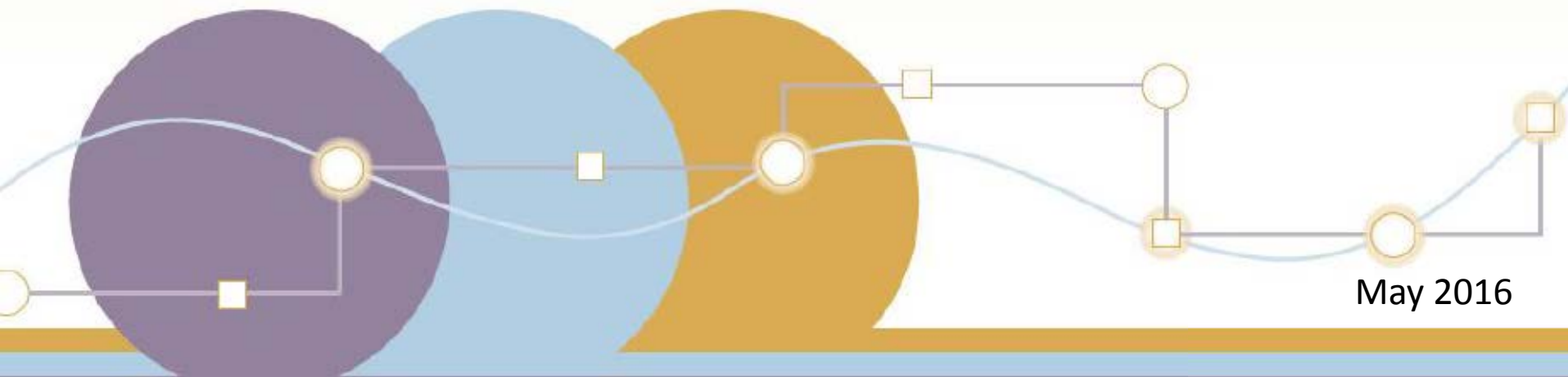
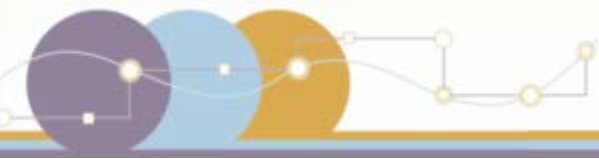


National Performance Management Measures NPRM

**Assessing Performance of the National Highway System,
Freight Movement on the Interstate System, and the
Congestion Mitigation and Air Quality Improvement (CMAQ) Program**

Subparts G and H: CMAQ Traffic Congestion and On-Road Mobile Source Emissions



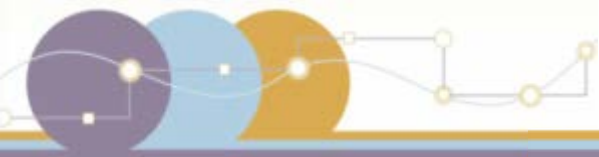


Opening Comments and Introductions

Gloria M. Shepherd

Associate Administrator

Office of Planning, Environment, & Realty



Today's Webinar

Part 1

Introduction to Transportation Performance Management

Pete Stephanos, *Office of Infrastructure*

Part 2

Proposed Performance Measures and Concepts

Pete Stephanos, *Office of Operations*

Part 3

Calculating Performance Measures – Subpart G: Traffic Congestion Measure

Rich Taylor, *Office of Operations*

Part 4

Calculating Performance Measures – Subpart H: On-Road Mobile Source Emissions Measure

Emily Biondi, *Office of Planning, Environment, & Realty*

Part 5

Target Establishment and Reporting, and RIA

Pete Stephanos,, *Office of Infrastructure*

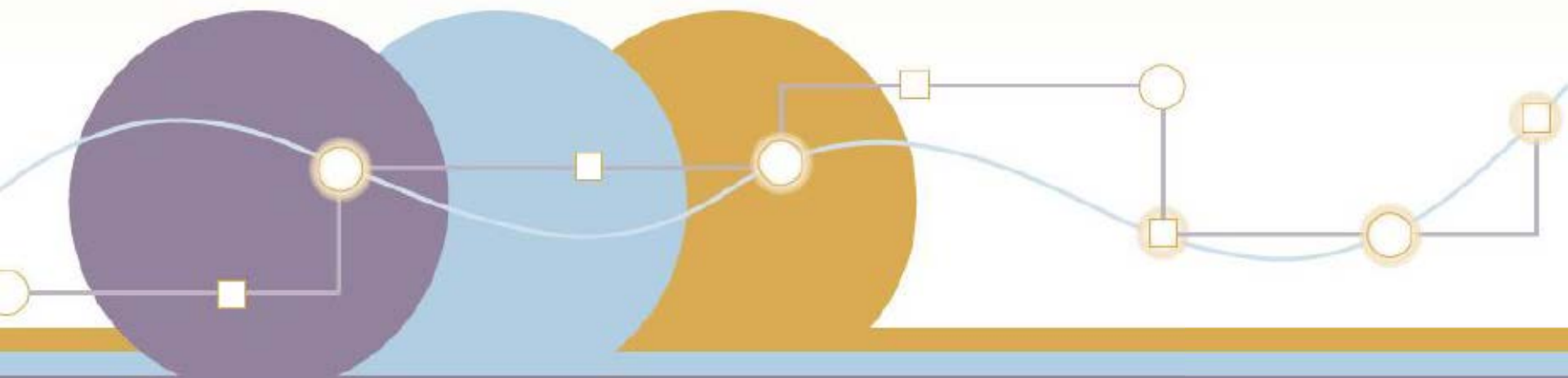
Part 6

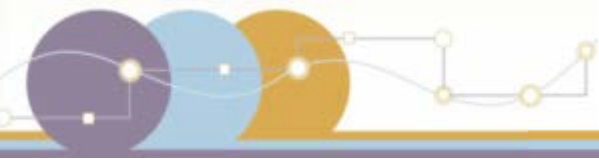
Summary and Q&A

Pete Stephanos, *Office of Infrastructure*

Part 1

Introduction to Transportation Performance Management





Why Are We Doing Performance Management?

- To transform the Federal-aid Highway Program and to provide a means to the **most efficient investment** of Federal transportation funds
- To refocus on **national transportation goals**
- To increase the **accountability and transparency** of the Federal-aid Highway Program
- To **improve decision-making** through performance-based planning and programming

FHWA TPM Rulemaking Schedule

Performance Area	NPRM	Comments Due	Final Rule
Safety Performance Measures	March 11, 2014	<u>Closed</u> June 30, 2014	Published March 15, 2016
Highway Safety Improvement Program	March 28, 2014	<u>Closed</u> June 30, 2014	Published March 15, 2016
Statewide and Metro Planning; Non-Metro Planning	June 2, 2014	<u>Closed</u> October 2, 2014	Anticipated May 2016
Pavement and Bridge Performance Measures	January 5, 2015	<u>Closed</u> May 8, 2015	Anticipated October 2016
Highway Asset Management Plan	February 20, 2015	<u>Closed</u> May 29, 2015	Anticipated October 2016
Performance of the NHS, Freight, and CMAQ Measures	April 22, 2016	<u>Open</u> until August 20, 2016 120 days	TBD



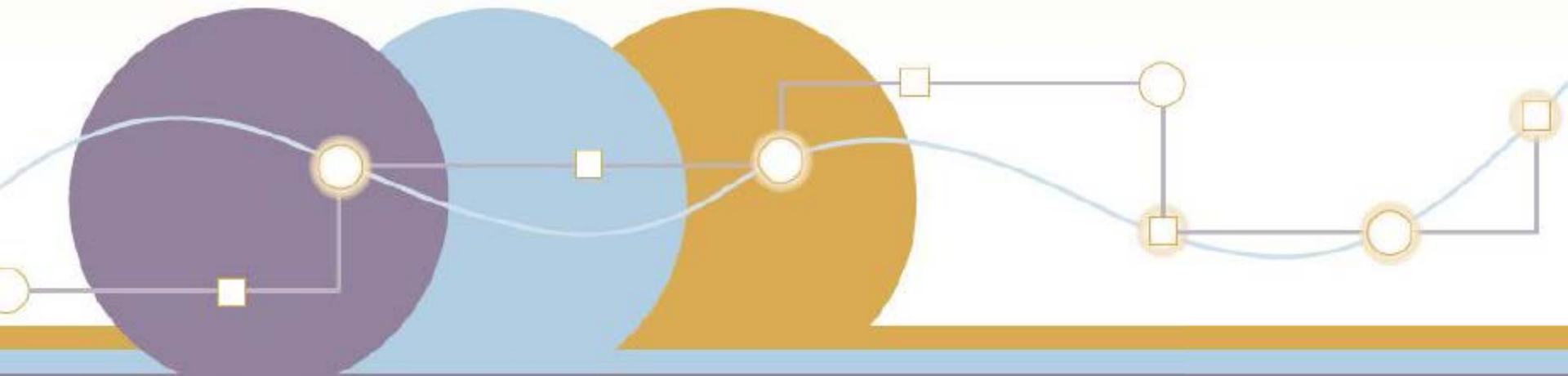
Summary of Proposed New 23 CFR Part 490

- Subpart A:** General Information, Target Establishment, Reporting, and NHPP and NHFP Significant Progress Determination
- Subpart B:** Measures to Assess the Highway Safety Improvement Program (HSIP)
- Subpart C:** Measures to Assess Pavement Condition
- Subpart D:** Measures to Assess Bridge Condition
- Subpart E:** Measures to Assess Performance of the National Highway System (NHS)
- Subpart F:** Measures to Assess Freight Movement on the Interstate System
- Subpart G:** Measure to Assess the CMAQ Program – Traffic Congestion
- Subpart H:** Measures to Assess the CMAQ Program – On-Road Mobile Source Emissions

Part 2

Proposed Performance Measures and Concepts

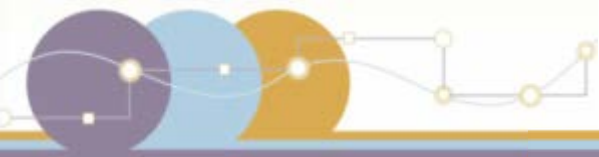
Key Concepts, Performance Measure Data Requirements, and Applicability





Subparts G and H: Measures to Assess the CMAQ Program

1 CMAQ – Traffic Congestion (Subpart G)	Annual Hours of Excessive Delay Per Capita
2 CMAQ – On-Road Mobile Source Emissions (Subpart H)	2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor



Metrics, Thresholds, and Measures

Each Reporting Segment

METRIC

A quantifiable indicator of performance or condition

THRESHOLD

The level of performance for a specific reporting segment that would determine its inclusion in the measure

Entire Applicable Network

MEASURE

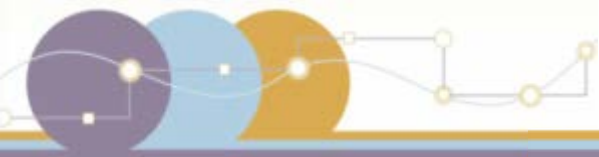
An expression based on a metric, used to establish targets and to assess progress towards achieving the established target

Example

Average truck speed =
52.30 mph

Uncongested =
**Avg truck speed >
50.00 mph**

2,510 uncongested miles
3,000 total miles =
83.7% uncongested



Measures vs. Targets

Entire Applicable Network

MEASURE

An expression based on a metric, used to establish targets and to assess progress towards achieving the established target

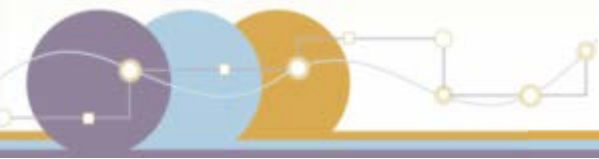
TARGET

A quantifiable level of performance or condition, as a value for a measure, to be achieved within a time period required by FHWA

Example

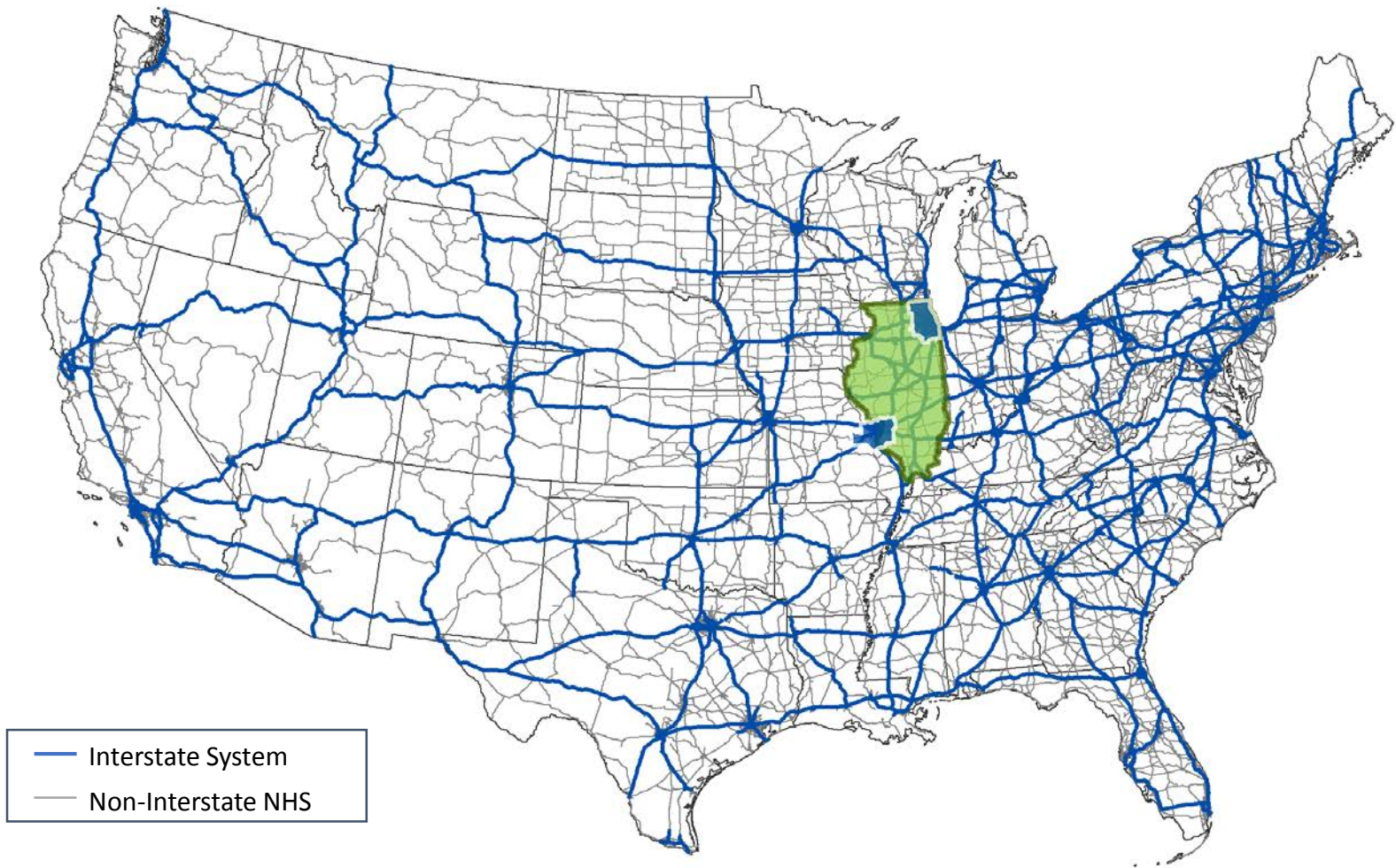
83.7% total Interstate miles uncongested

Target: 80.0% Uncongested
Actual: 83.7% Uncongested
✓ **Target Achieved**

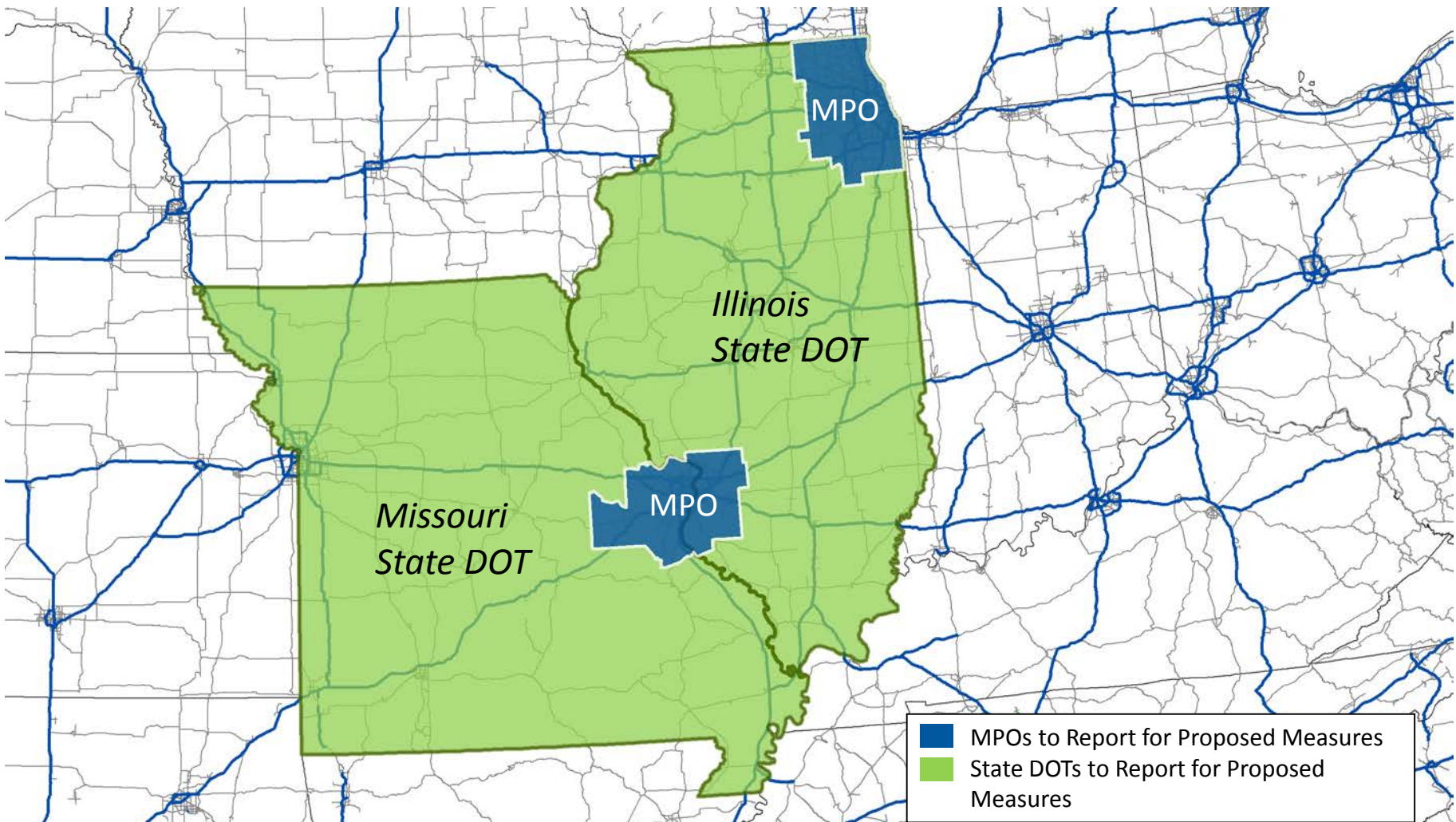


Geographic Areas used by Proposed Measures

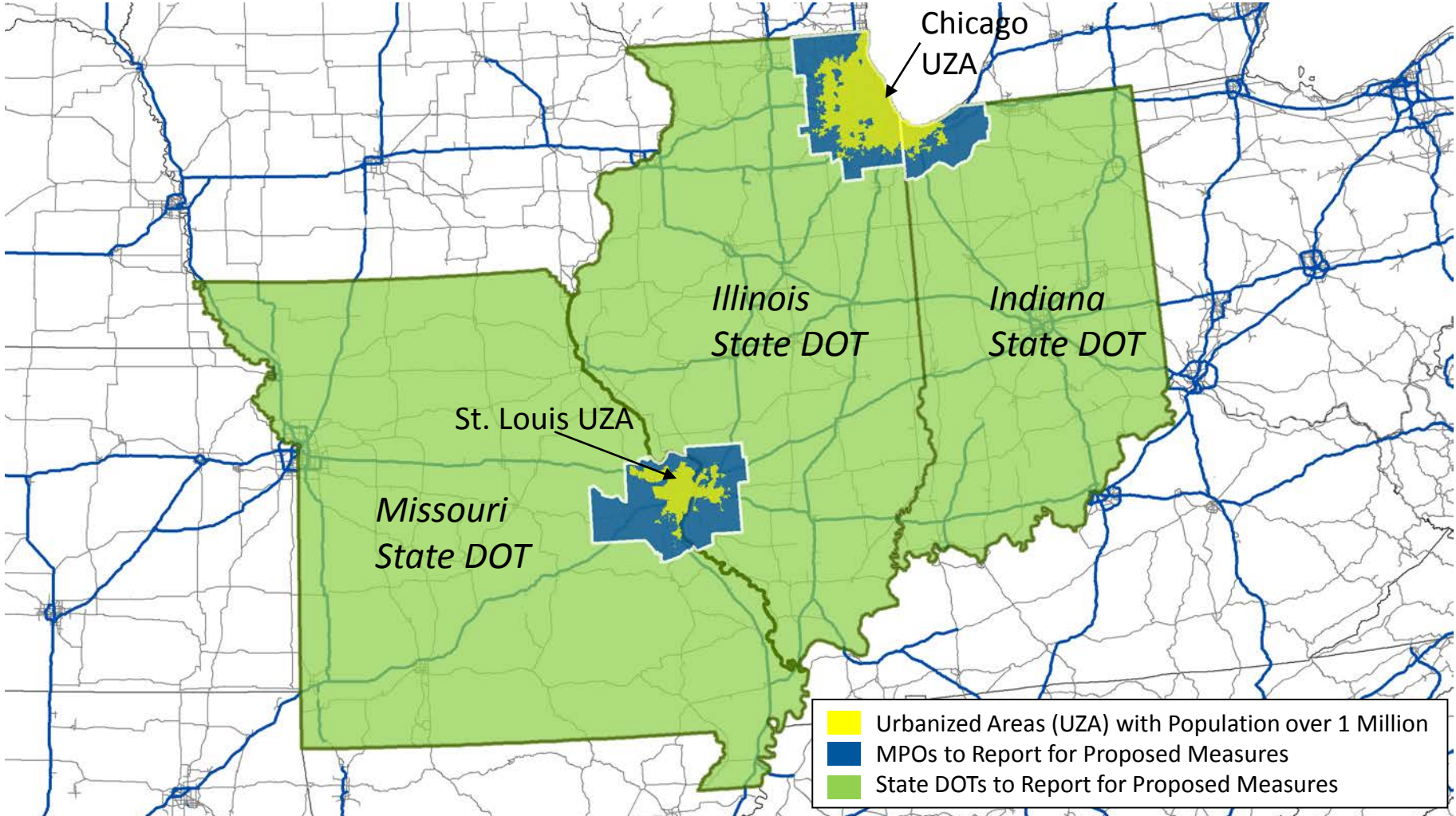
Geographic Areas used by Proposed Measures

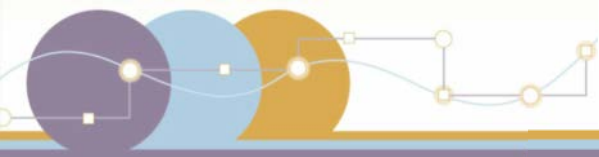


Geographic Areas used by Proposed Measures

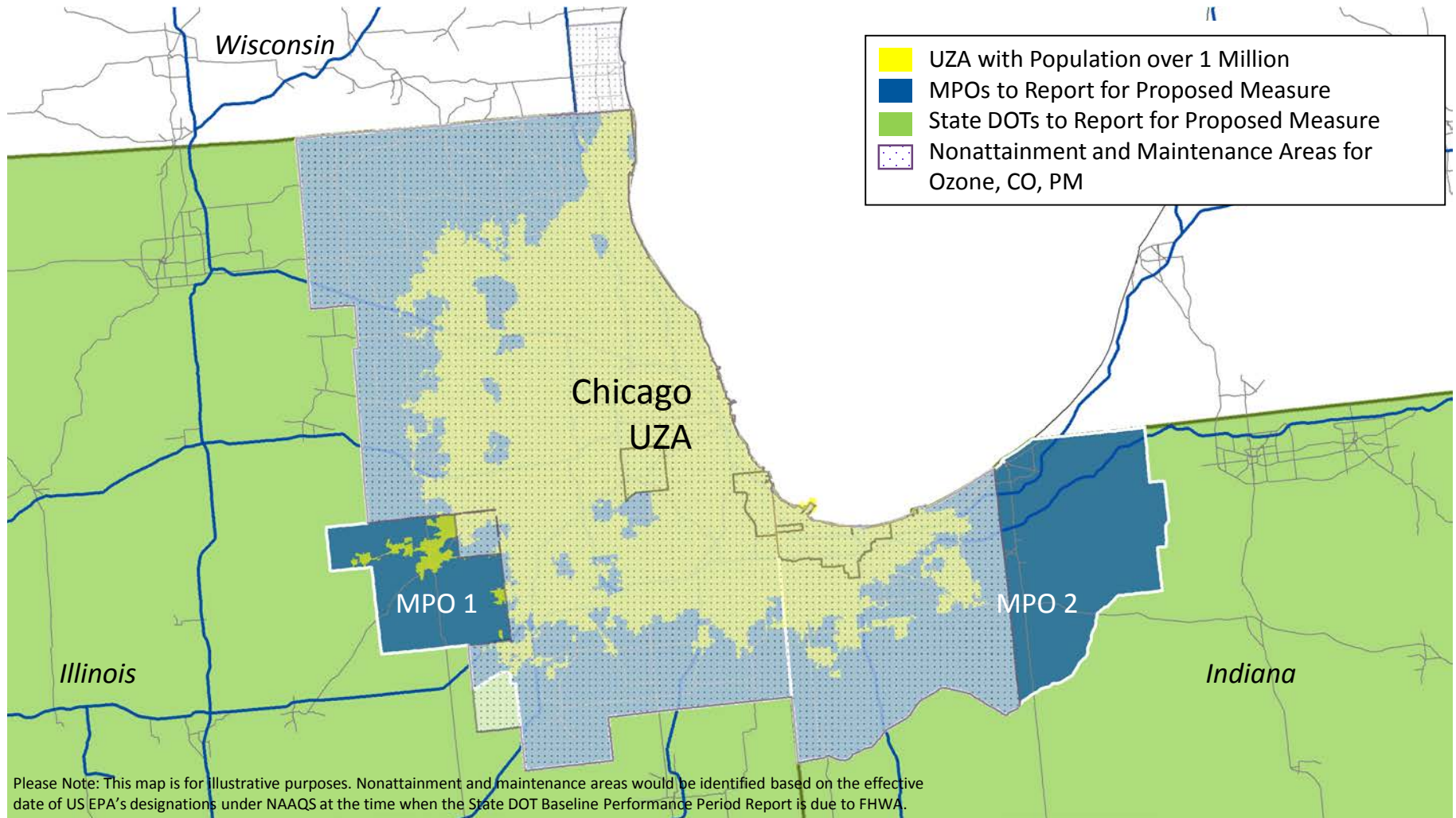


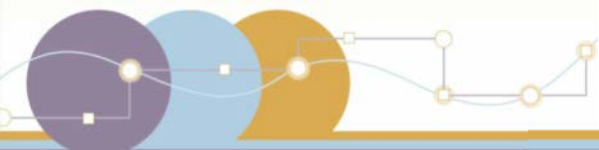
Geographic Areas: Traffic Congestion Measure



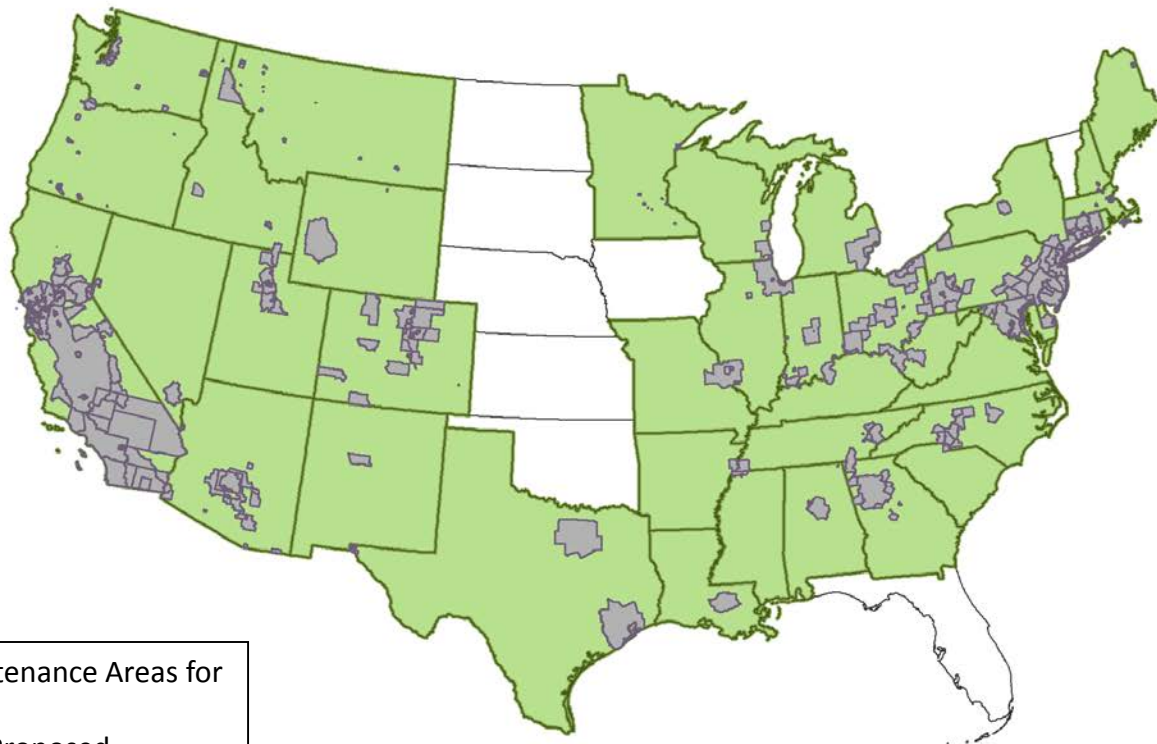




Geographic Areas: Traffic Congestion Measure





Geographic Area: On-Road Mobile Source Emissions Measure



	Nonattainment and Maintenance Areas for Ozone, CO, PM
	State DOTs to Report for Proposed Measure

Please Note: This map is for illustrative purposes. Nonattainment and maintenance areas would be identified based on the effective date of US EPA's designations under NAAQS at the time when the State DOT Baseline Performance Period Report is due to FHWA.

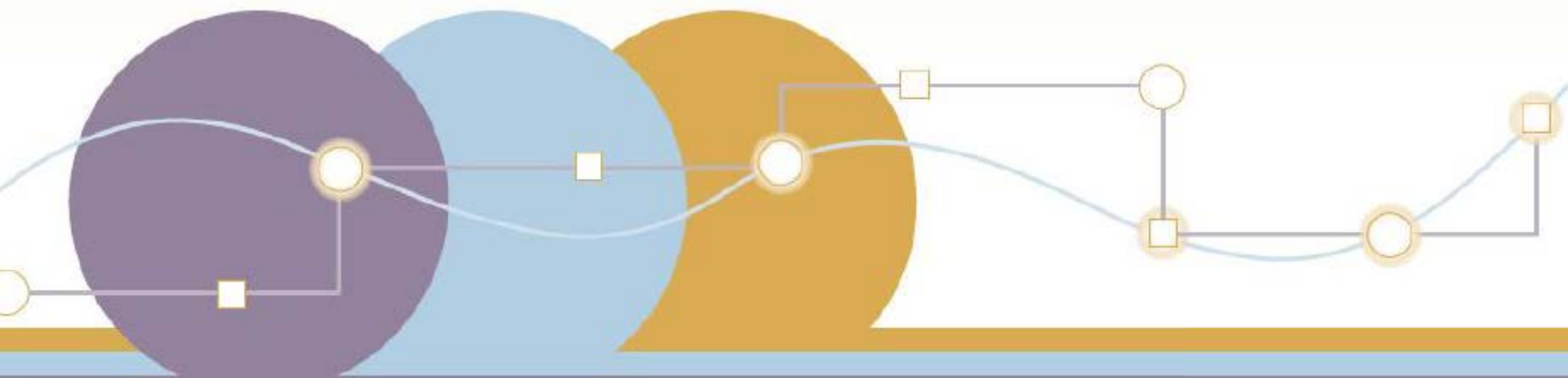


Data Sources for Proposed Performance Measures

Data Sources	Applicable Measure(s)	Relevant Data
National Performance Management Research Data System (NPMRDS) or equivalent data set	<ul style="list-style-type: none"> Subpart G: Traffic Congestion 	<ul style="list-style-type: none"> Travel times NHS travel time segments
US Decennial Census	<ul style="list-style-type: none"> Subpart G: Traffic Congestion 	<ul style="list-style-type: none"> Urbanized area populations
Highway Performance Monitoring System (HPMS)	<ul style="list-style-type: none"> Subpart G: Traffic Congestion 	<ul style="list-style-type: none"> Urbanized area boundaries AADT/volumes (if applicable)
EPA Green Book	<ul style="list-style-type: none"> Subpart G: Traffic Congestion Subpart H: On-Road Mobile Source Emissions 	<ul style="list-style-type: none"> Nonattainment and maintenance areas for applicable criteria pollutants
CMAQ Public Access System	<ul style="list-style-type: none"> Subpart H: On-Road Mobile Source Emissions 	<ul style="list-style-type: none"> Estimated emission reductions by project

Part 3

Calculating Performance Measures Subpart G: Traffic Congestion Measure





Measure to Assess CMAQ – Traffic Congestion (Subpart G)

Each Reporting Segment

Entire Applicable Network

METRIC

Total excessive delay
(vehicle-hours) for each
reporting segment on
the NHS

THRESHOLD

Excessive delay travel
time at threshold speed:
a) Interstates/highways/
expressways: 35 mph
b) Principal arterials and
all other roads:
15 mph

MEASURE

Annual hours of
excessive delay per
capita

Example

Total excessive delay, single
0.5 mi. Interstate segment:
**863.025 vehicle-
hours**

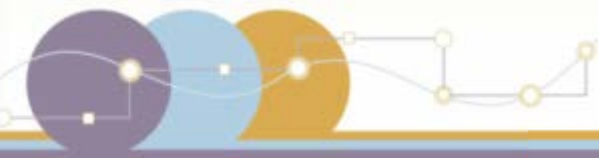
Threshold for 0.5 mi.
Interstate segment:
51 seconds

4.46M hrs excessive delay/
1.05M population =
4.3 hours per capita



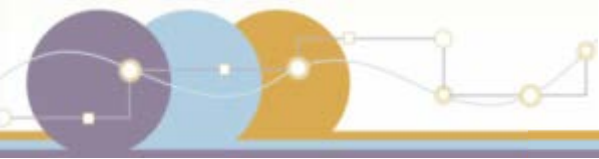
What is the National Performance Management Research Data Set (NPMRDS)?

- Is a data set provided by FHWA **monthly to State DOTs and MPOs**
- Includes **travel times derived from all traffic using the highway system**, in 5-minute bins
- Includes a breakdown of travel times of **freight vehicles and all traffic (freight and passenger vehicles)**
- Uses travel times that are reported via vehicle probes on **contiguous segments of roadway** covering the entire mainline NHS
- **Uses vehicle probes** that could include mobile phones, vehicle transponders, and portable navigation devices

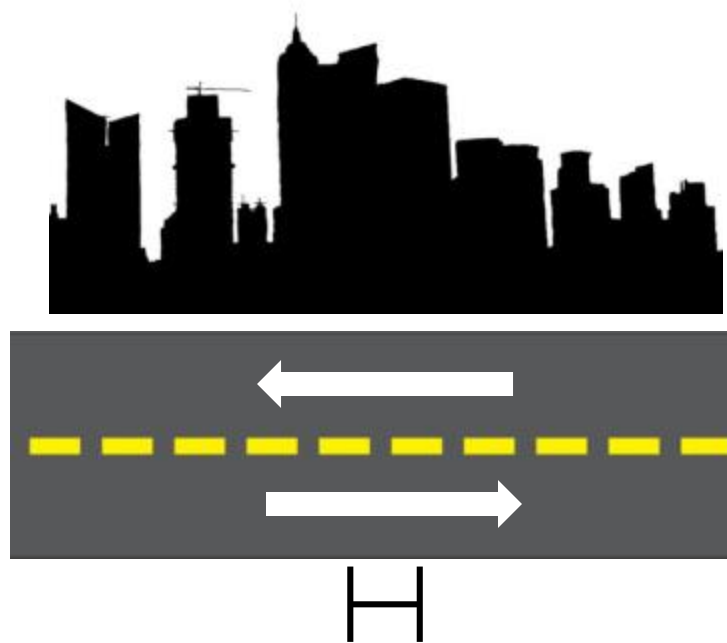


Equivalent Data Set Requirements

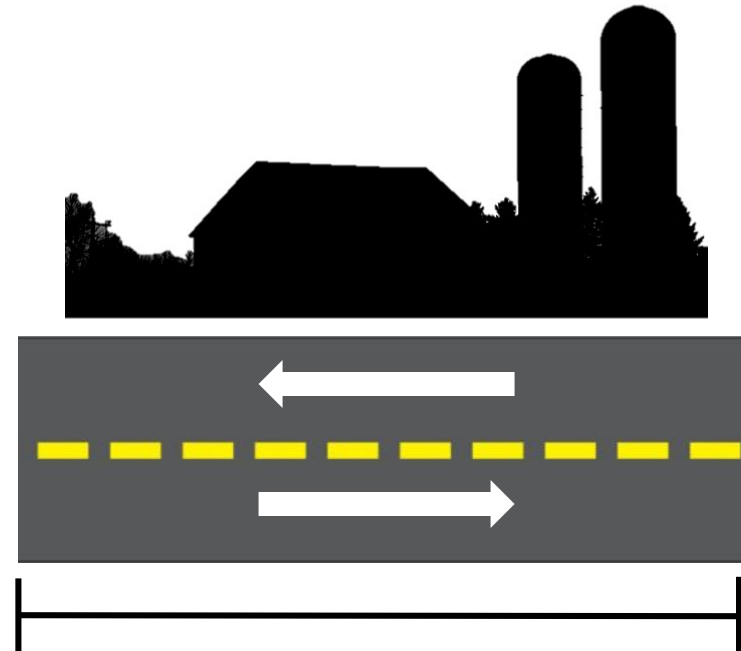
- Include contiguous segments that cover the full NHS, as defined in 23 U.S.C. 103, within the State boundary and/or MPA
- Include average travel times for at least the same number of 5-minute intervals and the same locations that would be available in the NPMRDS
- Be populated with actual measured vehicle travel times and shall not be populated with travel times derived from imputed methods (historic travel times or other estimates)
- For each segment at 5-minute intervals throughout a full day (24 hours) for each day of the year, include the average travel time, recorded to the nearest second, representative of at least one of the following:
 - All traffic on each segment of the NHS (freight and passenger)
 - Freight vehicle traffic on each segment of the Interstate System



Reporting Segments – Mainline NHS

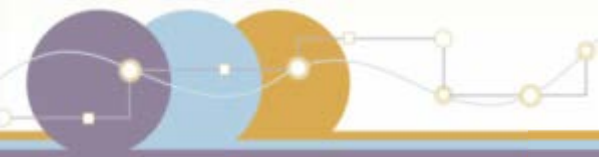


Maximum
Urban Length
½ mile*



Maximum
Rural Length
10 miles*

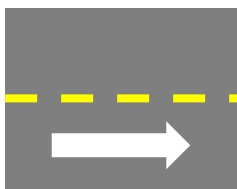
**Unless an individual Travel Time Segment is longer*



Data Requirements

Assemble travel times for all 5-minute bins

Single Road Segment
(eastbound travel)



All 5-min bins in a 24-hour
period



Full Year (Jan 1-Dec 31)



	5-minute bins (105,120 per year)	Avg Travel Time (EB)
		All Traffic (sec)
Feb 3	6:00 – 6:05am	47
Feb 3	6:05 – 6:10am	55
Feb 3	6:10 – 6:15am	--
Feb 3	6:15 – 6:20am	53
Feb 3	6:20 – 6:25am	52
Nov 7	7:25 – 7:30pm	51
Nov 7	7:30 – 7:35pm	53
Nov 7	7:35 – 7:40pm	54
Nov 7	7:40 – 7:45pm	50
Nov 7	7:45 – 7:50pm	57



Data Requirements

Assemble hourly volumes (actual or estimates)

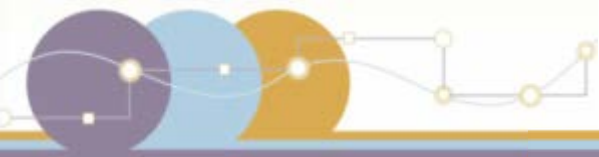
State DOTs would be able to use one of two methods to count or estimate hourly traffic volumes for each reporting segment:

1. Hourly traffic counts collected by continuous count stations
2. Average Annual Daily Traffic (AADT) reported to the HPMS



Continuous Count Station (source: [AZ DOT](#))

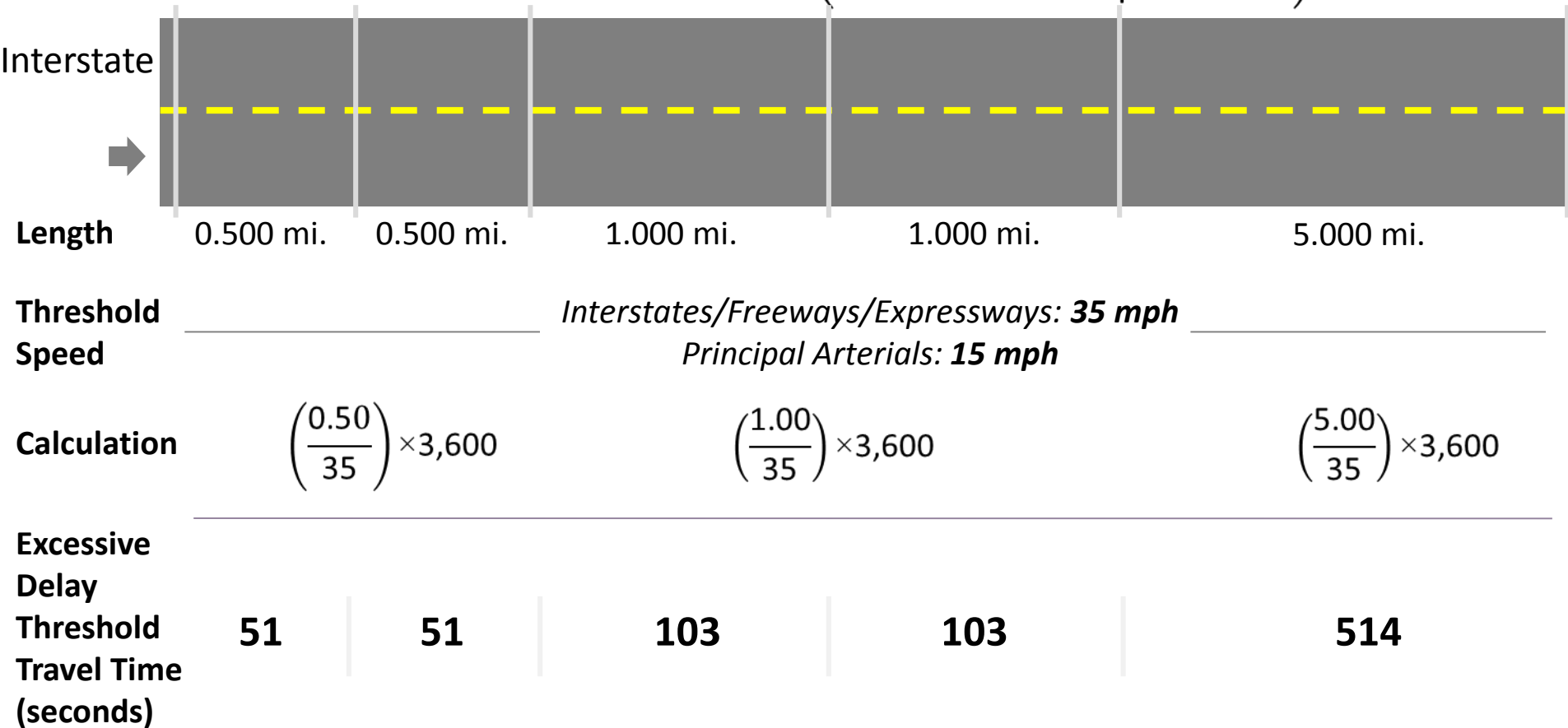
Roadway	Exit #	AADT	Mile Marker
I-27	44	54,000	46.5
I-27	49	51,000	51.0
I-27	53	47,000	53.5
I-27	54	36,000	56.5
I-27	59	35,000	63.0
I-27	67	29,000	68.0
...			

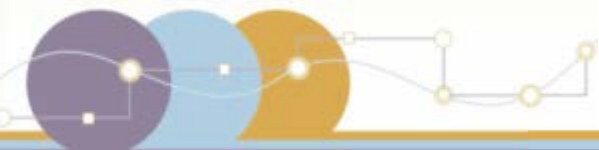


Calculating Excessive Delay Metric

Determine Excessive Delay Threshold Travel Time

$$\text{Excessive Delay Threshold Travel Time} = \left(\frac{\text{Travel Time Segment Length}}{\text{Threshold Speed}} \right) \times 3,600$$

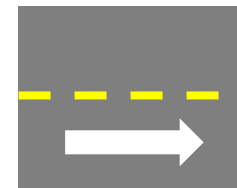




Calculating Total Excessive Delay Metric

Determine travel time segment delay for each 5-minute bin for each reporting segment

5-minute bins (105,120 per year)		Travel Times (sec)	Threshold (sec)	Travel Time Segment Excessive Delay (sec)
Feb 3	6:00 – 6:05am	47	51	0
Feb 3	6:05 – 6:10am	55		4
Feb 3	6:10 – 6:15am	--		--
Feb 3	6:15 – 6:20am	53		2
Feb 3	6:20 – 6:25am	52		1
Nov 7	7:25 – 7:30pm	51	51	0
Nov 7	7:30 – 7:35pm	53		2
Nov 7	7:35 – 7:40pm	54		3
Nov 7	7:40 – 7:45pm	50		0
Nov 7	7:45 – 7:50pm	57		6



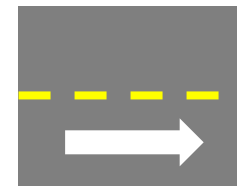
0.500 mi. Segment
Excessive Delay Threshold
Travel Time = 51 seconds



Calculating Total Excessive Delay Metric

Determine travel time segment delay for each 5-minute bin for each reporting segment

5-minute bins (105,120 per year)		Travel Times (sec)	Threshold (sec)	Travel Time Segment Excessive Delay (sec)
Feb 3	6:00 – 6:05am	47	51	0
Feb 3	6:05 – 6:10am	55		4
Feb 3	6:10 – 6:15am	--		--
Feb 3	6:15 – 6:20am	53		2
Feb 3	6:20 – 6:25am	52		1
Nov 7	7:25 – 7:30pm	51	51	0
Nov 7	7:30 – 7:35pm	53		2
Nov 7	7:35 – 7:40pm	54		3
Nov 7	7:40 – 7:45pm	50		0
Nov 7	7:45 – 7:50pm	57		6



0.500 mi. Segment
Excessive Delay Threshold
Travel Time = 51 seconds

Travel Time Segment Delay is calculated to the nearest whole second, and is capped at a maximum of 300 seconds.



Calculating Total Excessive Delay Metric

Convert to hours and multiply by vehicle counts to calculate total delay

5-minute bins (single hour)		Travel Time Segment Delay (sec)	×	Vehicle Count (hourly vol./ 12)	÷ 3600 =	Total Delay (vehicle-hrs.)
Feb 3	6:00 – 6:05am	0				375.0
Feb 3	6:05 – 6:10am	4		375.0		0.417
Feb 3	6:10 – 6:15am	--				
Feb 3	6:15 – 6:20am	2		375.0		0.208
Feb 3	6:20 – 6:25am	1		375.0		0.104
×						
Nov 7	7:25 – 7:30pm	0		325.0		
Nov 7	7:30 – 7:35pm	2		325.0		0.181
Nov 7	7:35 – 7:40pm	3		325.0		0.271
Nov 7	7:40 – 7:45pm	0		325.0		
Nov 7	7:45 – 7:50pm	6		325.0		0.542
÷ 3600 =						



Calculating Total Excessive Delay Metric

Sum excessive delay for the full year, for each travel time segment

	5-minute bins (single hour)	Total Delay (vehicle-hours)
Feb 3	6:00 – 6:05am	
Feb 3	6:05 – 6:10am	0.185
Feb 3	6:10 – 6:15am	
Feb 3	6:15 – 6:20am	0.093
Feb 3	6:20 – 6:25am	0.046

Nov 7	7:25 – 7:30pm	
Nov 7	7:30 – 7:35pm	0.106
Nov 7	7:35 – 7:40pm	0.160
Nov 7	7:40 – 7:45pm	
Nov 7	7:4 – 7:50pm	0.319

Total excessive delay for each reporting segment on the NHS=

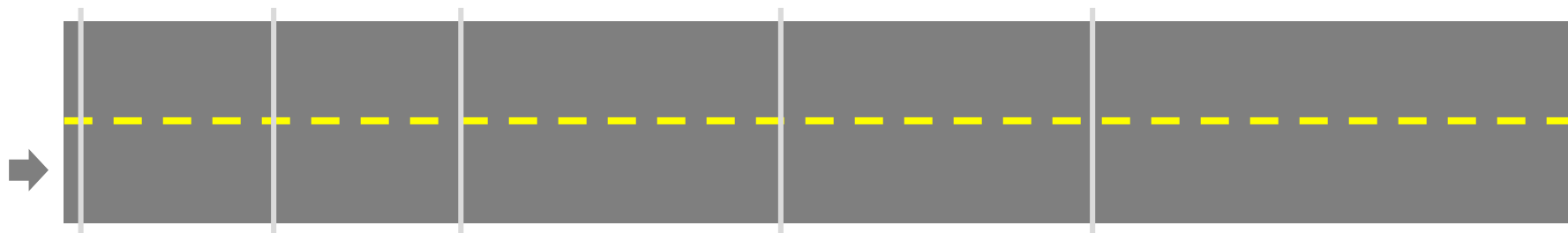
$$\sum \left(\begin{array}{c} \text{Delay for all 5-minute bins} \\ \text{on every day} \\ \text{for the full year} \end{array} \right)$$

= 865.025 vehicle-hours
For single segment



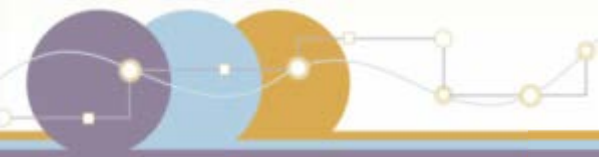
Calculating Traffic Congestion Measure

Sum travel time segment delay for all travel time segments



Length	0.500 mi.	0.500 mi.	1.000 mi.	1.000 mi.	5.000 mi.
Delay (v-hrs.)	1,610.025	1,644.750	2,420.050	2,355.125	3,870.050

**11,900.000 vehicle-hours excessive delay annually
over 8 miles**



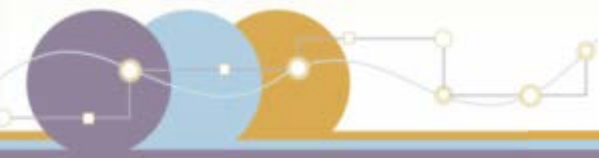
Calculating Traffic Congestion Measure

Divide by urban area population to calculate Excessive Delay Per Capita

Excessive Delay Per Capita

Total Excessive Delay
• Full Extent (3,000 mi.): **4,462,525.000 hours** \div Total Population: **1,047,102** $=$ Excessive Delay Per Capita: **4.3 vehicle-hours**

■ Annual Hours of Excessive Delay per Capita =
$$\frac{\sum [\text{Total Excessive Delay (for all segments)}]}{\text{Total Population}}$$



Measure vs. Target

Entire Applicable Network

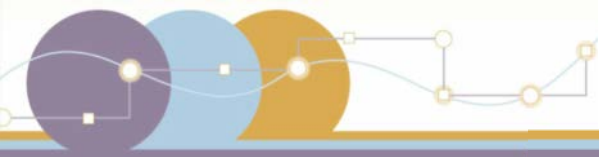
MEASURE
Annual hours of excessive
delay per capita

TARGET
Annual hours of excessive
delay per capita, as
established by the State
DOT or MPO

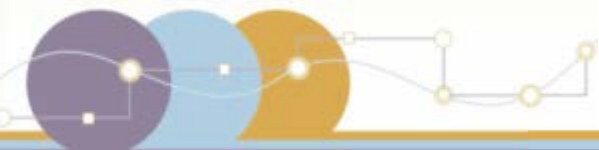
Example

4.3 vehicle-hours
excessive delay per capita

Target: 5.0 hours/capita
Actual: 4.3 hours/capita
✓ Target Achieved



Data Submittal Requirements



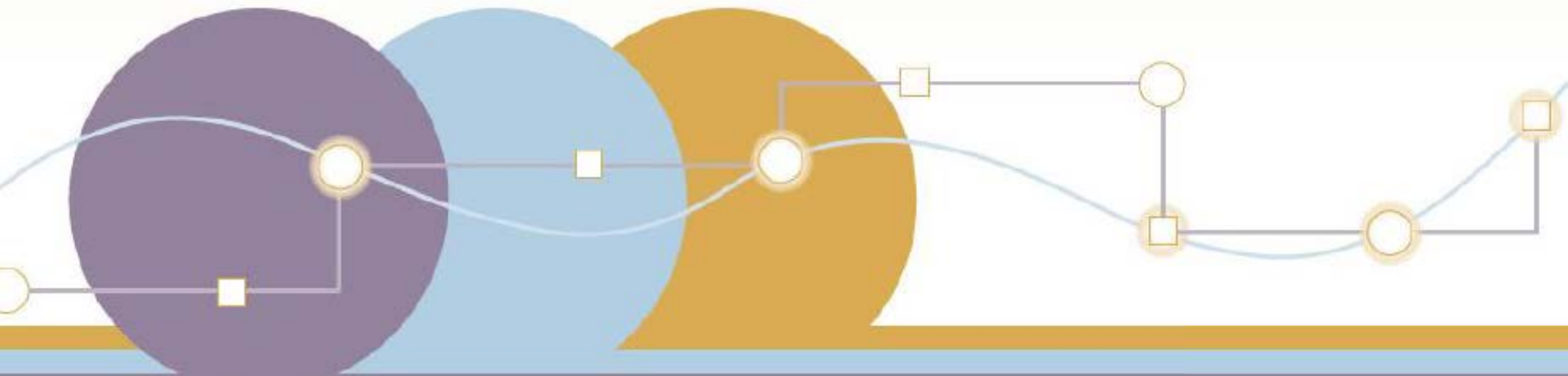
Data Submittal Requirements for Metric Calculation

Measure	Data	Submit Data to	Submission Deadline	Extraction Date
Traffic Congestion (Subpart G)	<ul style="list-style-type: none"> State DOT's methodology to develop hourly traffic volume estimates 	FHWA	60 days prior to submittal of First Baseline Report	--
	<ul style="list-style-type: none"> Total Excessive Delay (vehicle-hours) Reference NPMRDS TMC Codes, or HPMS Location Referencing 	HPMS	June 15*	August 15
	<ul style="list-style-type: none"> NHS Reporting Segments 	HPMS	November 1	--
	<ul style="list-style-type: none"> Adjusted urbanized area boundaries Urbanized area populations 	HPMS	First Baseline Report	--

*Data would be submitted each year for the previous calendar year. For example, on June 15, 2019, data would be submitted for January 2018 – December 2018.

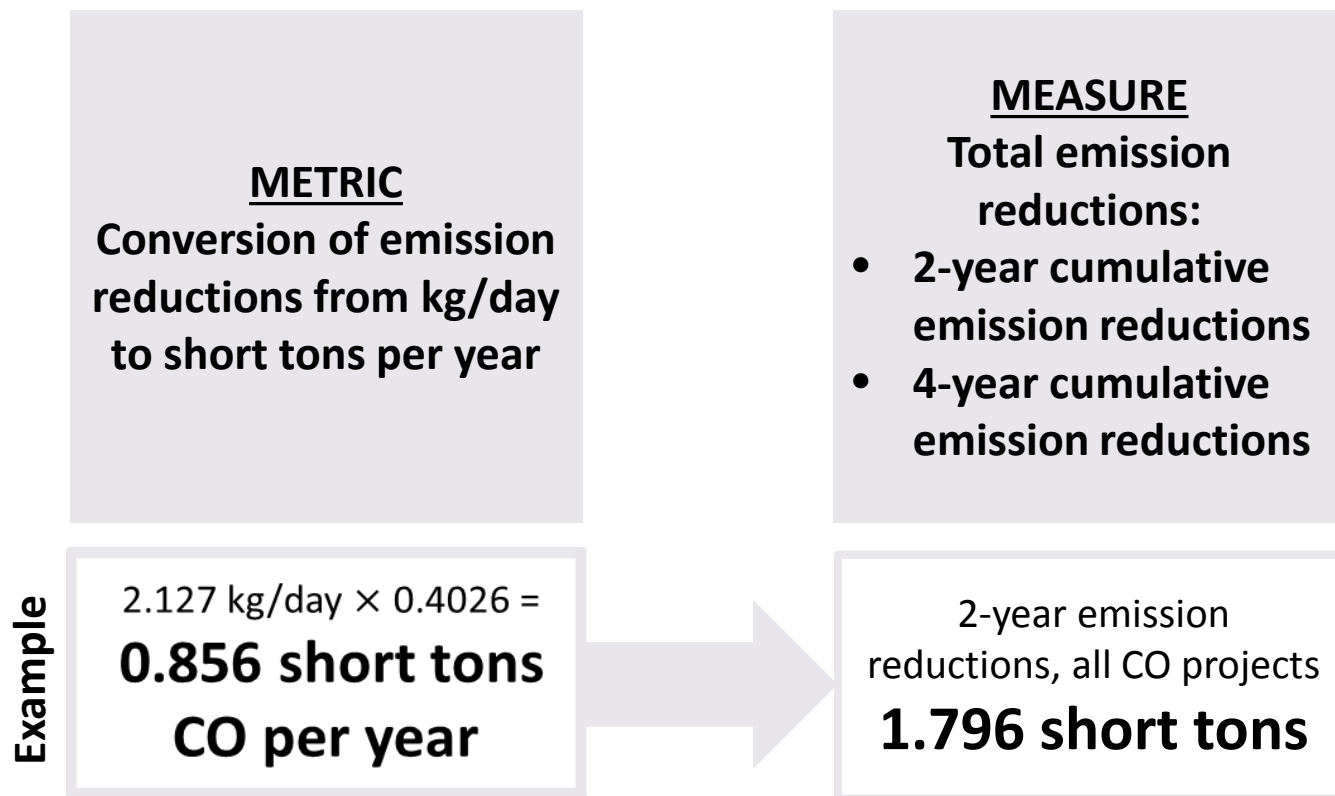
Part 4

Calculating Performance Measures Subpart H: On-Road Mobile Source Emissions Measure

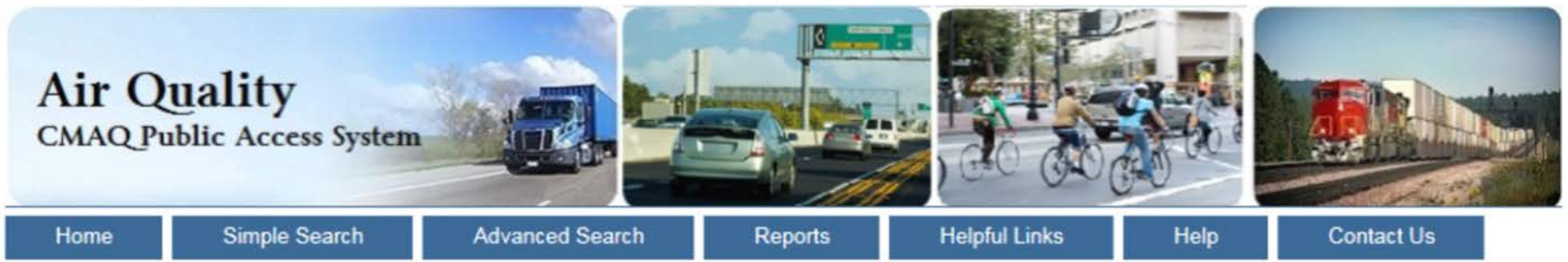




Measure to Assess CMAQ – On-Road Mobile Source Emissions (Subpart H)



Data Requirements



All 50 states and the District of Columbia submit annual reports of their CMAQ project obligations in March of every year. The FHWA uses these yearly submissions to maintain an active database of CMAQ investments, air quality benefits, Project trends within the program, and other anecdotal information focusing on the program's performance.

This database of CMAQ Project information had been reserved for internal planning purposes by authorized FHWA personnel, for Congressional reporting and made available to state DOTs and MPOs on an individual request basis.

The release of the CMAQ Public Access System was the first opportunity that the general public could have full access to FHWA approved CMAQ Project data submitted through the annual reporting process. The CMAQ Public Access System makes available searchable, read only, project information from 1992 to present in various reporting formats.

CMAQ system support and guidance information are available through the FHWA, [Air Quality, CMAQ](http://www.fhwa.dot.gov/environment/air_quality/cmaq/) (http://www.fhwa.dot.gov/environment/air_quality/cmaq/) website.



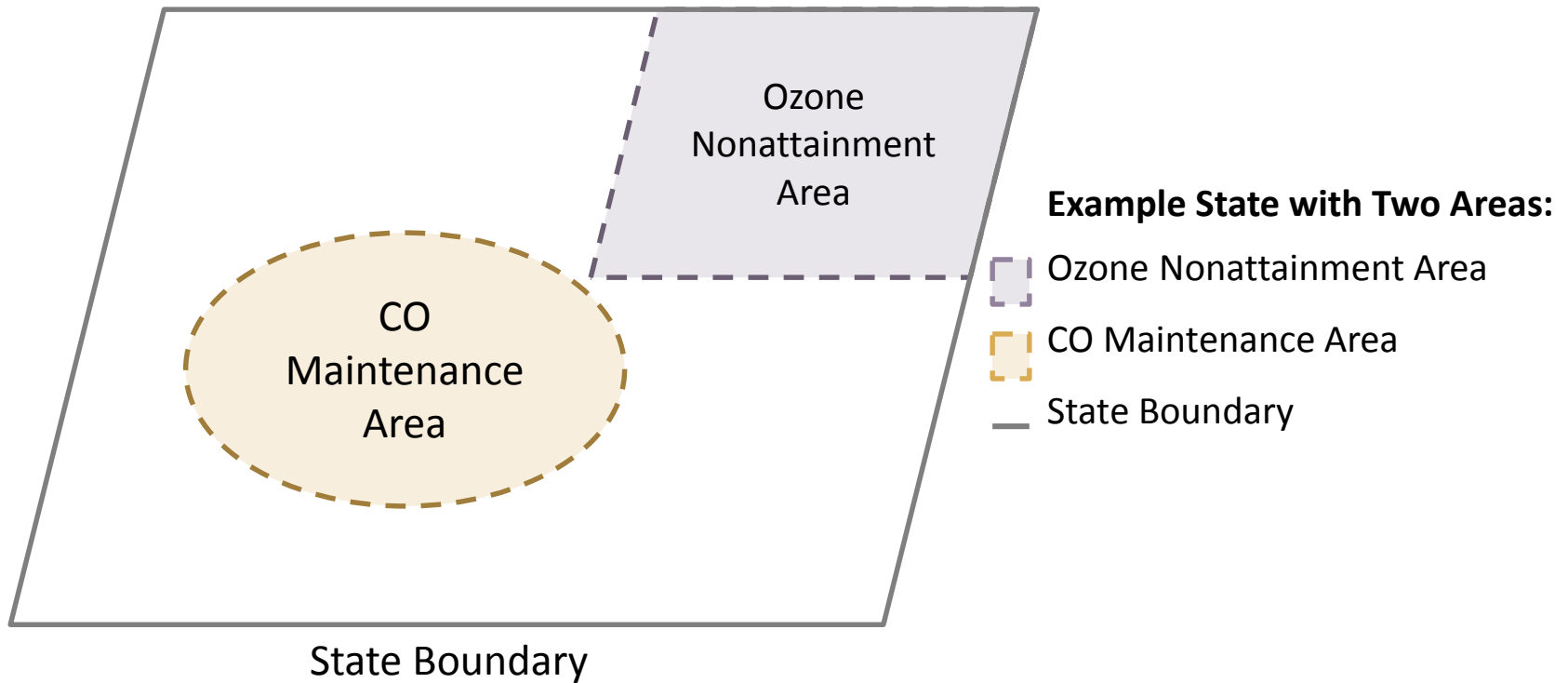
Disclaimer Note to User: Data present in the CMAQ Public Access System (PAS) is composed solely of projects from state DOT annual reports submitted and approved by FHWA, HQ Staff. Availability of project data for the previous fiscal year and subsequent years will be lagged and will be complete on September 30 of the succeeding calendar year.

CMAQ Public Access System: https://fhwaapps.fhwa.dot.gov/cmaq_pub/



Data for Emission Reductions Metric

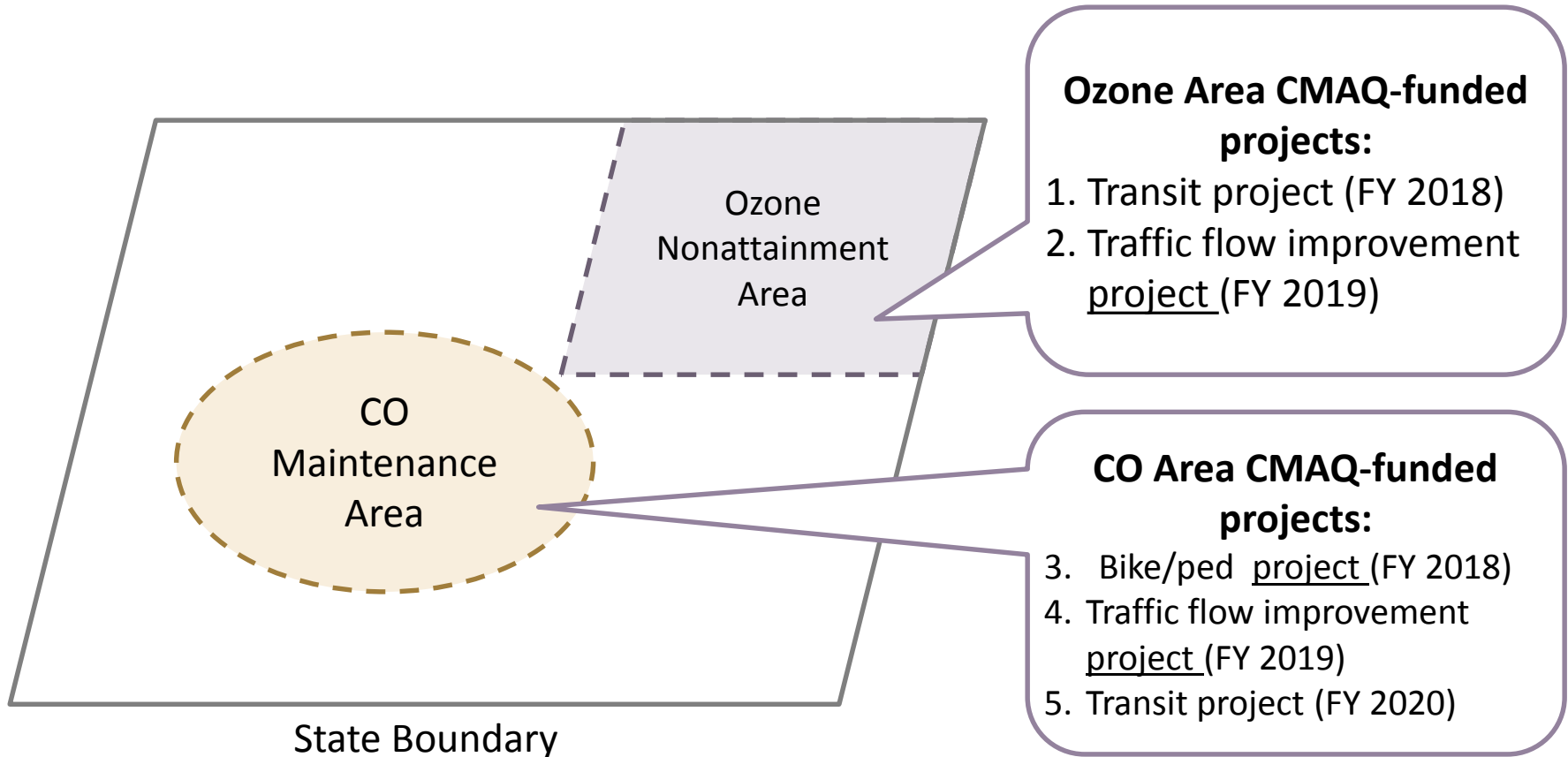
Identify applicable nonattainment and maintenance areas





Data for Emission Reductions Metric

Identify applicable CMAQ-funded projects within nonattainment and maintenance areas





Calculating Emission Reductions Metric

Multiply daily emission reductions by 0.4026 to convert to short tons per year.

Project	Fiscal Year Obligated	Kg/day		
		NO _x Benefit	VOC Benefit	CO Benefit
1. Ozone area transit	2018	10.500	7.830	
2. Ozone area traffic flow improvement	2019	0.953	0.487	
3. CO area bike/ped	2018			2.127
4. CO area traffic flow improvement	2019			2.335
5. CO area transit project (4-yr only)	2020			49.900

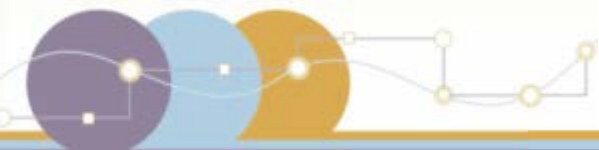


Calculating Emission Reductions Metric

Multiply daily emission reductions by 0.4026 to convert to short tons per year.

$$\text{kg/day} \times 0.4026 =$$

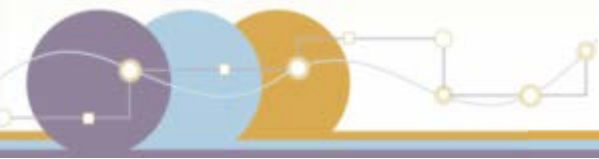
Project	Fiscal Year Obligated	Short tons per year		
		NO _x Benefit	VOC Benefit	CO Benefit
1. Ozone area transit	2018	4.227	3.152	
2. Ozone area traffic flow improvement	2019	0.384	0.196	
3. CO area bike/ped	2018			0.856
4. CO area traffic flow improvement	2019			0.940
5. CO area transit project (4-yr only)	2020			20.090



Calculating Emission Reductions Measure

Convert to short tons per year and sum totals

Project	Fiscal Year Obligated	Short tons per year		
		NO _x Benefit	VOC Benefit	CO Benefit
1. Ozone area transit	2018	4.227	3.152	
2. Ozone area traffic flow improvement	2019	0.384	0.196	
3. CO area bike/ped	2018			0.856
4. CO area traffic flow improvement	2019			0.940
5. CO area transit project (4-yr only)	2020			20.090
Total 2-Year Reduction (tons/year)	2018-2019	4.611	3.348	1.796
Total 4-Year Reduction (tons/year)	2018-2021	4.611	3.348	21.886



Measure vs. Target (for CO Emissions, 2 Years)

Example for CO Emissions, 2 Fiscal Years (2018-2019)

MEASURE

Total reduction in CO emissions for 2 years

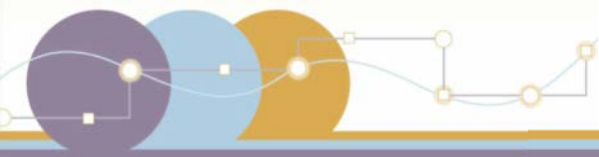
TARGET

Total reduction in CO emissions for 2 years, as established by the State DOT

Example

Total 2-year reduction in CO emissions:
1.796 tons

2-year target: 1.500 tons
2-year reduction: 1.796 tons
✓ Target Achieved

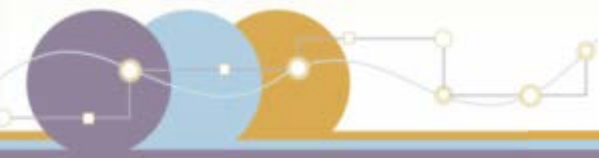


Data Submittal Requirements



Data Submittal Requirements for Metric Calculation

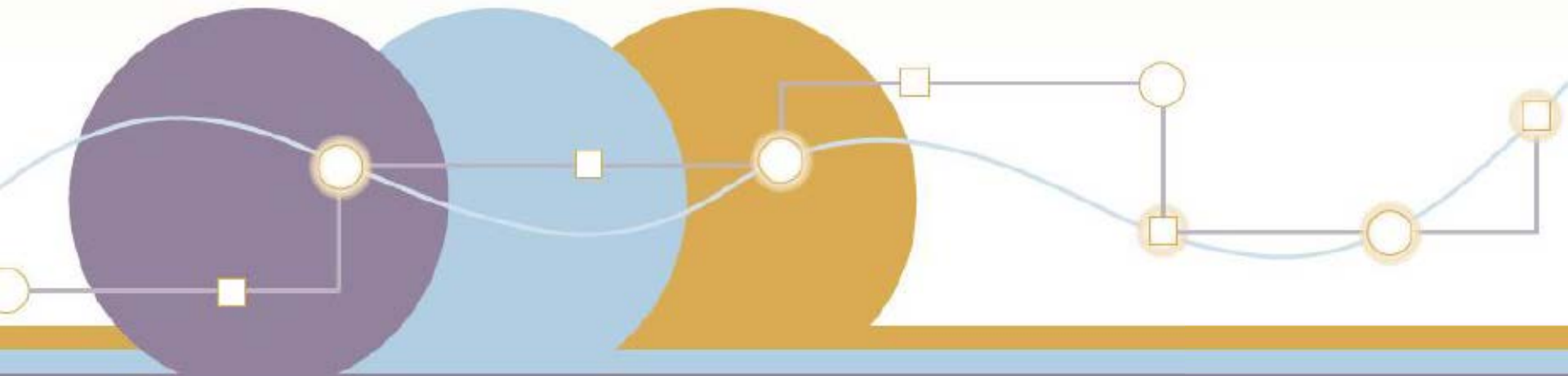
Measure	Data	Submit Data to	Submission Deadline	Extraction Date
On-Road Mobile Source Emissions (Subpart H)	Project information for each CMAQ project funded in the previous FY	CMAQ proj. tracking system	March 1 (following FY)	July 1 (in CMAQ Public Access System)

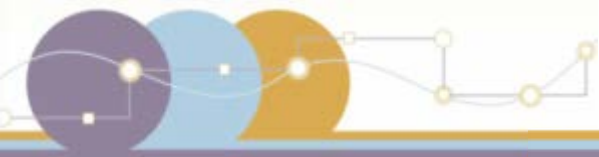


Questions?

Part 5

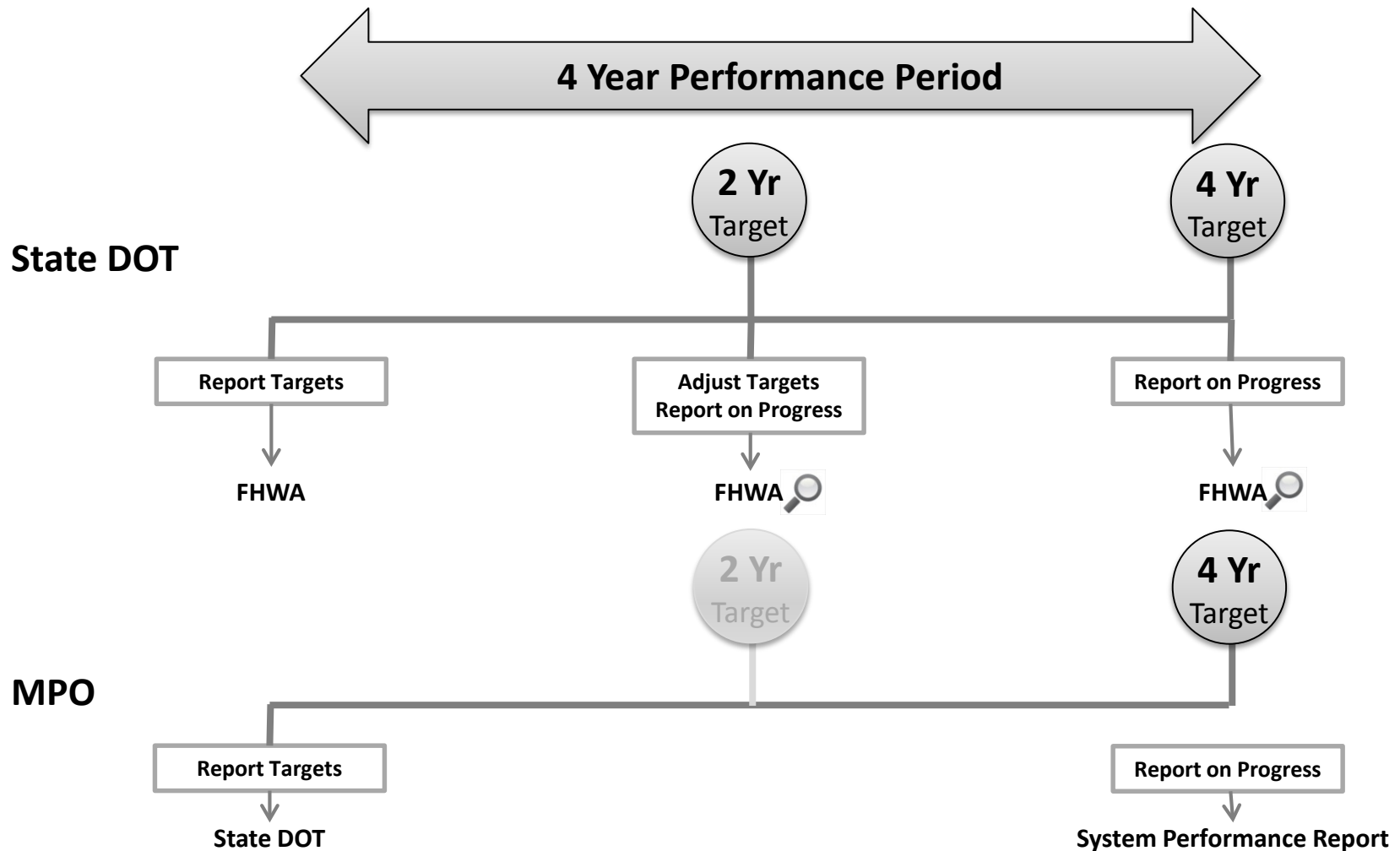
Target Establishment and Reporting, and Regulatory Impact Analysis (RIA)

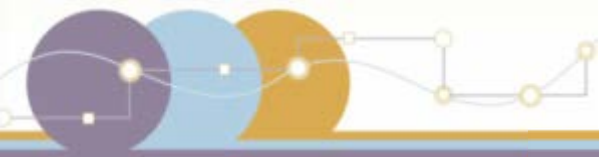




Transportation Performance Management

Overview





Proposed Establishment of Performance Targets

State DOTs

- Establish 2-year* and 4-year targets, as applicable
 - Within 1-year of the effective date of the final rule.
- Target adjustment of 4-year target allowed at the mid-point of target period
- Optional additional urbanized/non-urbanized targets

MPOs

- Establish 2-year** and 4-year targets, as applicable, by either committing to support the State DOT target or establishing a quantifiable target
 - Within 180 days of the State DOT
- If State DOT adjusts target, any MPO adjustments must occur within 180 days

**Traffic Congestion: 2-year targets not required in 1st performance period*

***On-Road Mobile Source Emissions: 2-year targets are only required when part of a designated nonattainment and maintenance area within the metropolitan planning area overlaps the boundary of an urbanized area with a population more than 1 million in population.*

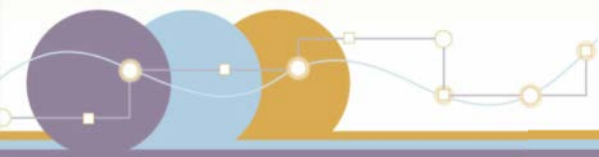


CMAQ Target Establishment Summary

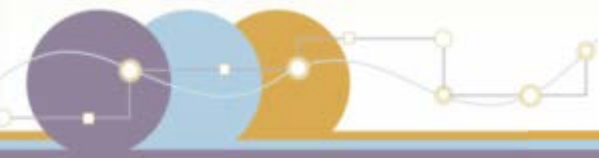
Proposed Measures	State DOT Targets	MPO Targets	Performance Period Start Date
<i>Traffic Congestion:</i> Annual Hours of Excessive Delay Per Capita (Subpart G)	Single 2-year* & 4-year targets for each urbanized area		January 1, 2018
<i>On-Road Mobile Source Emissions:</i> Total Emission Reductions for each applicable criteria pollutant and precursor (Subpart H)	2-year & 4-year targets	2-year** & 4-year targets	October 1, 2017

**Traffic Congestion: 2-year targets not required in 1st performance period*

*** On-Road Mobile Source Emissions: 2-year targets are only required when part of a designated nonattainment and maintenance area within the metropolitan planning area overlaps the boundary of an urbanized area with a population more than 1 million in population.*



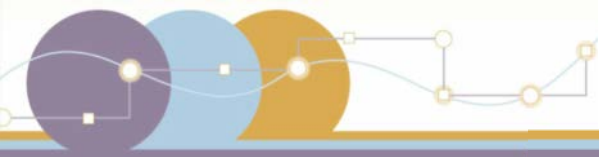
Reporting



Initial State DOT Reporting

Initial State Performance Report (due October 1, 2016)

- Performance where data is available
- Effectiveness of asset management investment strategy for NHS
- Progress toward targets
- Activity to reduce freight bottlenecks



State DOT Reporting on Performance Targets

Baseline Performance Period Report

- NHS limits
- Adjusted urbanized area boundaries and population data
- Nonattainment and maintenance areas and MPOs' CMAQ Performance Plan*
- Baseline performance
- 2-year and 4-year targets
- Discussion of congestion at freight bottle necks.
- Relationship to other plans, including freight

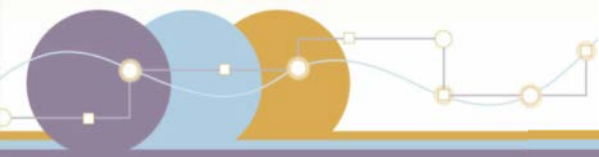
Mid Performance Period Progress Report

- 2-year performance
- Progress discussion
- Investment strategy effectiveness
- Adjusted 4-year targets (optional)*
- Extenuating circumstances*
- Target achievement discussion*
- MPOs' CMAQ Performance Plans*

*Only include when applicable

Full Performance Period Progress Report

- Same content as Mid Performance Period Progress Report, except:
 - Reporting on 4-year performance
 - No option for adjusted targets



MPO Reporting on Performance Targets

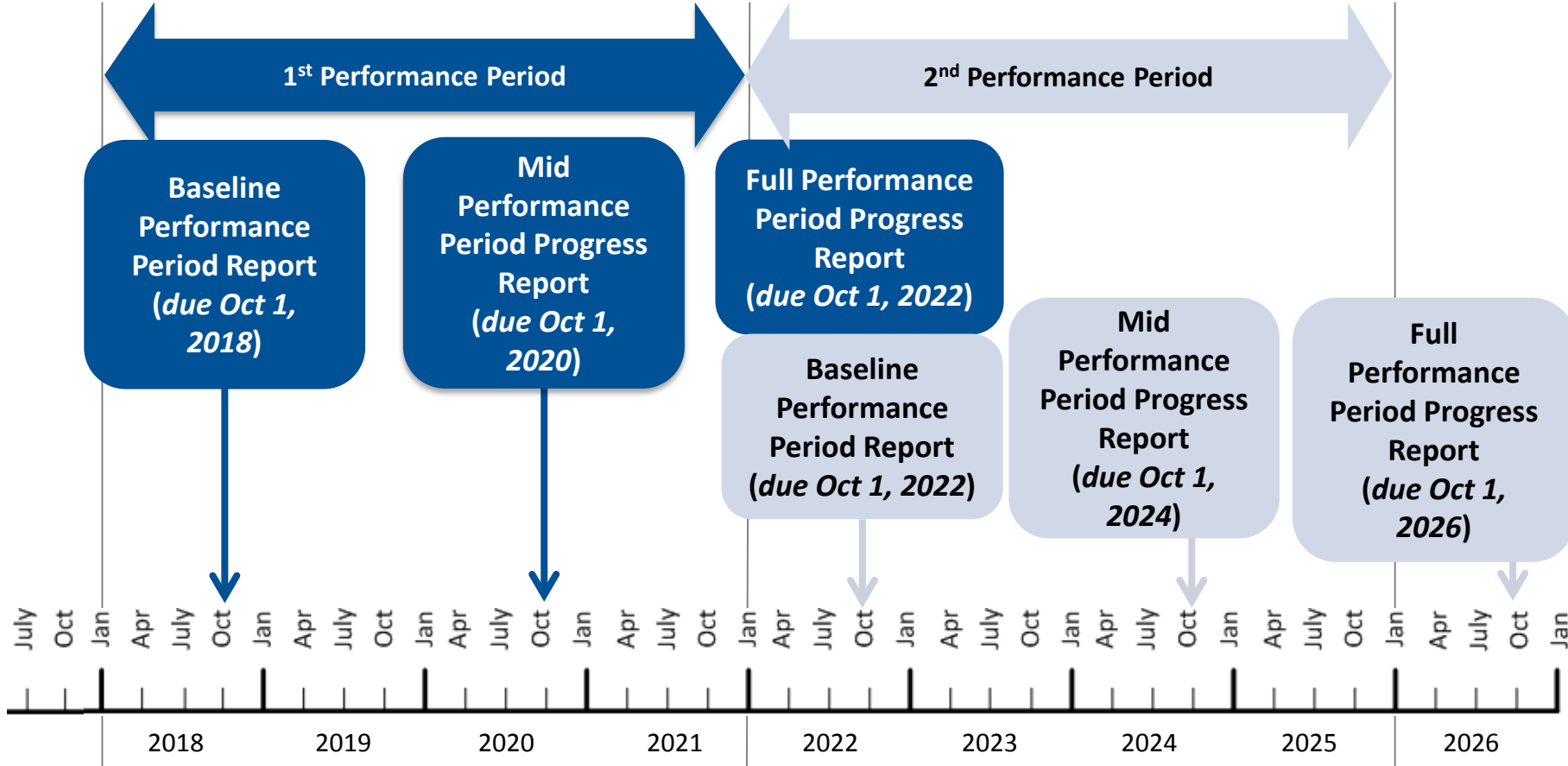
System Performance Report

- Part of MPO's Metropolitan Transportation Plan (MTP)
- Report baseline performance and progress toward achieving targets

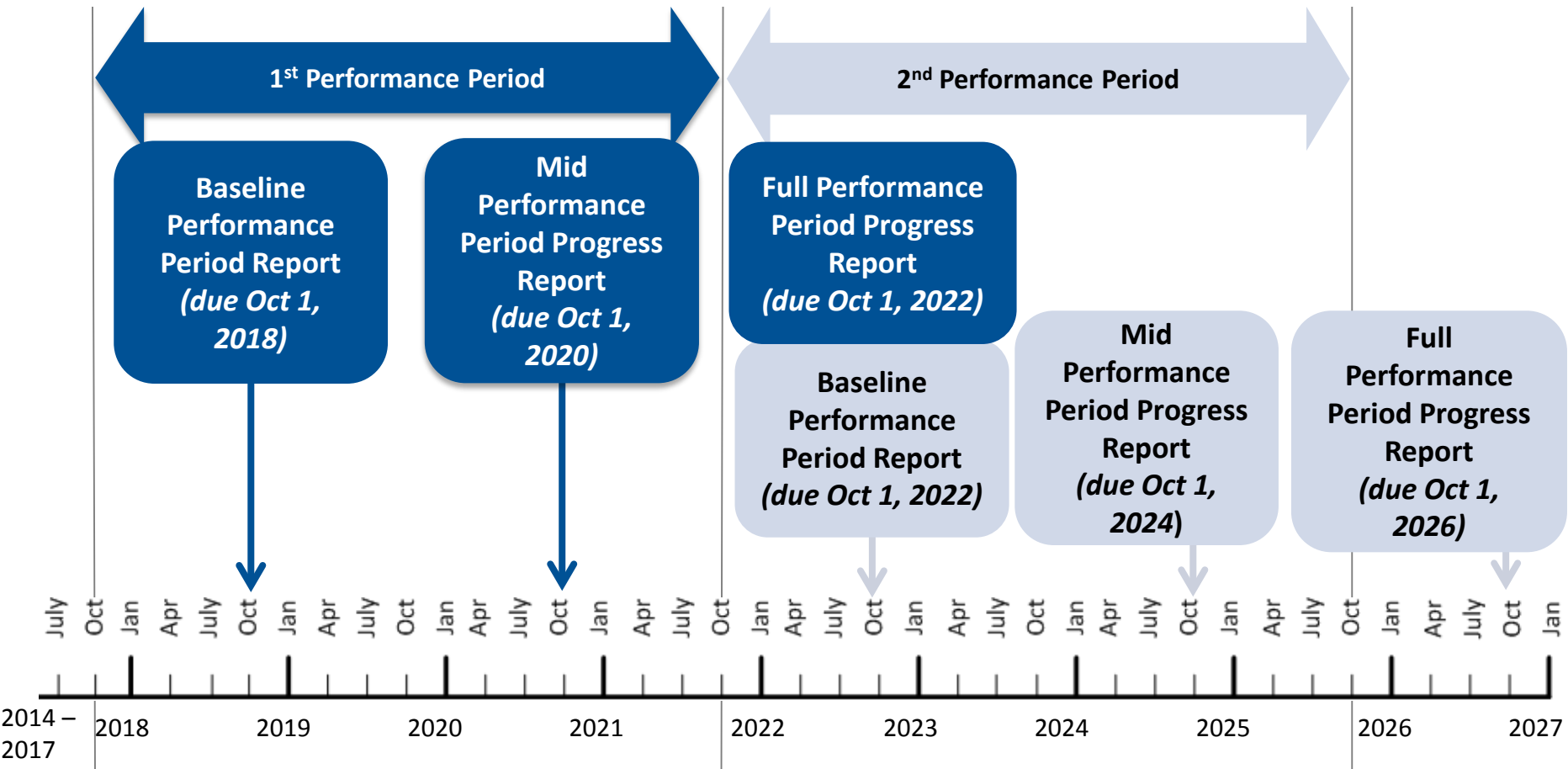
CMAQ Performance Plan

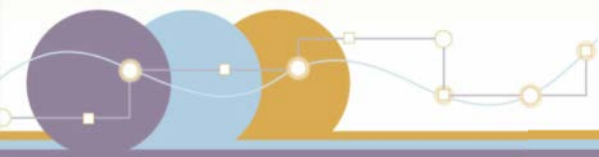
- Required for MPOs serving a TMA with a population over 1 million with ozone, CO, or PM nonattainment and maintenance areas

Timeline of Performance Periods for Subpart G: Traffic Congestion (Calendar Year)

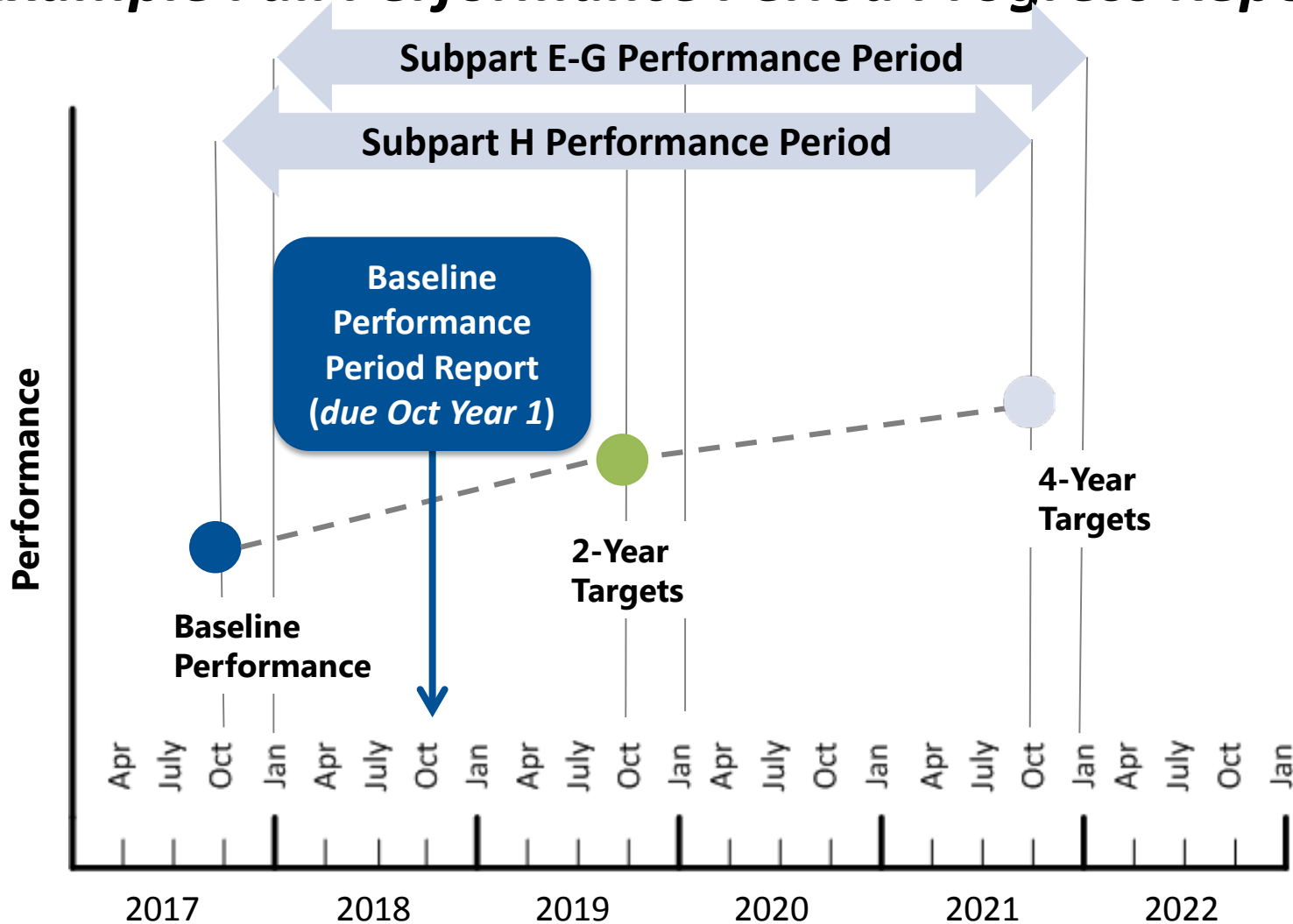


Timeline of Performance Periods for Subpart H: On-Road Mobile Source Emissions (Federal Fiscal Year)

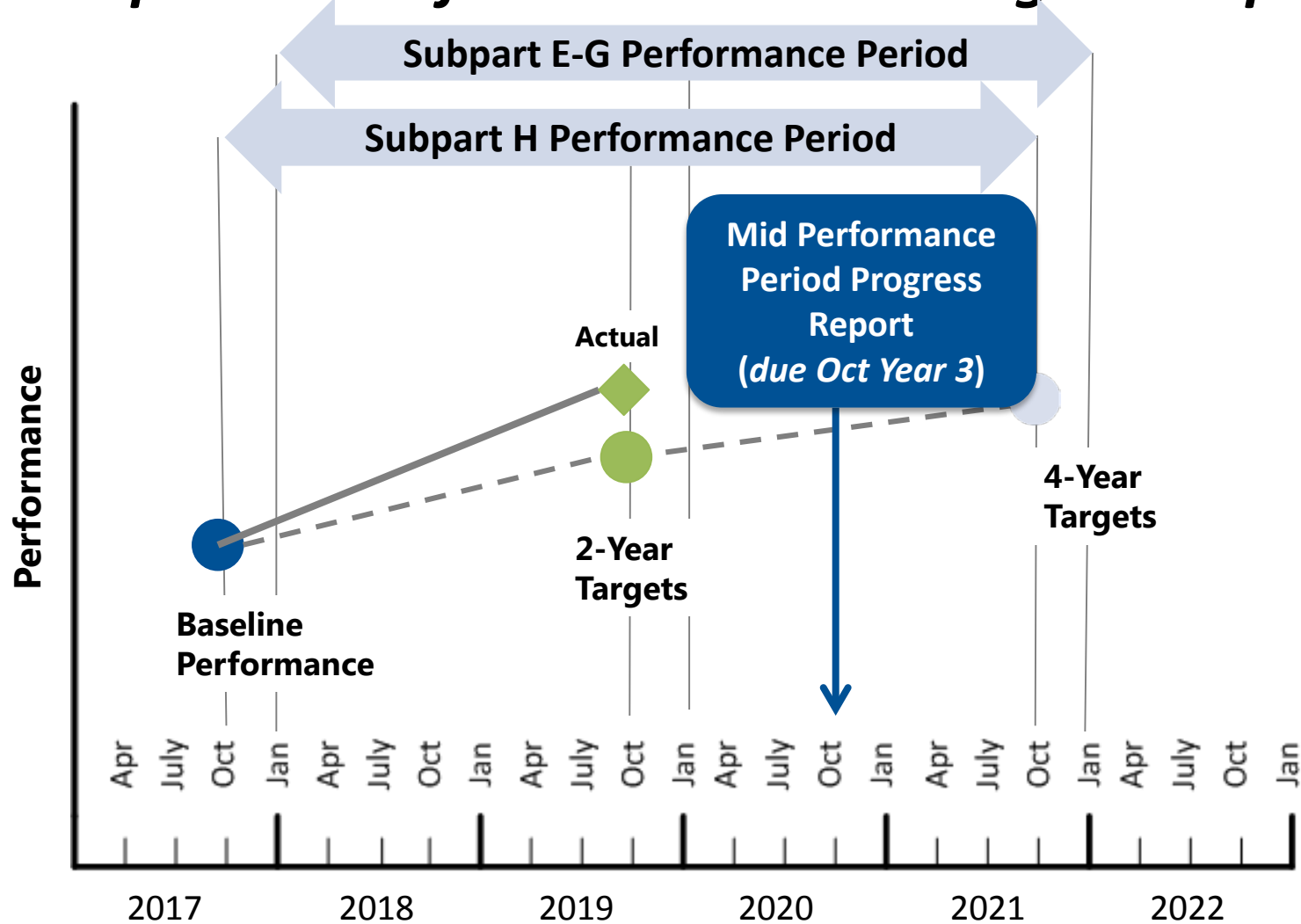


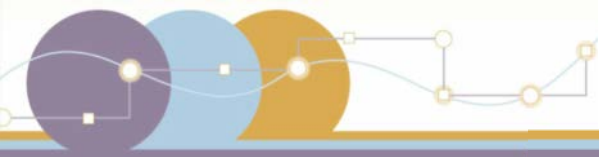


Example Full Performance Period Progress Reporting

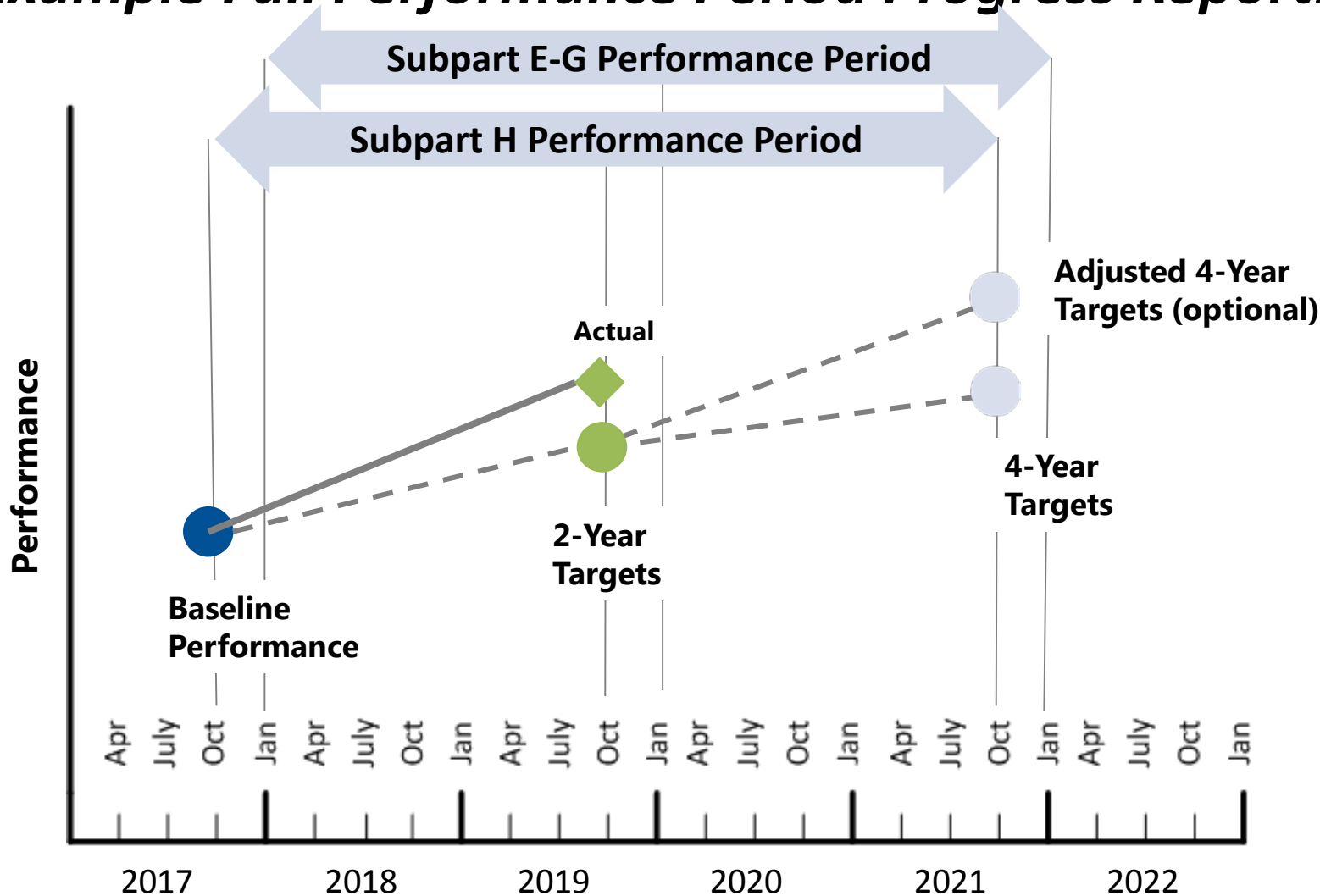


Example Full Performance Period Progress Reporting

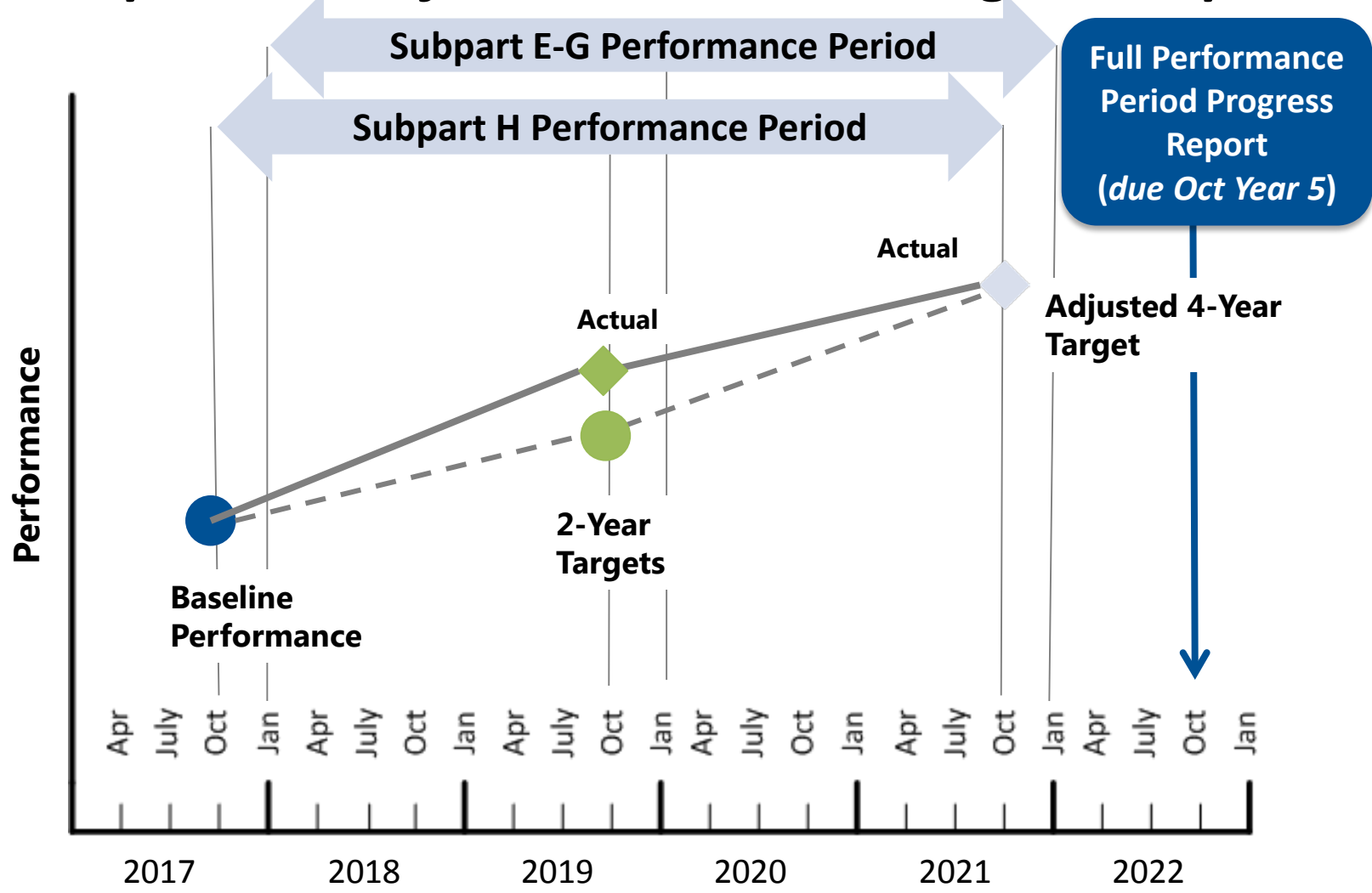


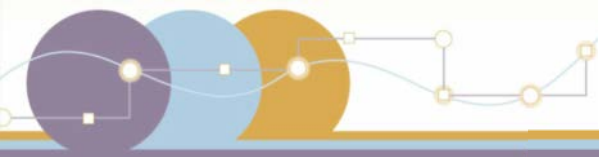


Example Full Performance Period Progress Reporting

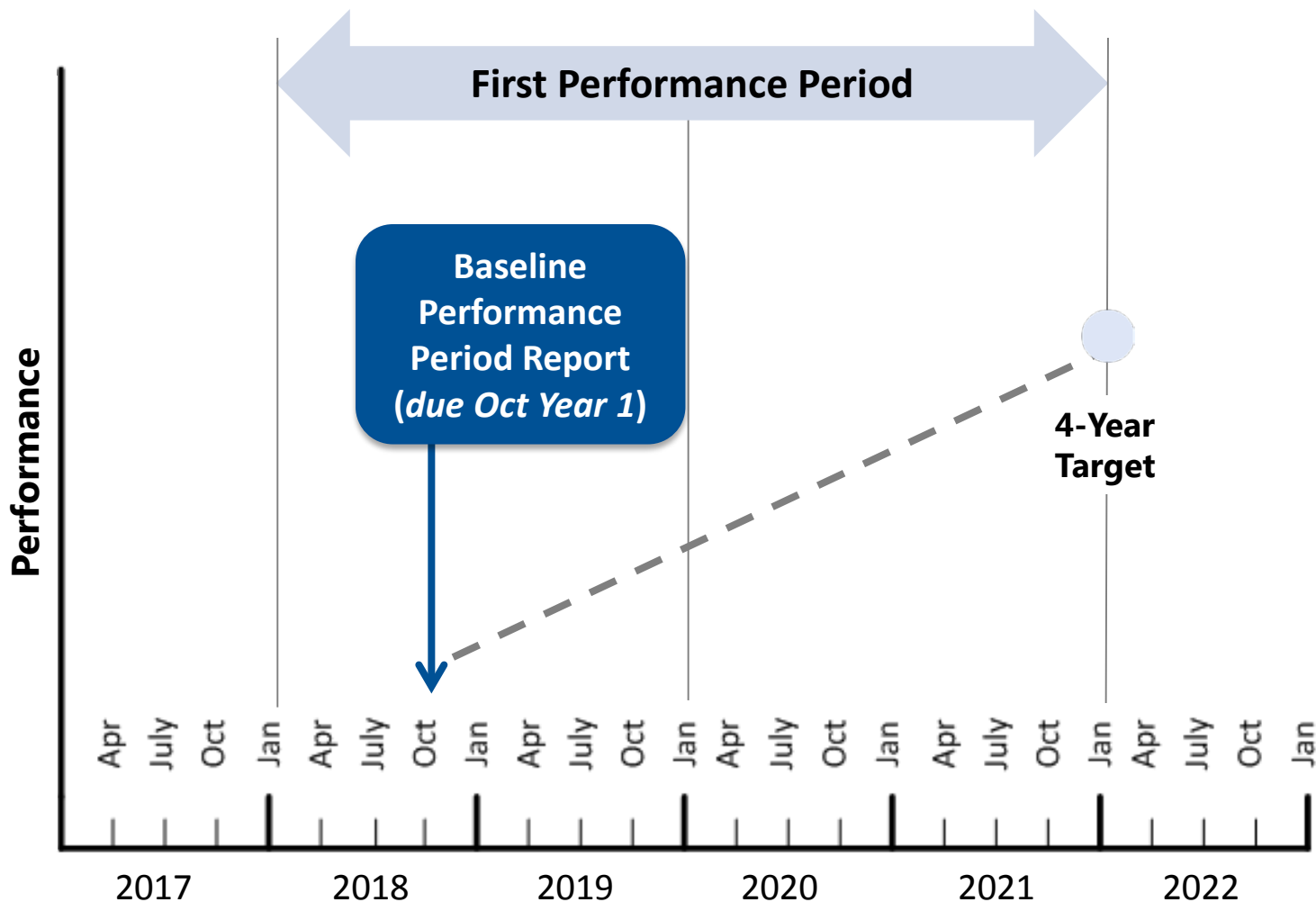


Example Full Performance Period Progress Reporting

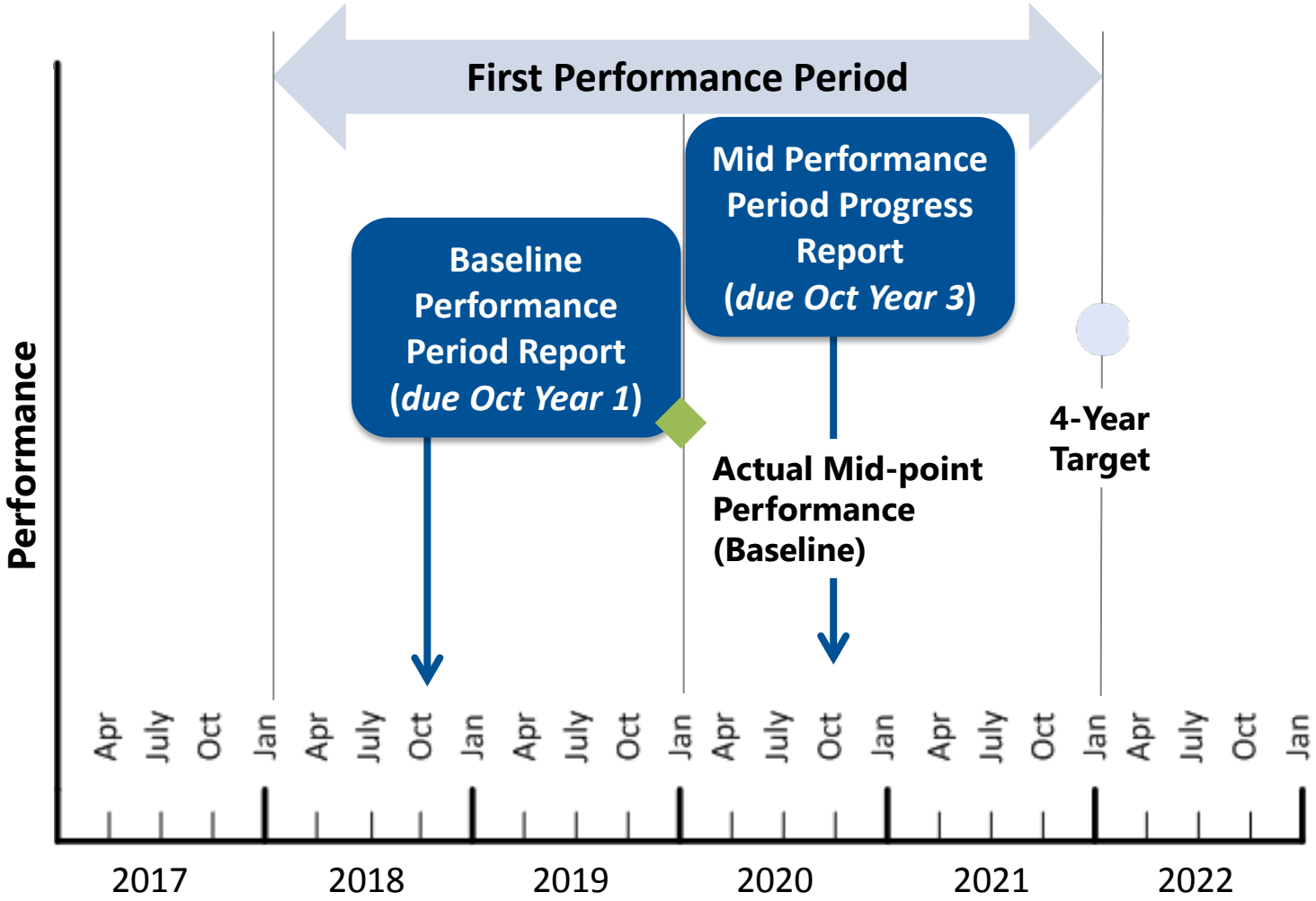




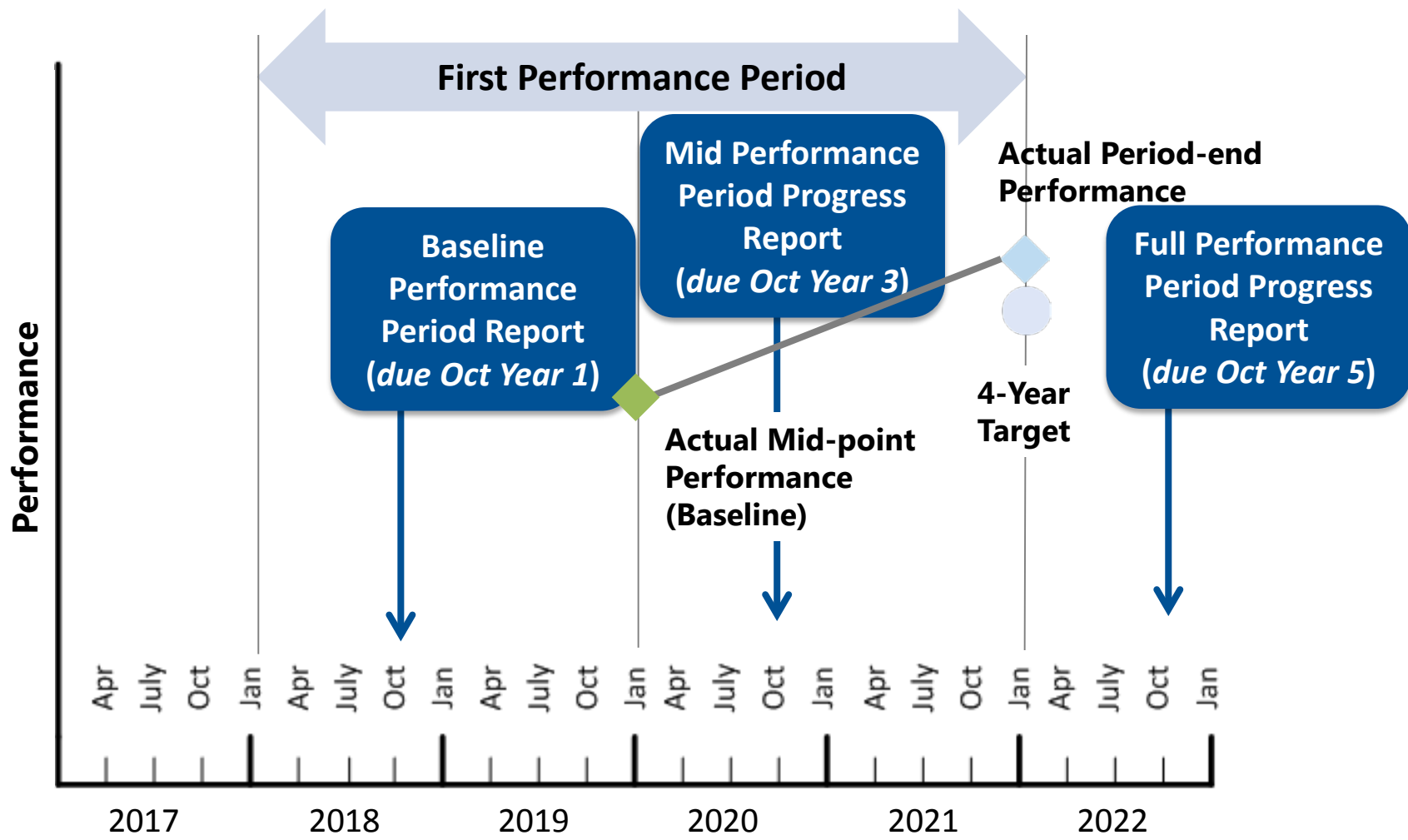
Subpart G: 1st Performance Period Progress Reporting

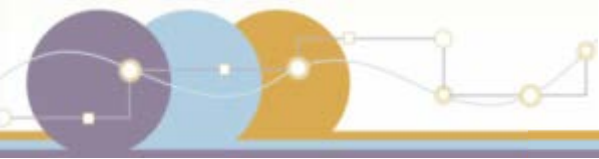


Subpart G: 1st Performance Period Progress Reporting

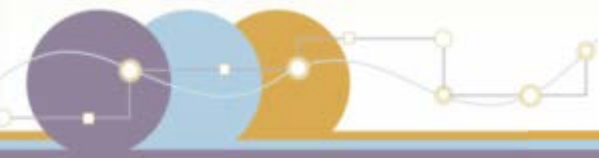


Subpart G: 1st Performance Period Progress Reporting





Regulatory Impact Analysis (RIA)



Regulatory Impact Analysis Findings over 11 Years

Enhancing Performance of the NHS by Reducing Congestion
+
Reduced emissions

Traffic Congestion Costs (undiscounted)

Metric Calculation = \$5.13 million
Measure Calculation = \$6.61 million*

On-Road Mobile Source Emissions Costs (undiscounted)

Metric Calculation = \$13.29 million
Measure Calculation = \$593,412*

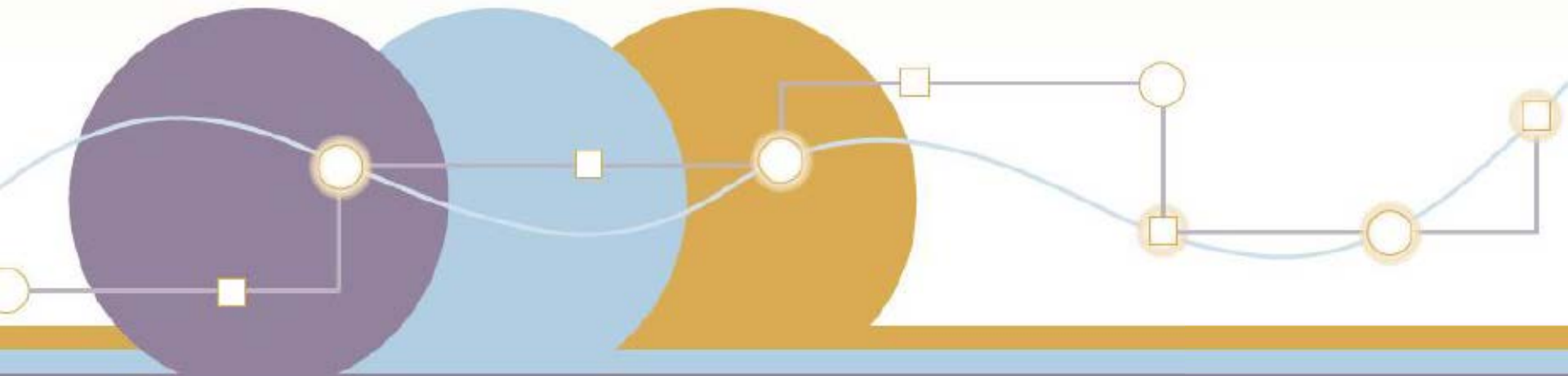
Level of Change Needed to make Costs Beneficial

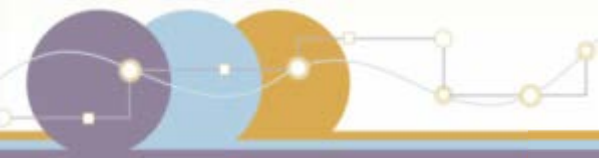
Expected Costs

**The NPRM contains a summary of the analysis that describes the level of change needed to make the costs beneficial. Refer to the full analysis document in the docket for more details.*

Part 6

Summary and Q&A



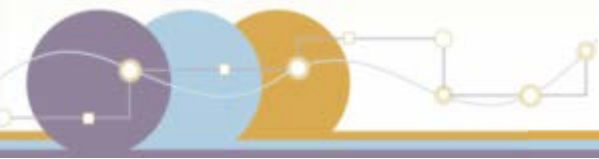


Rulemaking Resources

Office of TPM website: <http://www.fhwa.dot.gov/tpm/>

Fact sheets, published NRPMs, webinar registration, recordings of past webinars, and related information:

http://www.fhwa.dot.gov/tpm/rule/pm3_nprm.cfm



Submit comments to:

www.regulations.gov

[FHWA 2013-0054](#)

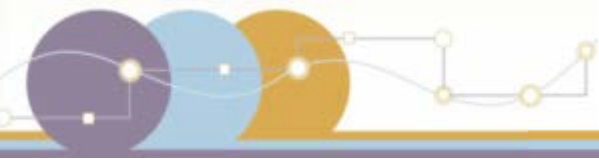
(click above for direct link)

For clarifying questions or more information, please contact:

Francine Shaw Whitson

FSWhitson@dot.gov

PerformanceMeasuresRulemaking@dot.gov



Transportation Performance Management

Thank you!