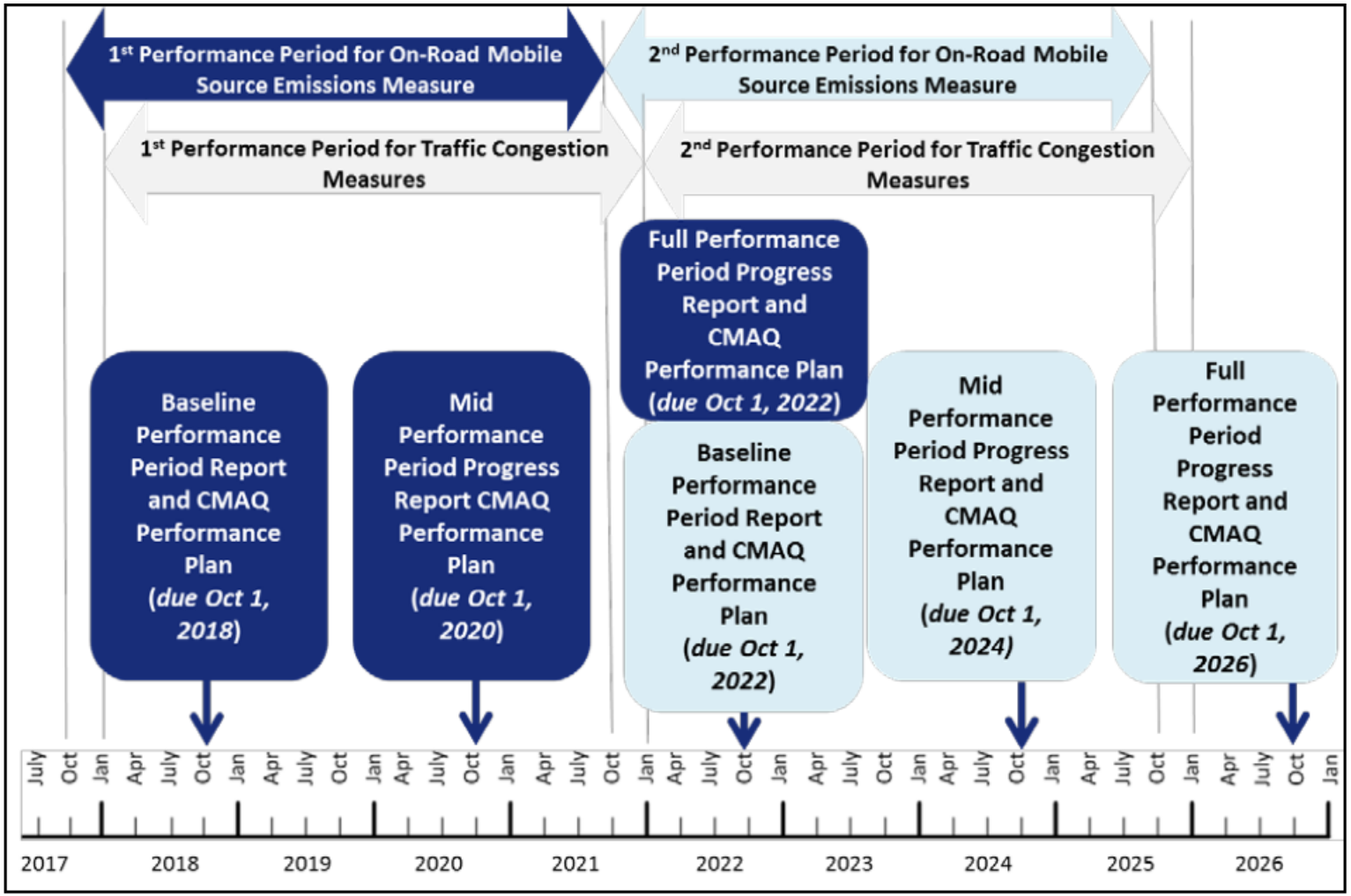
Baltimore Regional Transportation Board

# CMAQ Performance Plans

Technical Committee August 9, 2022

# CMAQ Performance Periods

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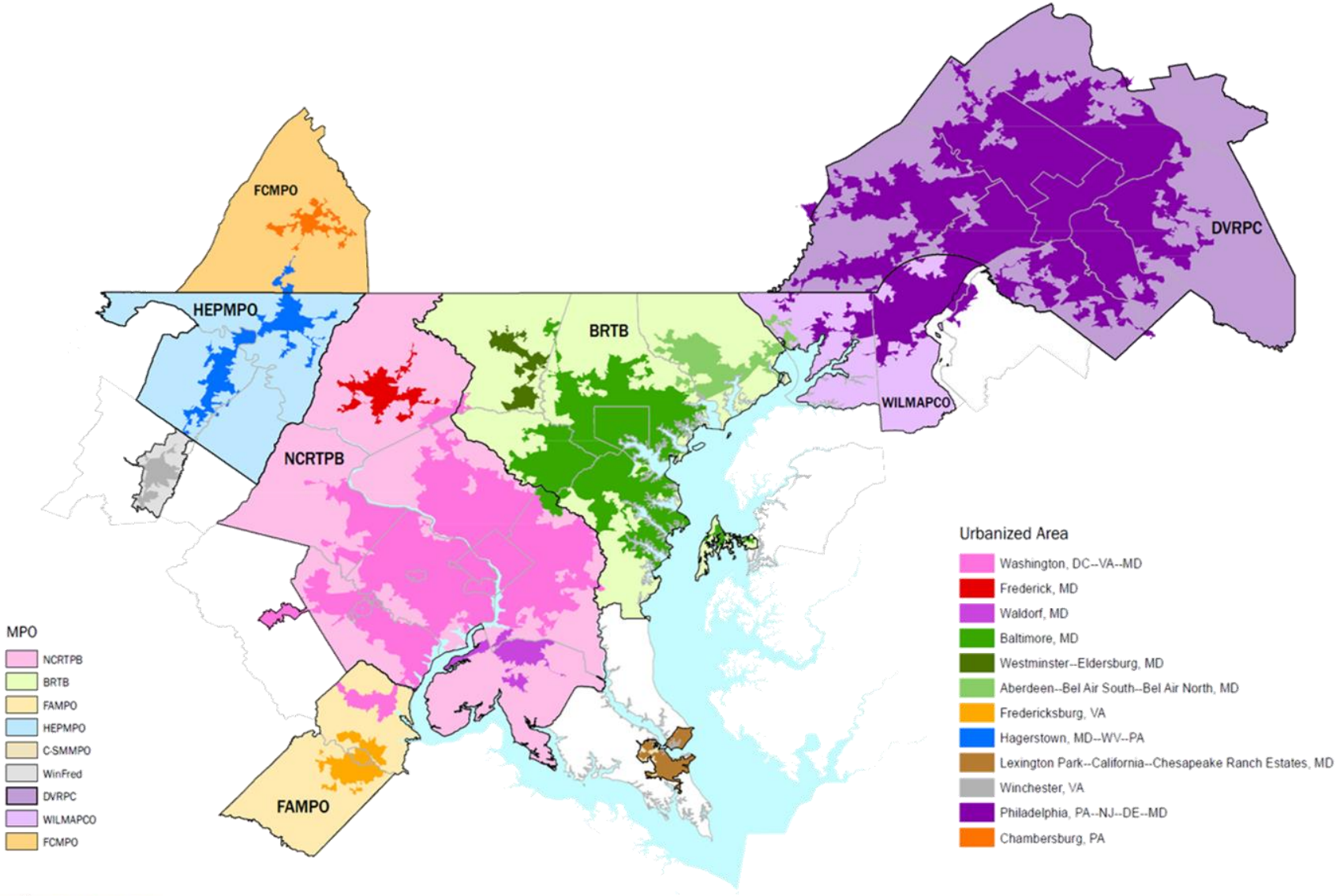
# CMAQ Performance Measures

| Performance Area | Measure |
|---|---|
| **Traffic Congestion** (23 CFR Part 490 Subpart G) | **PHED Measure:** Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita |
| | **Percent of Non-SOV Travel Measure:** Percent of Non-Single Occupancy Vehicle (SOV) Travel |
| **On-Road Mobile Source Emissions** (23 CFR Part 490 Subpart H) | **Total Emissions Reduction Measure:** 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor for all projects funded with CMAQ funds |

# FEDERAL REQUIREMENTS FOR CMAQ PROJECT FUNDING

- The CMAQ Program supports two important goals of the U.S. DOT: improving air quality and relieving congestion.
- A CMAQ project must meet three basic criteria: it must be a transportation project, it must generate an emissions reduction, and it must be in or benefit a nonattainment or maintenance area.
- In nonattainment and maintenance areas, the project also must meet the provisions contained in the transportation conformity regulations.
- Lastly, all CMAQ-funded projects need to complete NEPA requirements. Projects are not required to have quantifiable emissions reduction benefits; a qualitative assessment is sufficient.
- All projects awarded annually must be entered into the CMAQ PAS. Data for the CMAQ Emissions Reduction performance measure is taken from the quantified benefits included in the projects listed in the PAS that have been funded in the region.
- Adopted targets reflect the anticipated cumulative emissions reduction to be reported in the CMAQ PAS for new projects over the next four years.

# MPO and Urbanized Area Boundaries

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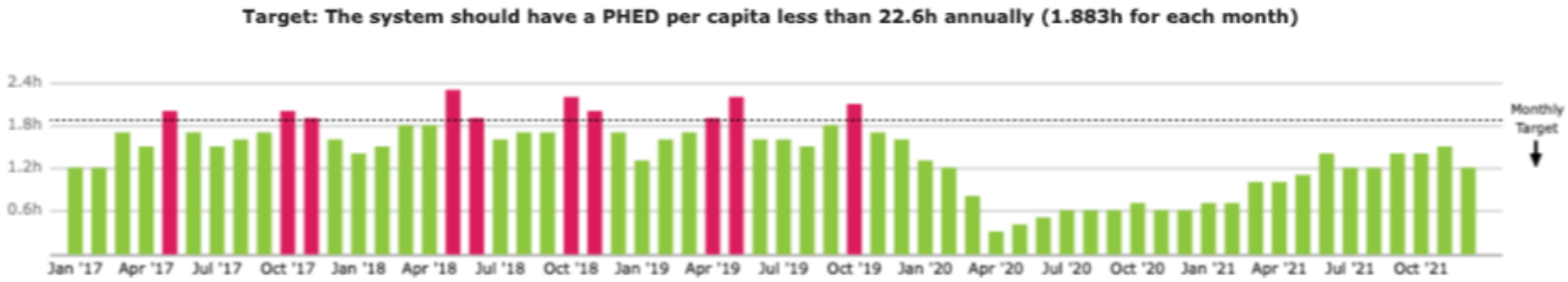
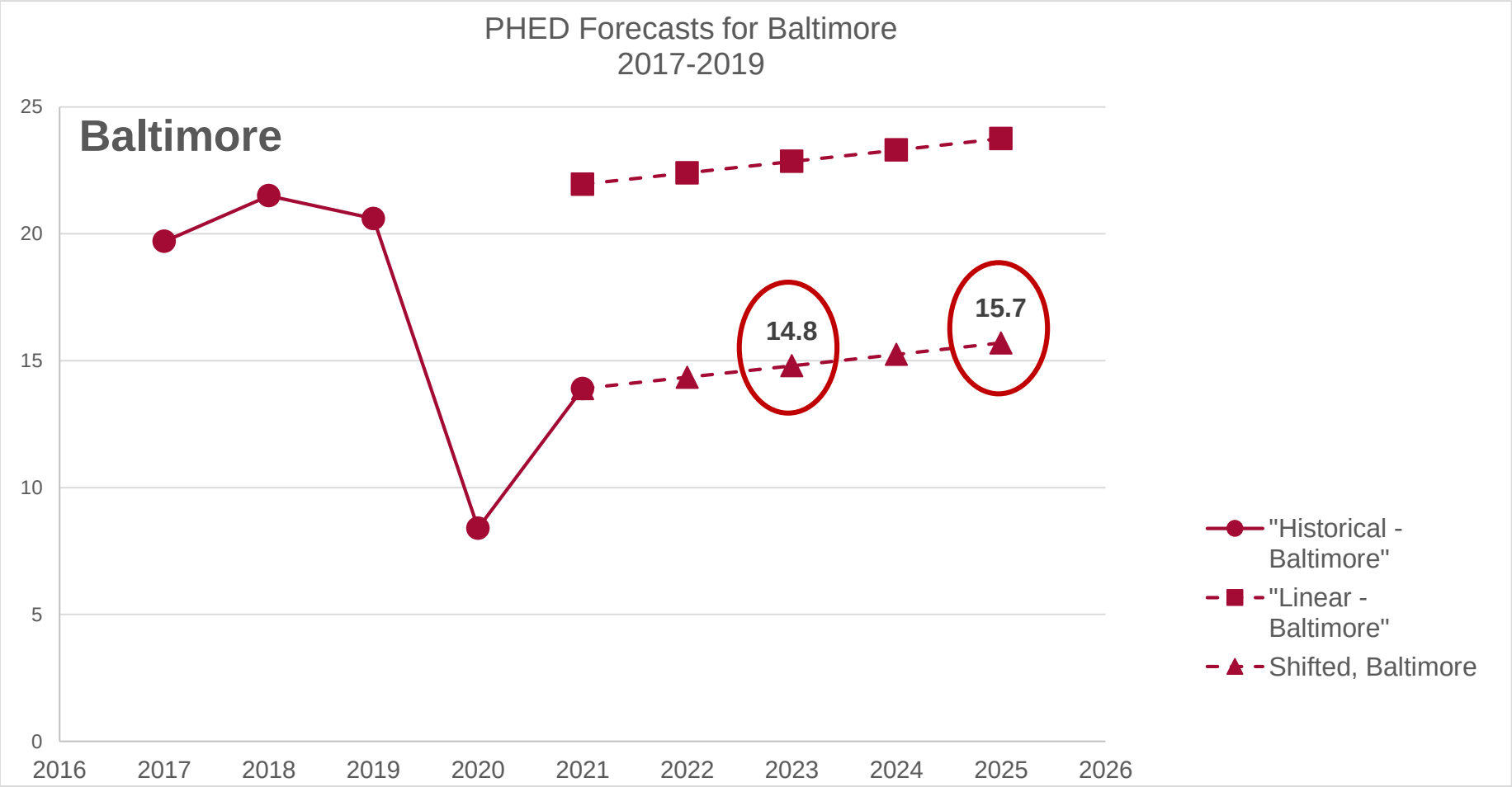
# Traffic Congestion - Peak Hour Excessive Delay (PHED): Baltimore UZA Performance




| Year's Performance | |
|---|---|
| 2017 | 19.7h |
| 2018 | 21.5h |
| 2019 | 20.6h |
| 2020 | 8.4h |
| 2021 | 13.9h |

Data Source: RITIS

# PHED: Baltimore UZA, 2 and 4-Year

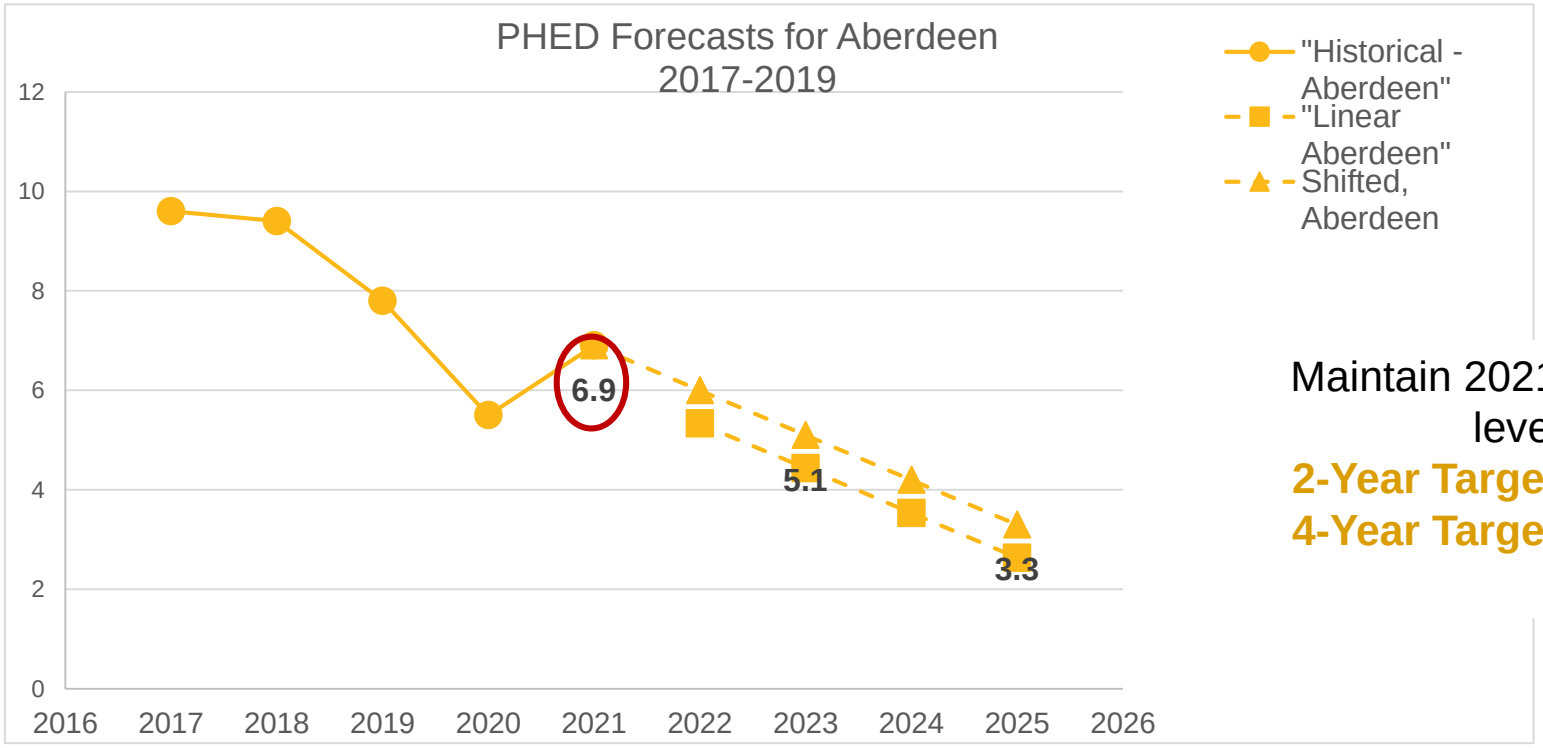



Omit 2020 and assume pre-pandemic trends will continue from current performance level. This means the slope of the pre-pandemic trend is shifted to start at observed 2021 levels.

**2-Year Target: 14.8 hours**

**4-Year Target: 15.7 hours**

# PHED: Aberdeen UZA, 2 and 4-Year

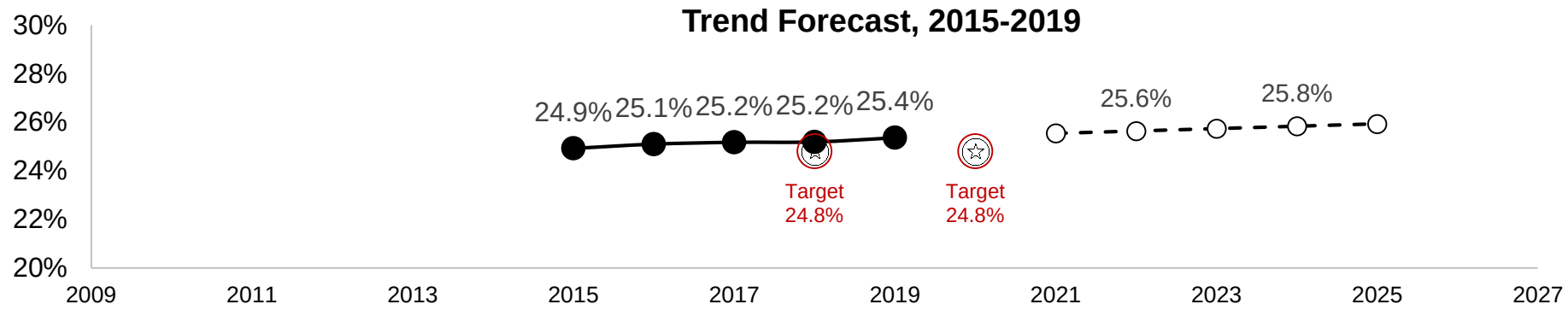


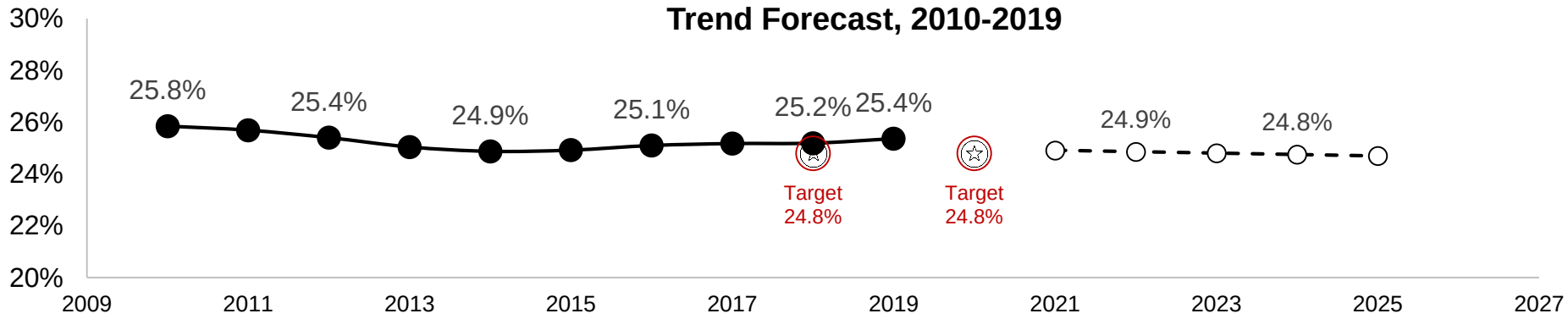

Maintain 2021 congestion levels.

**2-Year Target: 6.9 hours**

**4-Year Target: 6.9 hours**

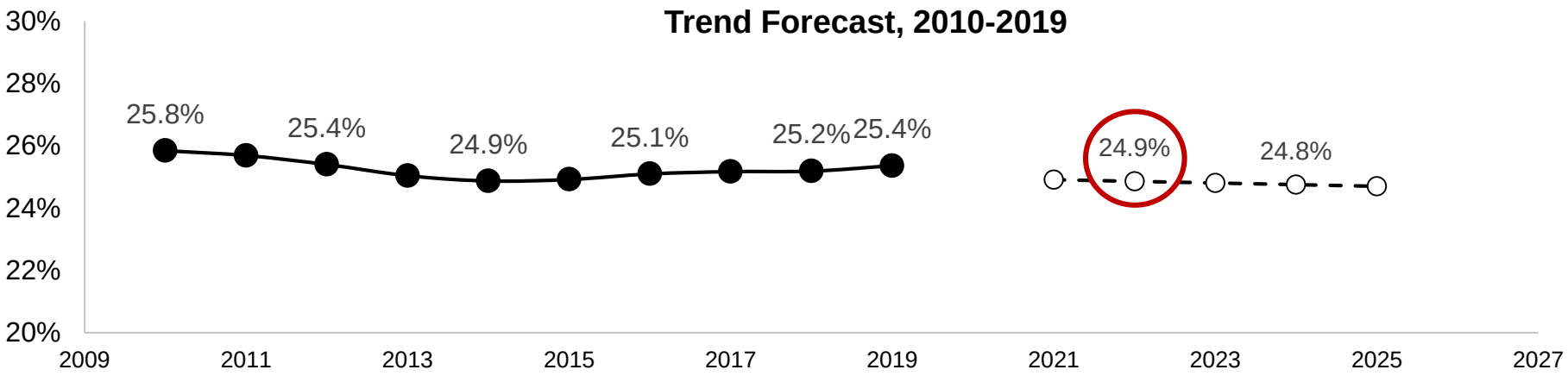
# Traffic Congestion - Non-SOV Travel: Baltimore UZA Performance

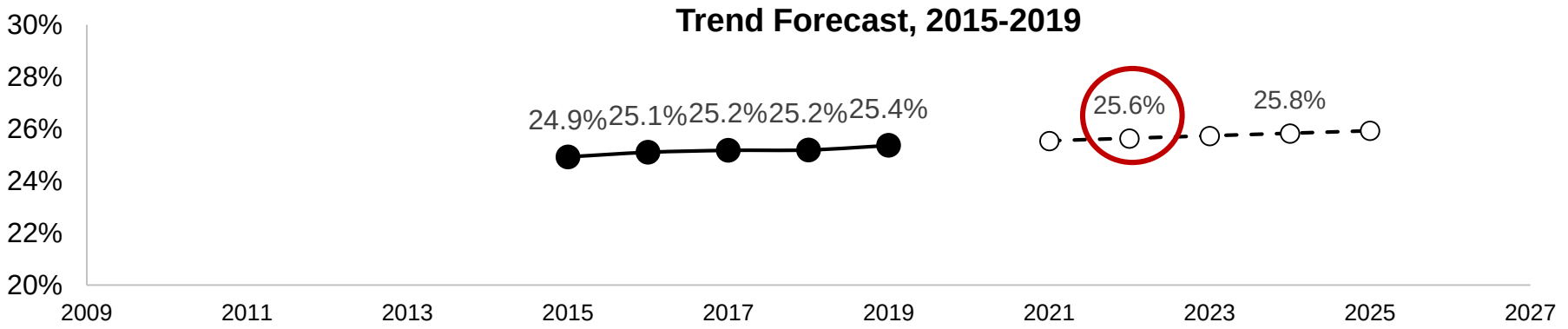



Data Source: US Census ACS

# Non-SOV Travel: Baltimore UZA, 2-Year

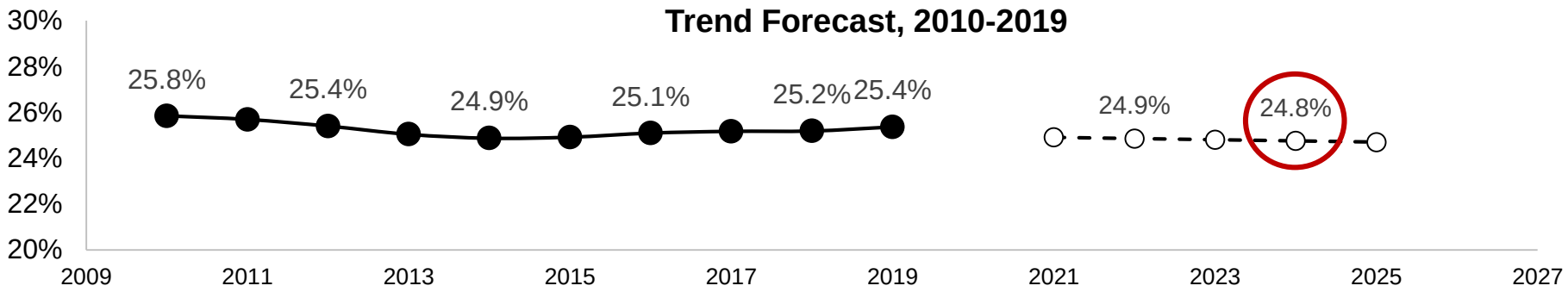


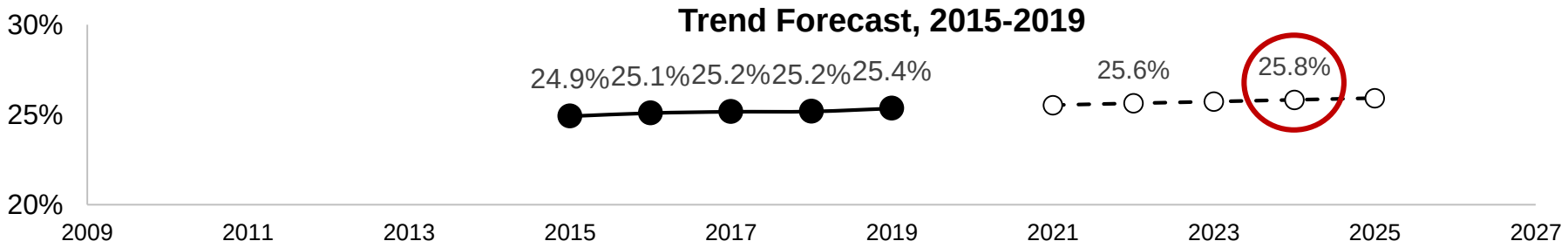




Omit 2020 and look at both long-term trend (2010-2019) and nearer-term trend (2015-2019). Take the average of the 2022 estimates for each forecasted trend.

**2-Year Target: 25.3%**

# Non-SOV Travel: Baltimore UZA, 4-Year

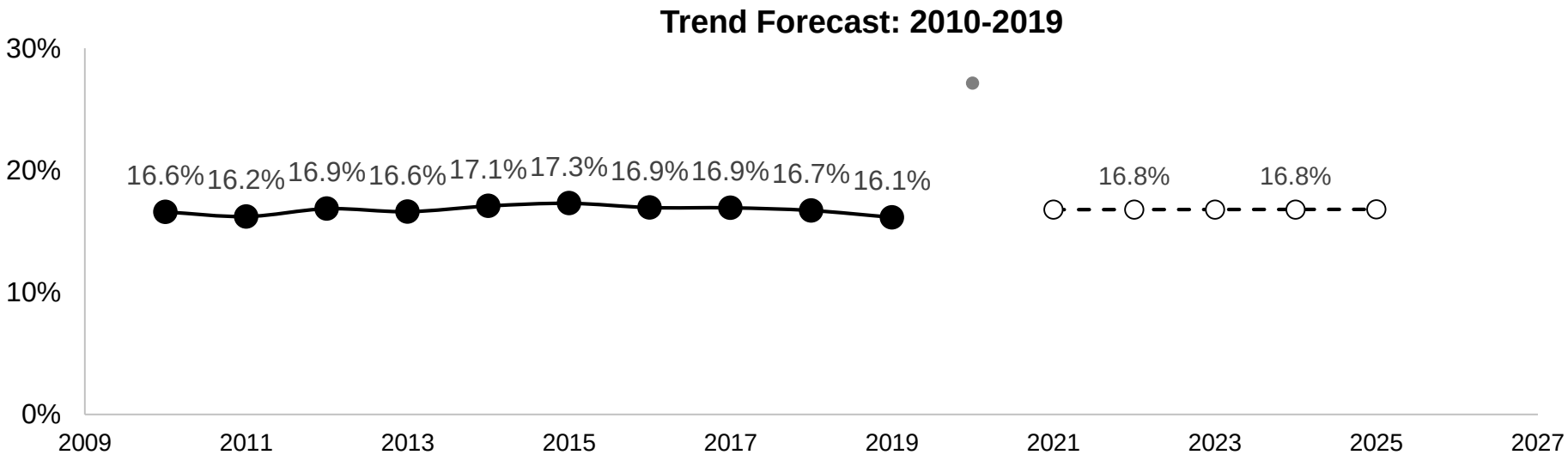



Omit 2020 and look at both long-term trend (2010-2019) and nearer-term trend (2015-2019). Take the average of the 2024 estimate for each (25.3%) and add a slight improvement (0.2%) to reflect longer term regional goals.

**4-Year Target: 25.5%**

# Non-SOV Travel: Aberdeen UZA, 2 and 4-Year

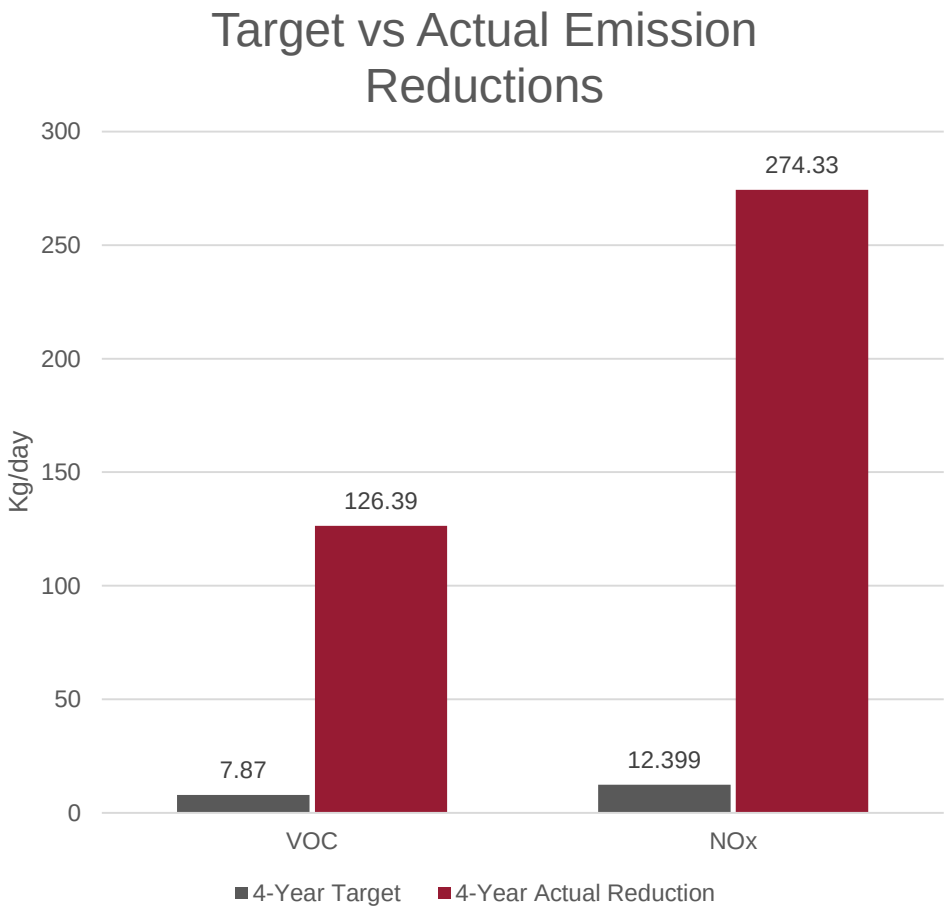



Omit 2020 and look at the long-term trend (2010-2019) since population, employment, and non-SOV trends have all been very stable over time.

**2-Year Target: 16.8%**

**4-Year Target: 16.8%**

# On-Road Mobile Source Emissions: FFY 2018-2021 Performance




- Targets
  - Met 2-year and 4-year targets for VOC & NOx
- 11 Projects with emission reductions, including
  - Adaptive "Smart" Signal Systemization
  - Bus Replacement
  - Baltimore City's Traffic Management Center

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# On-Road Mobile Source Emissions: FFY 2022-2025 Target Setting

- Historic trends
  - Emission reductions from the FFY 2014-2017 and FFY 2018-2021 performance periods
- Anticipated Programmed CMAQ projects
  - MDOT MTA – Battery Electric Buses, Purple Line Crescent Trail; LOTS Ridesharing; LOTS Guaranteed Ride Home
- Adjustments for:
  - Outlier projects - omitted
  - Altered commute patterns & COVID rebound
  - Declining emission rates of light duty vehicles

| Tools |
| --- |
| -MAQONE<br>-FHWA Emissions Calculator Toolkit<br>-TRIMMS |

# On-Road Mobile Source Emissions: FFY 2022-2025 Projects and Targets

| Baltimore Region Project Descriptions | Type of Project | FFY |
|---|---|---|
| Battery Electric Bus Procurement | Transit Improvements | 2024/2025 |
| Battery Electric Bus Charging Infrastructure | Transit Improvements | 2023/2024 |
| LOTS Ridesharing Program | Ride Sharing | 2024 |
| LOTS State of Maryland Guaranteed Ride Home – Baltimore Region | Ride Sharing | 2024 |

| State/MPO | 2-Year Target (Sum FY22-FY23) | | 4-Year Target (Sum FY22-FY25) | |
|---|---|---|---|---|
| | Sum of Emissions Benefits (kg/Day) | | Sum of Emissions Benefits (kg/Day) | |
| | VOC | NOX | VOC | NOX |
| BRTB | 0.87 | 6.64 | 13.63 | 43.27 |
| TPB | 0.21 | 1.71 | 6.24 | 15.19 |
| WILMAPCO | 0.04 | 0.10 | 0.07 | 0.18 |
| **MDOT (statewide)** | **1.12** | **8.45** | **19.94** | **58.64** |

# DRAFT 2022 Milestone Dates

| Task | Target Date |
|---|---|
| ICG and TC **review** Congestion Targets and methodology, and draft Performance Report and Plan | July |
| ICG and TC **endorse** targets, Performance Report, and Plan | August |
| BRTB endorse targets, Performance Report, and Plan | August |
| BMC **submit** Performance Report and Plan to MDOT | Late August |

# For More Information

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