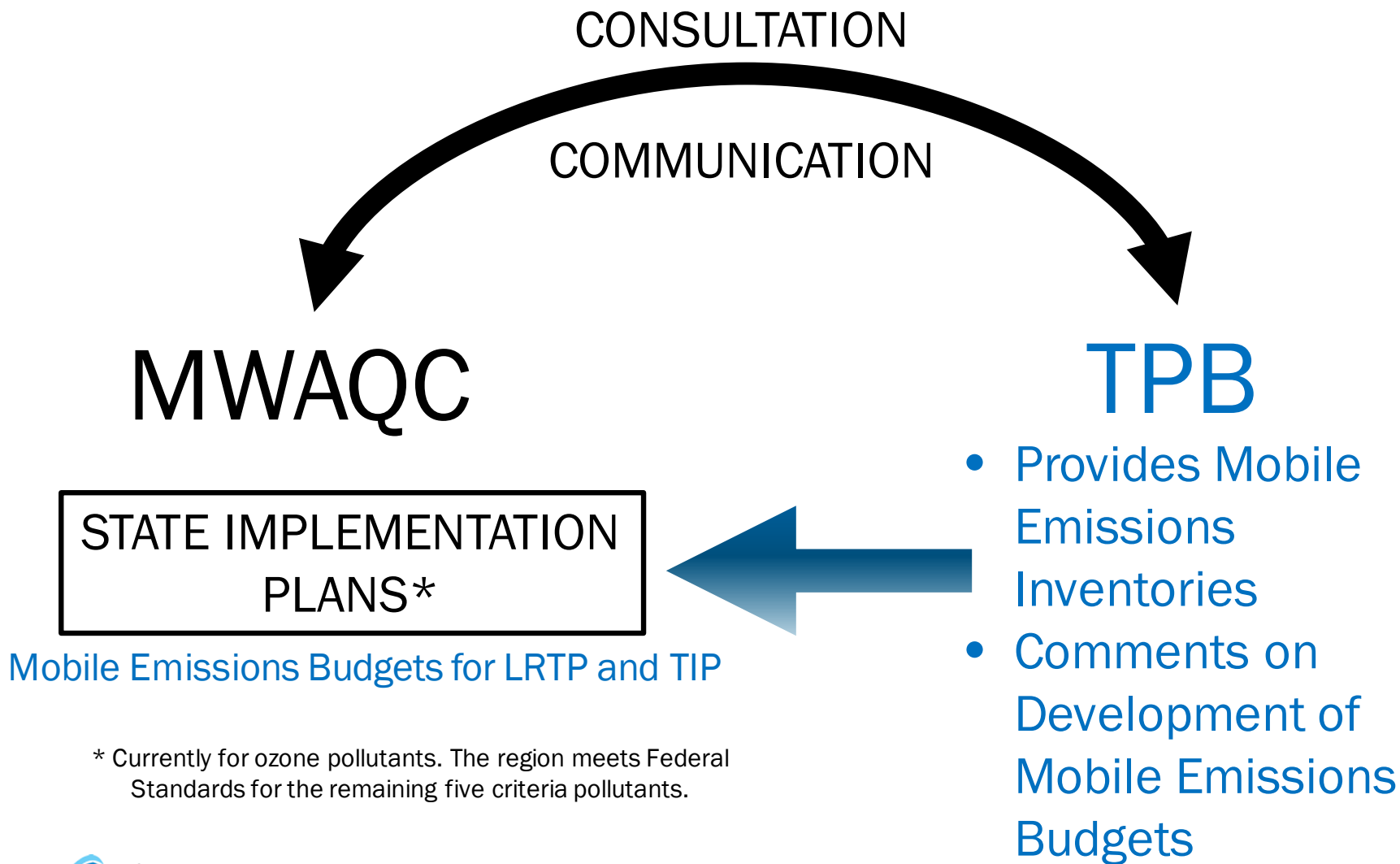
- Is classified as a “marginal” nonattainment area for Ozone
- Did not meet the “marginal” area deadline to attain the Standard by the end of the 2020 ozone season
- Did meet the Standard by the end of the 2021 ozone season, which will be relevant only if the region decides to apply for a one-year extension
- Must develop a State Implementation Plan (SIP) which will include **NEW** Motor Vehicle Emissions Budgets (MVEBs) or Mobile Emissions Budgets



Observed Ozone Levels Over Time



State Implementation Plans



* Currently for ozone pollutants. The region meets Federal Standards for the remaining five criteria pollutants.



Mobile Emissions Budgets

- MWAQC consults with TPB to set the Mobile Emissions Budgets in the SIP
- Once EPA approves (or “finds adequate for conformity”) the Mobile Emissions Budgets in the SIP, TPB must use those budgets for all air quality conformity analyses of the region’s Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) until new Mobile Emissions Budgets are approved



Mobile Emissions Budgets

Setting Budgets vs. Using Budgets

SIP Mobile Emissions Budgets:

- Developed at a fixed point in time for specific future years
- Developed using one set of technical inputs, analysis tools, and assumptions
- Remain in place for a long period of time (many years)
- Not required to be updated to address changing inputs, tools, or assumptions

Transportation Conformity demonstrations using the Mobile Emissions Budgets:

- Generally done every year, and future analysis years change
- Required to update the technical inputs, analysis tools, and assumptions



Mobile Emissions Budgets

Inconsistency Between SIP and Conformity Emissions Estimates

- Mobile emissions estimates used to set budgets with one set of technical inputs
- Future conformity emissions estimates developed using updated technical inputs
- Changes in technical inputs for conformity analysis cause changes in emissions estimates
- Emissions budget years are fixed but conformity analysis years change



Mobile Emissions Budgets

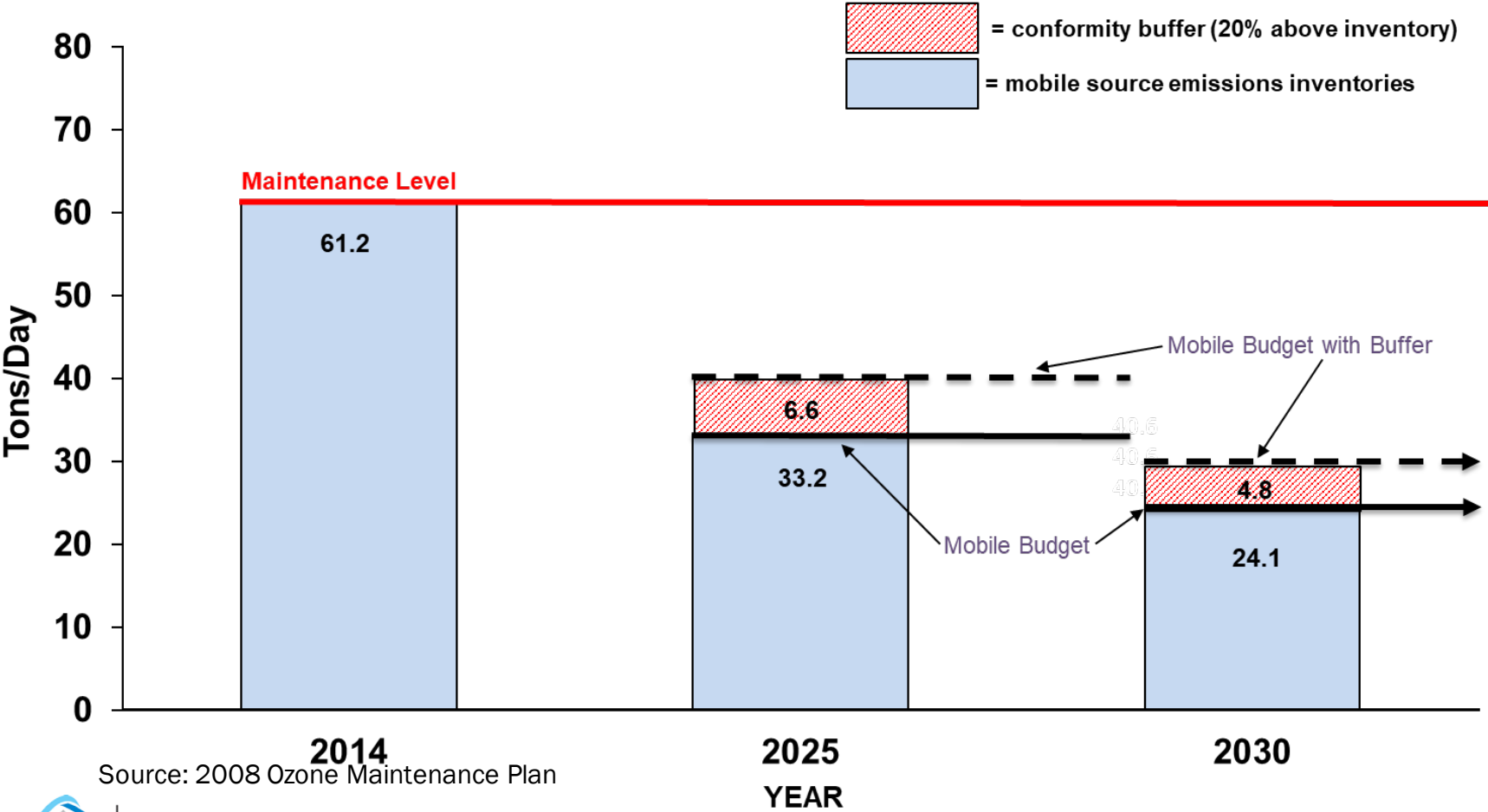
Accounting for Uncertainties in Transportation Emissions Estimates

- Federal regulations provide for establishing a “buffer”/“safety margin” in mobile emissions budgets
- The use of emissions buffers is common practice in SIPs around the country
- The region’s current mobile emissions budgets were set using a 20% buffer above the emissions inventories to accommodate the impact of uncertainties in the future transportation emissions estimates from changes to technical inputs
- The region’s NEW mobile emissions budgets should be set using the same buffer to account for future uncertainties, which could be further exacerbated with the transition to a new post-COVID normal in the next few years



SIP Development: Mobile Emissions Budgets

Volatile Organic Compounds (VOCs)

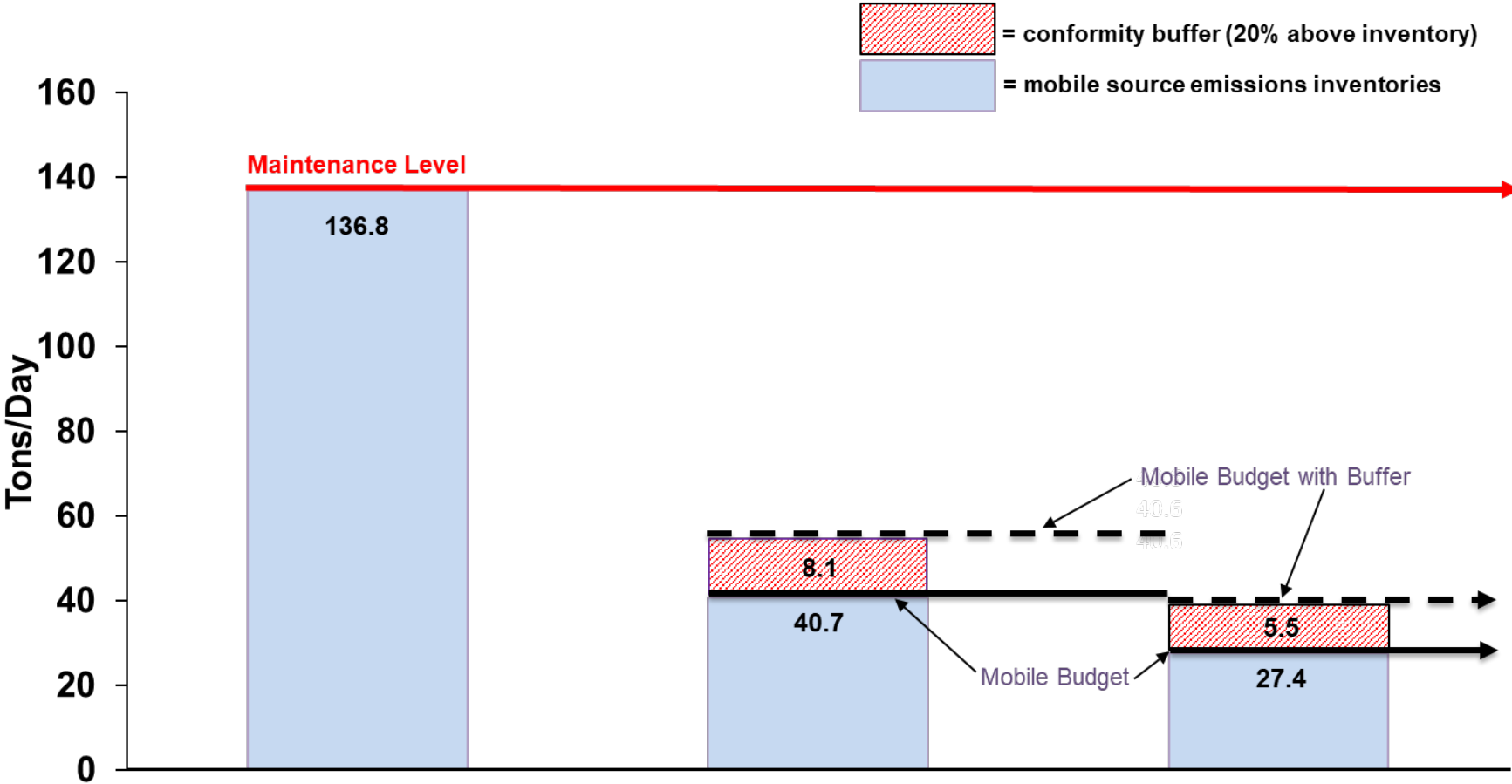


Source: 2008 Ozone Maintenance Plan



SIP Development: Mobile Emissions Budgets

Nitrogen Oxides (NOx)



Source: 2008 Ozone Maintenance Plan



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Schedule: NEW Mobile Emissions Budgets

- Spring 2022: TPB staff develops 2017 and 2023 mobile emissions inventories for Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) using EPA's latest version of Motor Vehicle Emission Simulator (MOVES3)
- Summer 2022: MWAQC TAC and Transportation Conformity Subcommittee discuss new Mobile Emissions Budgets
- Summer 2022: MWAQC coordinates with TPB to finalize new Mobile Emissions Budgets
- September 2022: MWAQC approves SIP with new Mobile Emissions Budgets for public comment
- December 2022: States submit SIP to EPA (submission deadline for Attainment SIP is January 2023)

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