Transportation Performance Management (TPM)

2018 Data Report

U.S. Department of Transportation
Federal Highway Administration

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Source of Charts and Tables

All charts and tables in the document were created by FHWA.

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Acronyms

CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon Monoxide
DOT	Department of Transportation
FARS	Fatality Analysis Reporting System
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
HPMS	Highway Performance Monitoring System
HSIP	Highway Safety Improvement Program
IRI	International Roughness Index
MAP-21	Moving Ahead for Progress in the 21st Century
MPO	Metropolitan Planning Organization
NBI	National Bridge Inventory
NHPP	National Highway Performance Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NOx	Nitrogen Oxides
NPMRDS	National Performance Management Research Data Set
PHED	Peak Hour Excessive Delay
PM2.5	Particulate Matter with diameter of less than or equal to 2.5 micrometers
PM10	Particulate Matter with diameter of less than or equal to 10 micrometers
PMF	Performance Management Form
PSR	Present Serviceability Rating
SOV	Single Occupancy Vehicle
TPM	Transportation Performance Management
TTTR	Truck Travel Time Reliability
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds

Introduction

Purpose of this Report

This 2018 Transportation Performance Management (TPM) Data Report provides a compilation of the first full set of performance data submitted to the Federal Highway Administration (FHWA) and available online at State Performance Dashboard and Reports.[1] There are 17 performance measures contained in 23 Code of Federal Regulations (CFR) part 490 that are shown in Table 1. The performance measure areas are: safety (five measures), pavements (four measures), bridges (two measures), travel time reliability (two measures), freight movement (one measure), traffic congestion (two measures), and on-road mobile source emissions performance measure (one measure). All State Departments of Transportation (DOTs) including the District of Columbia and Puerto Rico report safety performance measures information annually via the Highway Safety Improvement Program (HSIP) process.[2] For the other performance measure areas, State DOTs submit biennial reports through the FHWA's electronic reporting portal called the Performance Management Form (PMF).[3]

Safety data was first reported by State DOTs in 2017; the 2018 reporting year is the first to include baseline and target data for all 17 performance measures. This report provides a snapshot across the nation for each performance measure area, with context explaining what the metrics, baselines, and targets represent.

This report documents State DOT baselines and targets. Future reports with additional data will allow for greater analysis of the data and of trends. The FHWA expects to update this report regularly, corresponding to the national data reporting cycles as reflected in the Performance Measures and Asset Management Plan - Key Implementation Dates[4] timeline on the FHWA webpage.

[1] https://www.fhwa.dot.gov/tpm/reporting/state/index.cfm
[2] Highway Safety Improvement Program Report Guidance https://safety.fhwa.dot.gov/hsip/reports/
[3] Performance Management Form (PMF) Input Fields https://www.fhwa.dot.gov/tpm/guidance/
[4] https://www.fhwa.dot.gov/tpm/rule/timeline.pdf

Table 1: Program Areas, Measures Areas, and Performance Measures

Program Area	Measure Area	Performance Measures
Safety	Highway Safety Improvement Program (HSIP) [23 CFR 490.203]	Number of fatalities [23 CFR 490.207(a)(1)]
		Rate of Fatalities per 100 million vehicle miles traveled [23 CFR 490.207(a)(2)]
		Number of serious injuries [23 CFR 490.207(a)(3)]
		Rate of Serious injuries per 100 million vehicle miles traveled [23 CFR 490.207(a)(4)]
		Number of non-motorized fatalities and non-motorized serious injuries [23 CFR 490.207(a)(5)]
National Highway Performance Program (NHPP)	Condition of pavements on the Interstate System [23 CFR 490.105(c)(1)]	Percentage of pavements on the Interstate System in good condition [23 CFR 490.307(a)(1)]
		Percentage of pavements on the Interstate System in poor condition [23 CFR 490.307(a)(2)]
	Condition of pavements on the non-Interstate National Highway System (NHS) [23 CFR 490.105(c)(2)]	Percentage of pavements on the non-Interstate NHS in good condition [23 CFR 490.307(a)(3)]
		Percentage of pavements on the non-Interstate NHS in poor condition [23 CFR 490.307(a)(4)]
	Condition of bridges on the NHS [23 CFR 490.105(c)(3)]	Percentage of NHS bridges classified as in Good condition [23 CFR 490.407(c)(1)]
		Percentage of NHS bridges classified as in Poor condition [23 CFR 490.407(c)(2)]
	NHS Travel Time Reliability [23 CFR 490.105(c)(4)]	Percentage of person-miles traveled on the Interstate that are reliable [23 CFR 490.507(a)(1)]
		Percentage of person-miles traveled on the non-Interstate NHS that are reliable [23 CFR 490.507(a)(2)]
National Highway Freight Program (NHFP)	Freight movement on the Interstate System [23 CFR 490.105(c)(6)]	Truck Travel Time Reliability (TTTR) Index [23 CFR 490.607]
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Traffic congestion [23 CFR 490.105(c)(7)]	Annual Hours of Peak-Hour Excessive Delay (PHED) Per Capita [23 CFR 490.707(a)]
		Percent of non-Single Occupancy Vehicle (Non-SOV) Travel [23 CFR 490.707(b)]
	On-road mobile source emissions [23 CFR 490.105(c)(8)]	Total Emissions Reduction for applicable criteria pollutants [23 CFR 490.807]

Background

The FHWA defines TPM as a "strategic approach that uses system information to make investment and policy decisions to achieve national performance goals."

Under Section 1203 of Moving Ahead for Progress in the 21st Century (MAP-21), as amended by the Fixing America's Surface Transportation (FAST) Act, Congress established seven national goals and directed the FHWA to establish national performance measures for the Federal-Aid Highway Program in support of six of the seven goals established in MAP-21. To meet the new statutory requirements, FHWA pursued a number of significant rulemakings.

Collectively, the regulations establish performance management requirements that address safety, infrastructure condition, system performance, freight movement, traffic congestion, and on-road mobile source emissions. The requirements encourage effective investment of Federal transportation funds. Performance management increases the accountability and transparency of the Federal-Aid Highway Program and provides a framework to support improved investment decision making through a focus on performance outcomes for key national transportation goals.

Appendix 1 provides specific information about the performance measures as well as the related three published performance measure rulemakings, effective dates, and regulatory references.

Scope of National Reporting

Beginning with the 2018 reporting year, all 52 State DOTs reported performance data and targets for each of the 17 performance measures. This was a significant effort for the State DOTs as well as FHWA. The FHWA established a new reporting portal, worked with State DOTs and Metropolitan Planning Organizations (MPO) to improve data quality, and provided support and assistance. All 52 State DOTs met the reporting deadline. For some State DOTs, this involved collection of new data, new types of analysis, and development of new reporting systems. Combined with the success of the safety data collection over the past few years, State DOTs and FHWA are collectively on track to continue to report and collect this national level performance information.

It is important to note that several reporting requirements are being phased in during this first four-year performance period. In developing the requirements for submitting metric data and targets, FHWA recognized that some State DOTs may not be able to meet all data requirements prior to the start of the first proposed performance period. Therefore, FHWA allowed a phase-in and transition period for some data elements and targets. The timeline[5] on the FHWA webpage provides detailed information on the reporting requirements.

[5] https://www.fhwa.dot.gov/tpm/rule/timeline.pdf

Target Setting

State DOTs and MPOs work together to set data-informed targets. They are accountable for managing performance to make progress toward those targets.

The FHWA facilitates the collaborative target-setting process, providing guidance, training, and technical assistance to State DOTs and MPOs. Because FHWA did not require any particular method for target setting, State DOTs used a variety of approaches, including: historical data and trends, projections based on anticipated revenues, projections based on existing and currently programmed projects, and scenario modeling. The FHWA anticipates that State DOTs will refine their target setting approaches as they have more experience with the processes and more comprehensive and robust data sets.

For some of the performance measure areas, State DOTs are required to meet certain minimum conditions, and/or to make a certain amount of progress each year or every two years in achieving their targets. Appendix 2 provides an overview of the requirements and associated consequences of not meeting the requirements for the applicable measures.

2018 Compiled Results by Performance Measure Area

The following sections of this report provide summary transportation system performance data and background information from all 52 State DOTs, with more detailed discussions for each performance area. The final section provides information on FHWA's ongoing activities as it continues to support State DOTs and MPOs in tracking and improving transportation performance throughout the country. The FHWA is committed to working with State and MPO partners to integrate performance management into regular business practice for the Federal-aid highway program.

For each performance area, State DOTs reported on the baseline performance level, and set targets for the upcoming performance period, according to the requirements of each performance rule. For the safety performance measures, States DOTs used a baseline period of 2013-2017, and an upcoming performance period of 2015-2019. The annual safety targets are set using a 5-year rolling average. For most other measures, States DOTs set both 2-year and 4-year targets for the upcoming performance period (2017 – 2021); the targets are set relative to the 2017 baseline value.

Comparison of Baseline Performance to Target

State DOTs set targets for all applicable measures, with some indicating improving performance, declining performance, or steady performance in the future years compared with the baseline. Figure 1 provides more detail on the expected trends and results from investments and policy decisions across the State DOTs for the safety performance measures. For the safety measures, improving performance would indicate a reduction in the number or rate of fatalities or serious injuries, and declining performance would indicate an increase in the number or rate of fatalities or serious injuries.

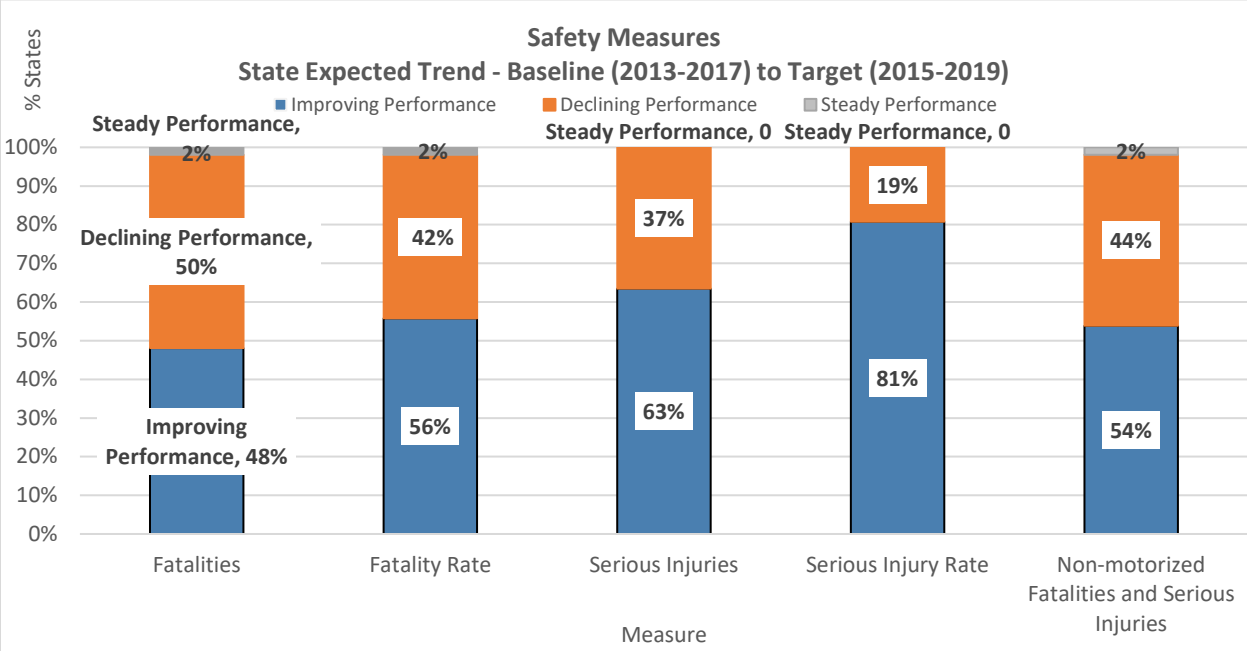

Figure 1: State Expected Trend (Baseline to Target) for the Safety Performance Measures

Figure 2 provides more detail on the expected trends and results from investments and policy decisions across the State DOTs for the infrastructure condition and system performance measures. It includes information only for the measures for which State DOTs reported both 2018 baseline value and 4-year target information; it does not include other measure areas with phased reporting.

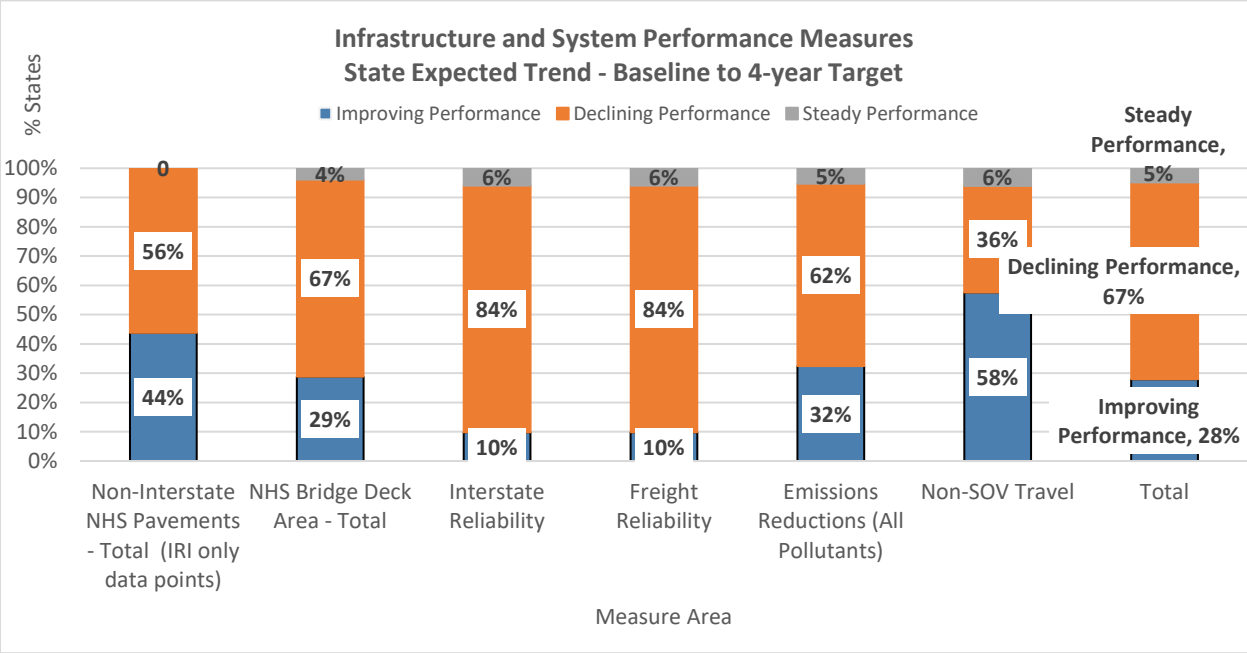

Figure 2: State Expected Trend (Baseline to Target) for Infrastructure Condition and System Performance Measures by Percent of States

Safety Measures

As previously shown in Table 1, five performance measures are associated with safety:

- Number of fatalities
- Rate of fatalities per 100 million vehicle miles traveled (VMT)
- Number of serious injuries
- Rate of serious injuries per 100 million vehicle miles traveled
- Number of non-motorized fatalities and non-motorized serious injuries

Table 2 provides additional background information on the safety performance measures.

Table 2: Background on Safety Measures

Criteria	**Safety**
Applicability	All public roads.
Measure Data Collection	Annual data collection. [6] Annual metric reporting in HSIP Report by August 31. [7]
Metric(s)	Annual total fatalities from Fatality Analysis Reporting System (FARS).[8] Annual total serious injuries from each State's HSIP annual report.[9] Total VMT from Highway Performance Monitoring System (HPMS). [10]
Measure Calculation	5-year rolling average of the annual totals for baseline and target.[11]
State DOT Target Requirements	State DOTs: annual target.[12] MPOs: annual target (option to support the State DOT target(s)).[13]
Target Phase-In	N/A

Number of Fatalities

Figure 3 provides the number of State DOTs that set targets reflecting improving, steady, or declining performance for fatalities when comparing baseline (2013-2017) with the target (2015-2019).

[6] 23 CFR 490.209(a)

[7] 23 CFR 924.15(a)

[8] 23 CFR 490.207(a)(b)(1),(2), and (5)

[9] 23 CFR 490.209(a)(5)

[10] 23 CFR 490.207(b)(2)

[11] 23 CFR 490.207(b). Guidance: FHWA Procedure for Safety Performance Measure Computation and State Target Achievement Assessment https://www.fhwa.dot.gov/tpm/guidance/

[12] 23 CF 490.209(a)

[13] 23 CFR 490.209(c)(4)

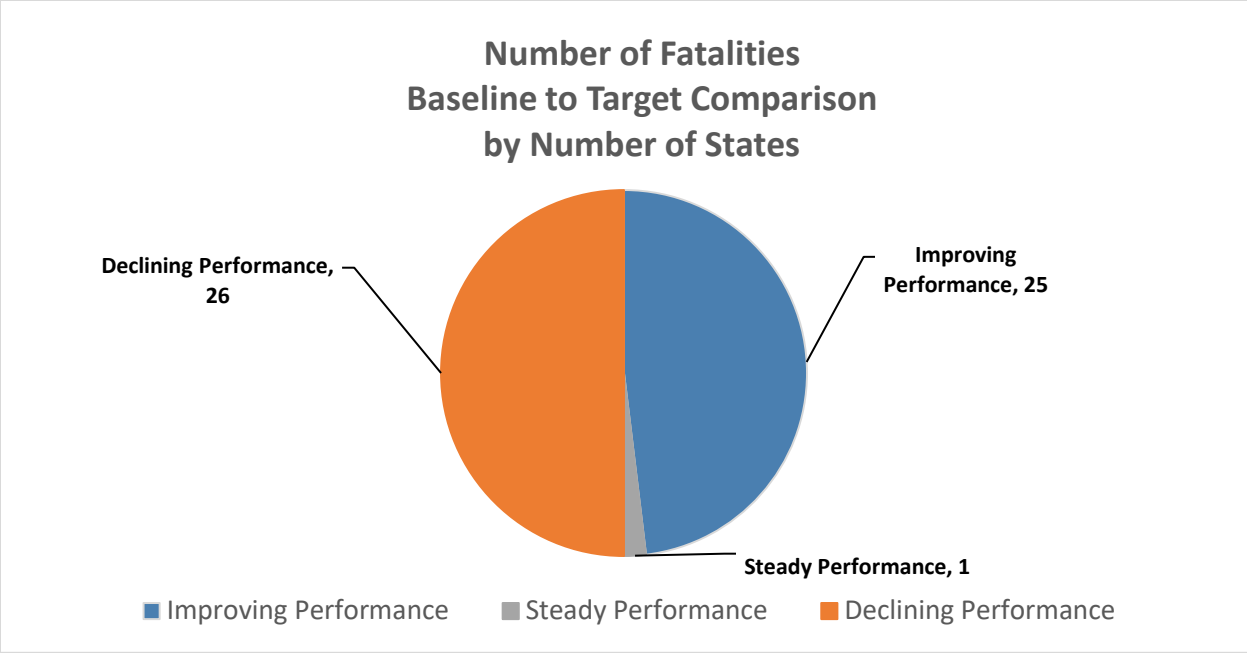

Figure 3: Number of Fatalities Baseline to Target Comparison by Number of States

Rate of Fatalities Per 100 Million Vehicle Miles Traveled

This performance measure is commonly referred to as the fatality rate.
Figure 4 displays the baseline distribution of the fatality rate across the States, showing the number of States with fatality rate in each category.

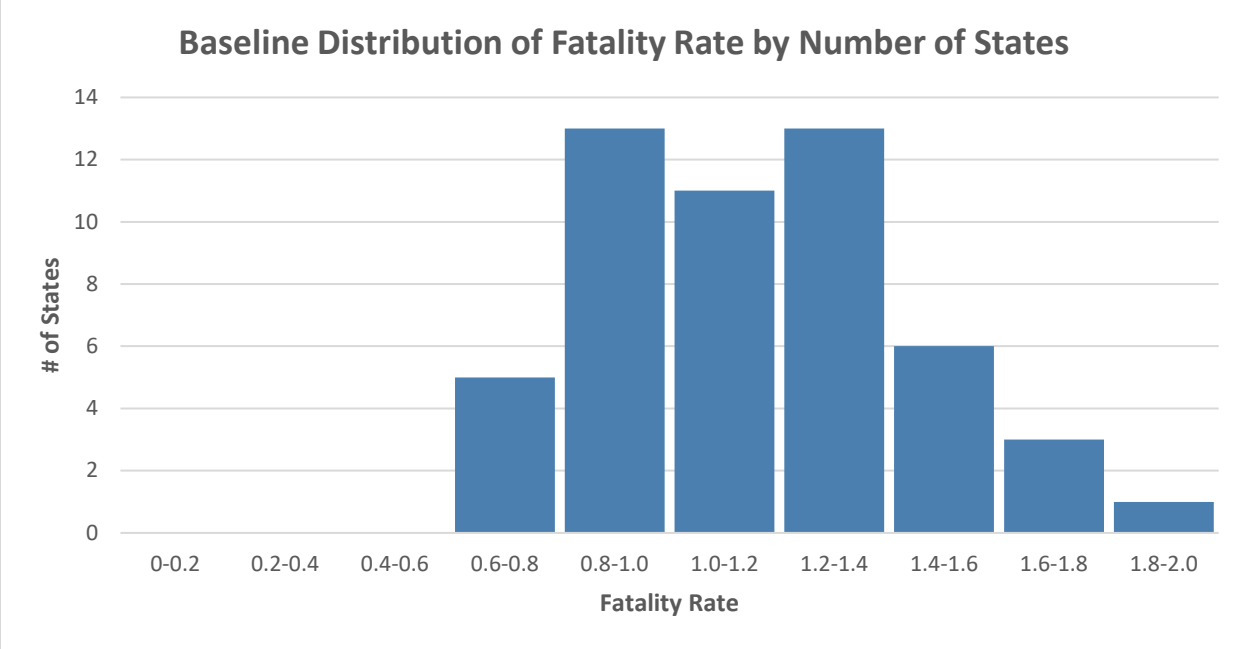

Figure 4: Baseline Distribution of Fatality Rate by Number of States

Figure 5 provides the number of State DOTs that set targets reflecting improving, steady, or declining performance for fatality rate when comparing baseline (2013-2017) with the target (2015-2019).

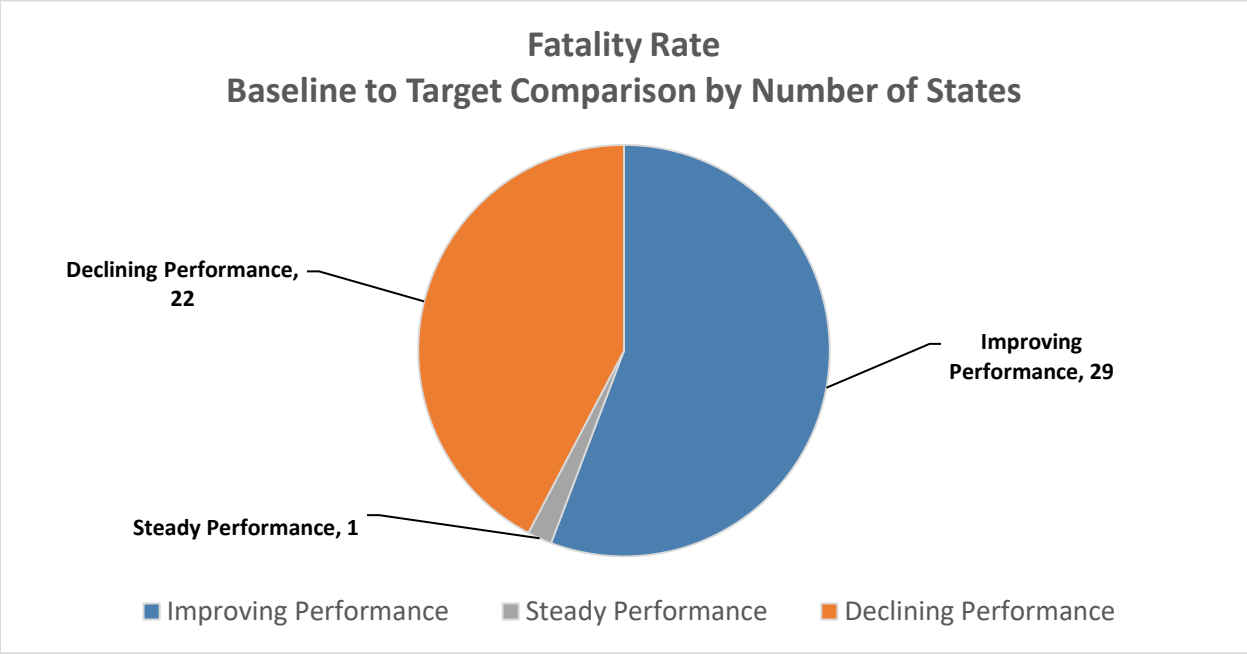

Figure 5: Fatality Rate Baseline to Target Comparison by Number of States

Figure 6 shows the distribution of percent change in fatality rate when comparing baseline (2013 -2017) with the target (2015-2019). The orange bars indicate the number of States with increasing fatality rate of up to 30 percent, and the blue bars indicate number of States with decreasing fatality rate of up to 100 percent. The black line indicates the dividing line at zero.

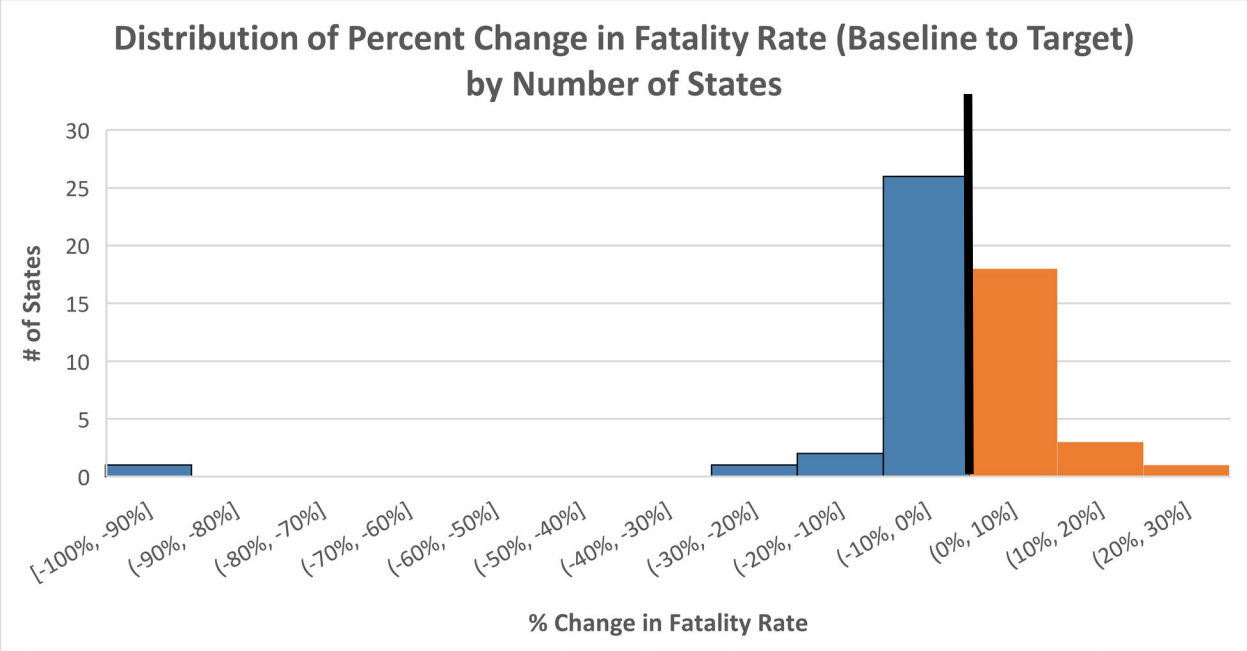

Figure 6: Distribution of Percent Change in Fatality Rate (Baseline to Target) by Number of States

Number of Serious Injuries

Figure 7 provides the number of State DOTs that set targets reflecting improving, steady, or declining performance for serious injuries when comparing baseline (2013-2017) with the target (2015-2019).

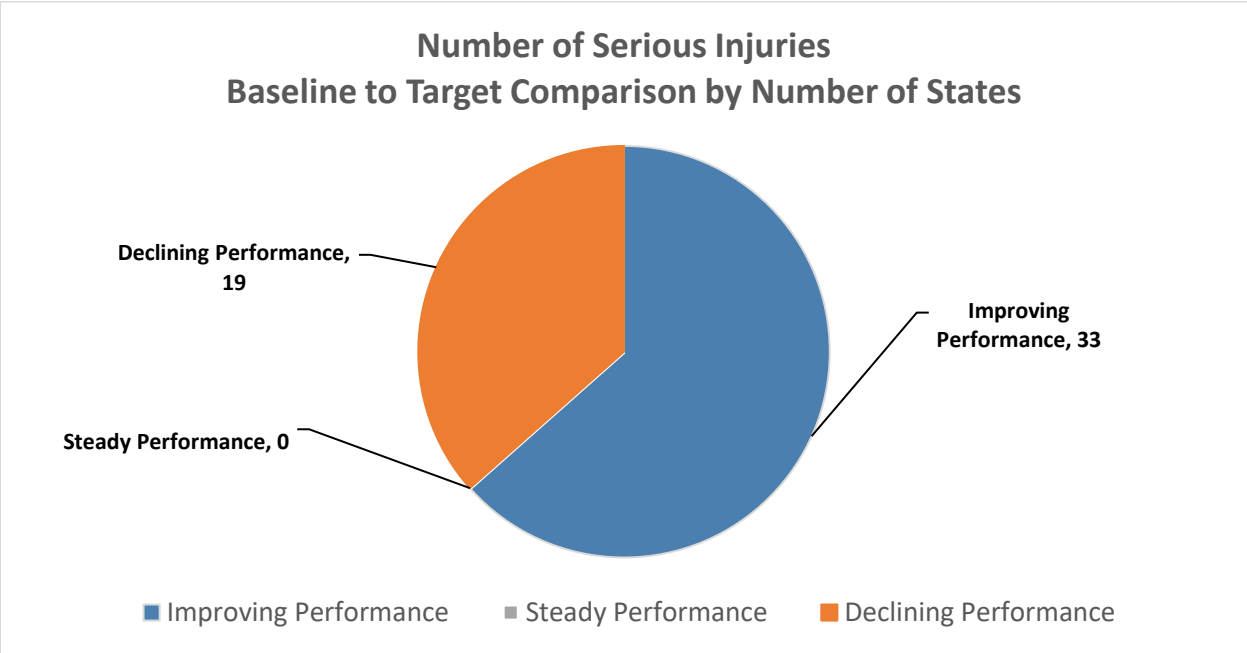

Figure 7: Number of Serious Injuries Baseline to Target Comparison by Number of States

Rate of Serious Injuries Per 100 Million Vehicle Miles Traveled

This performance measure is commonly referred to as the serious injury rate.
Figure 8 displays the baseline distribution of the serious injury rate across the States, showing the number of States with serious injury rate in each category.

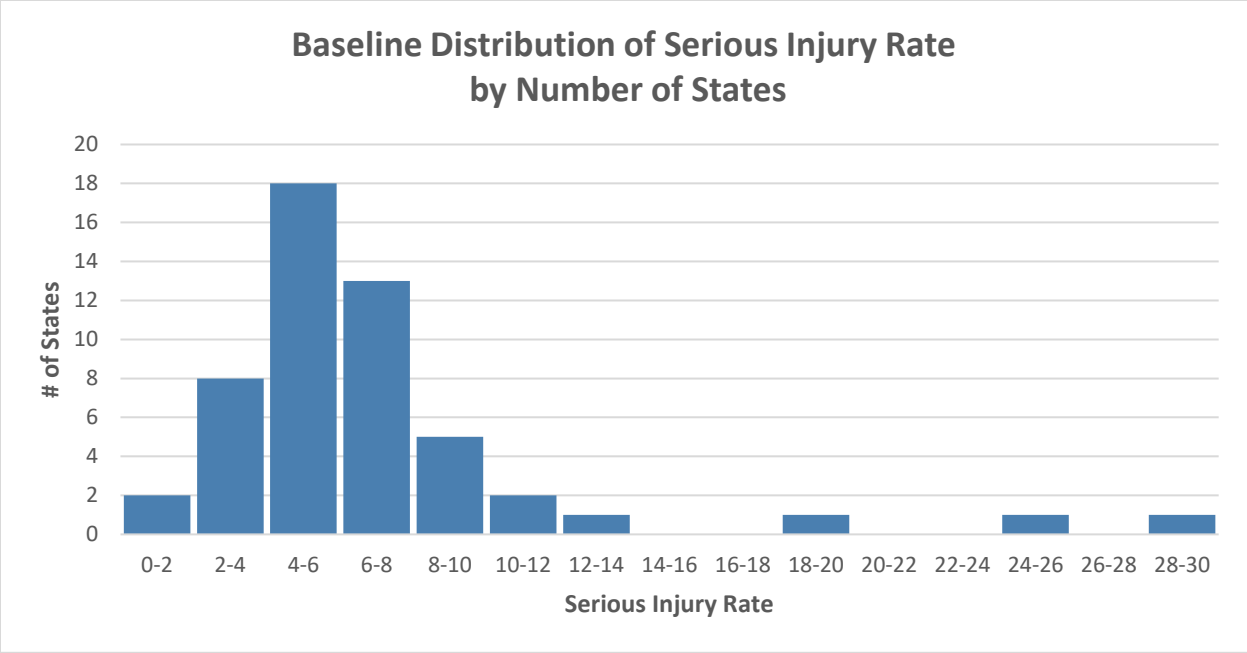

Figure 8: Baseline Distribution of Serious Injury Rate by Number of States

Figure 9 provides the number of State DOTs that set targets reflecting improving, steady, or declining performance for serious injury when comparing baseline (2013-2017) with the target (2015-2019).

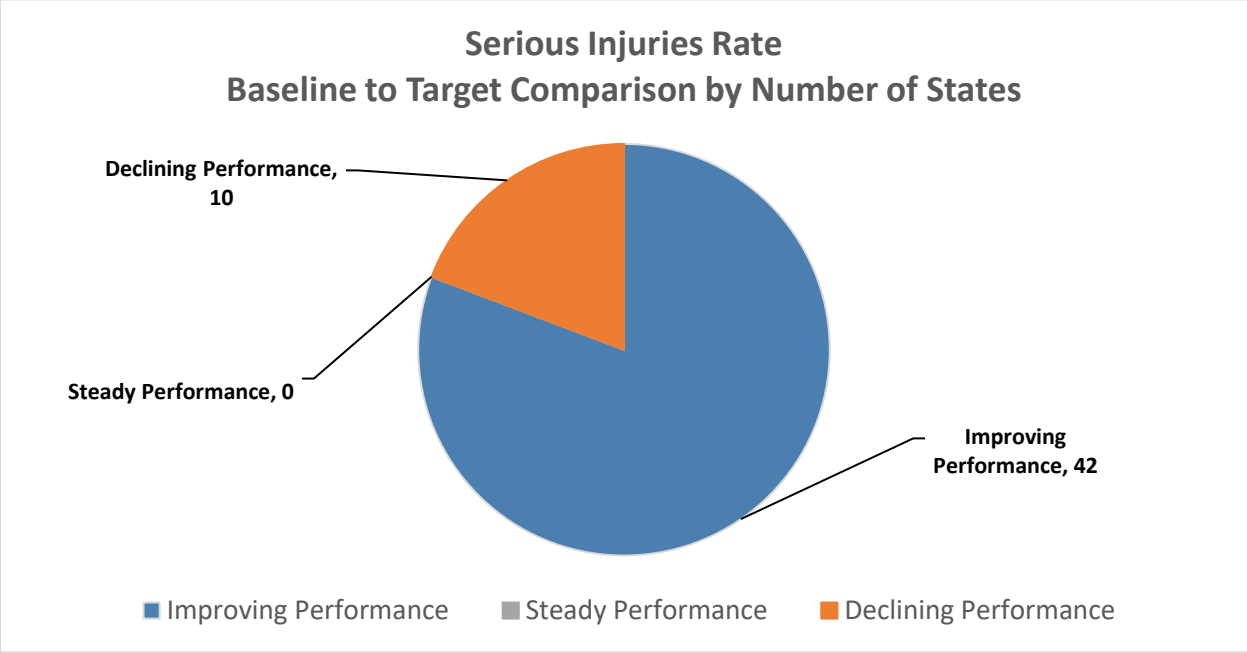

Figure 9: Serious Injuries Rate Baseline to Target Comparison by Number of States

Figure 10 shows the distribution of percent change in serious injury rate when comparing baseline (2013 -2017) with the target (2015-2019). The orange bars indicate the number of States with increasing serious injury rate of up to 30 percent, and the blue bars indicate number of States with decreasing serious injury rate of up to 100 percent. The black line indicates the dividing line at zero.

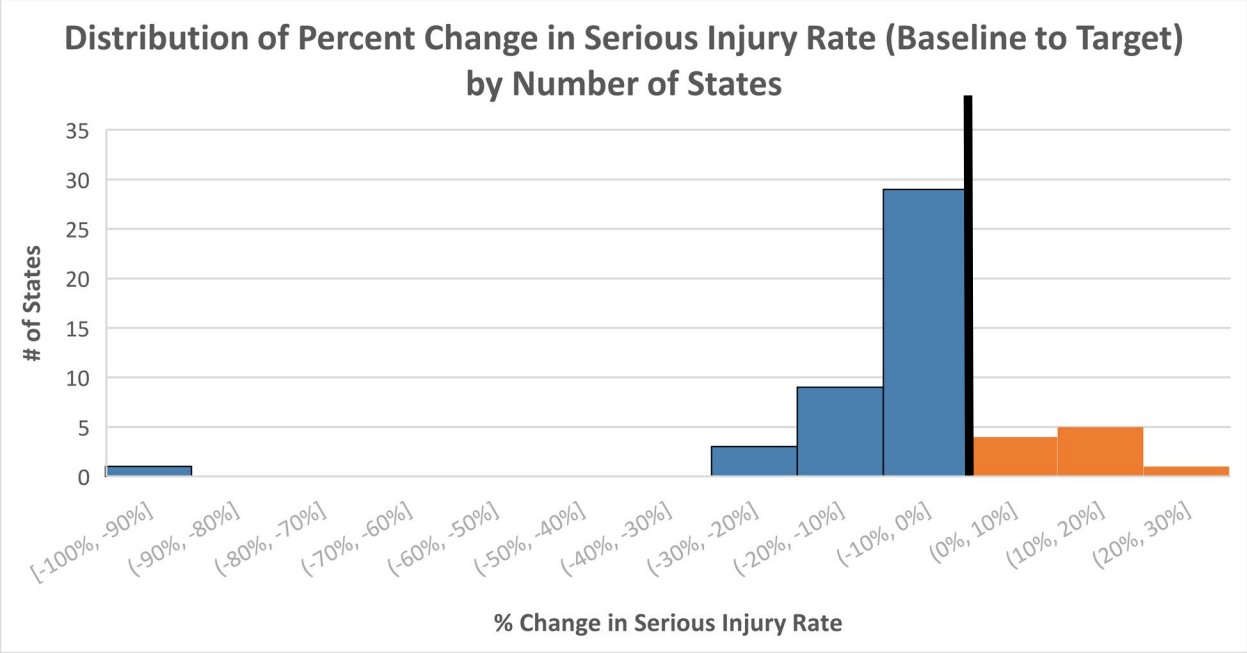

Figure 10: Distribution of Percent Change in Serious Injury Rate (Baseline to Target) by Number of States

Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries

Figure 11 provides the number of State DOTs that set targets reflecting improving, steady, or declining non-motorized fatalities and serious injuries when comparing baseline (2013-2017) with the target (2015-2019).

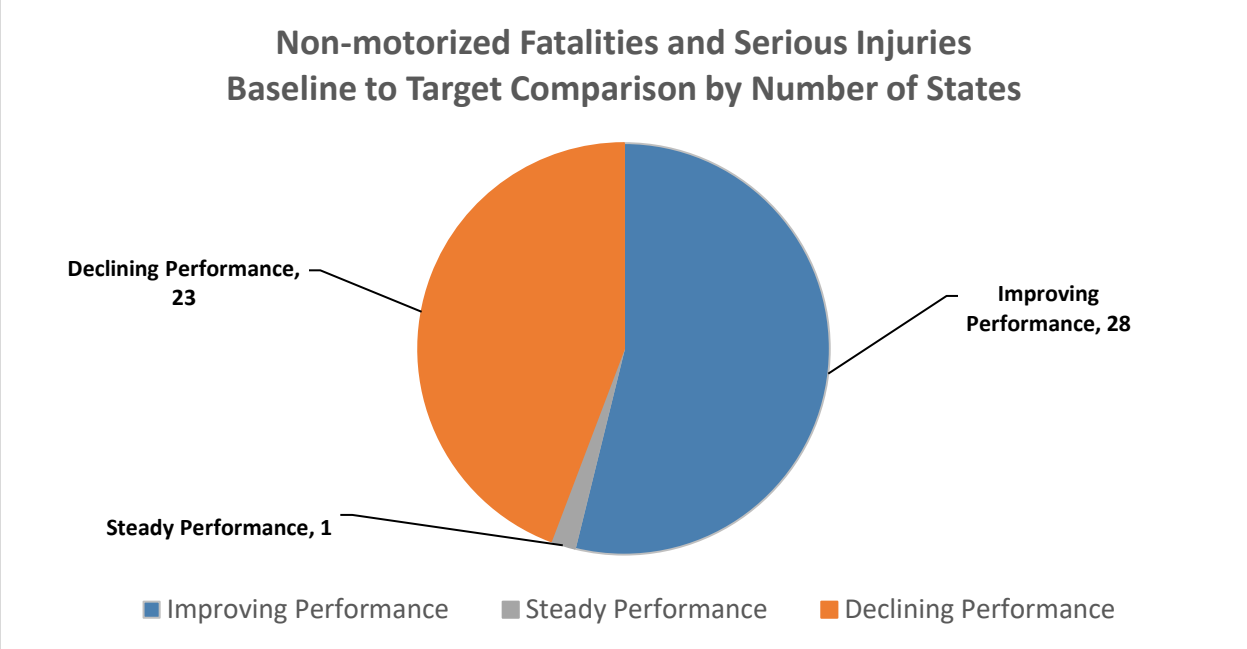

Figure 11: Non-Motorized Fatalities and Serious Injuries Baseline to Target Comparison by Number of States

Pavement Measures

As previously shown in Table 1, there are four performance measures associated with pavement condition:

- Percentage of pavements of the Interstate System in Good condition
- Percentage of pavements of the Interstate System in Poor condition
- Percentage of pavements of the non-Interstate NHS in Good condition
- Percentage of pavements of the non-Interstate NHS in Poor condition

State DOTs report annually to the HPMS on pavement condition, and biennially submit the State Biennial Performance Report that includes information on the performance measures to the PMF. Table 3 provides additional background on the pavement performance measures.

Table 3: Background on Pavement Measures

Criteria	**Interstate System**	**Non-Interstate NHS**
Applicability	Mainline highways on the Interstate System.	Mainline highways on the non-Interstate NHS.
Measure Data Collection	Annual data collection. Annual metric reporting to HPMS by April 15.[14]	Biennial data collection. Annual metric reporting to HPMS by June 15.[15]
Data Transition	State DOTs to start collecting Interstate pavement data for the HPMS according to the requirements not later than January 1, 2018.[16] First reporting to HPMS not later than April 15, 2019.[17]	First performance period: State DOTs were only required to collect and report on the International Roughness Index (IRI).[18] States must meet all pavement data collection requirements by January 1, 2020.[19]
Metric(s)	IRI, Cracking Percent, rutting, faulting, and present serviceability rating (PSR)	

[14] 23 CFR 490.319(a)
[15] 23 CFR 490.319(b)
[16] 23 CFR 490.309(a)
[17] 23 CFR 490.311(c)(4) and 23 CFR 490.311(d)(2)
[18] The "phase-in" requirements and the "transition" provision for the Pavement Condition Measures https://www.fhwa.dot.gov/tpm/guidance/qa_phasein.pdf
[19] 23 CFR 490.309(a)

Criteria	Interstate System	Non-Interstate NHS
Measure Calculation	Percent of the lane-miles of Interstate mainline segments rated as in Good and Poor condition (weighted by lane-miles). [20]	Percent of the lane-miles of non-Interstate NHS mainline segments rated as in Good and Poor condition (weighted by lane-miles). [21]
State DOT Target Requirements	2-year and 4-year statewide targets. [22]	
Target Phase-In	No 2-year targets or baseline data reported for first performance period.	N/A – both 2-year and 4-year targets reported for first performance period.

Percentage of Pavements of the Interstate System in Good Condition

For the October 2018 Report, State DOTs were only required to submit 4-year targets for the percent of pavements on the Interstate System in Good and Poor condition.[23]

Figure 12 displays the distribution of the percent of Interstate pavement in Good condition across the States based on the 4-year targets, showing the number of States with condition in each category.

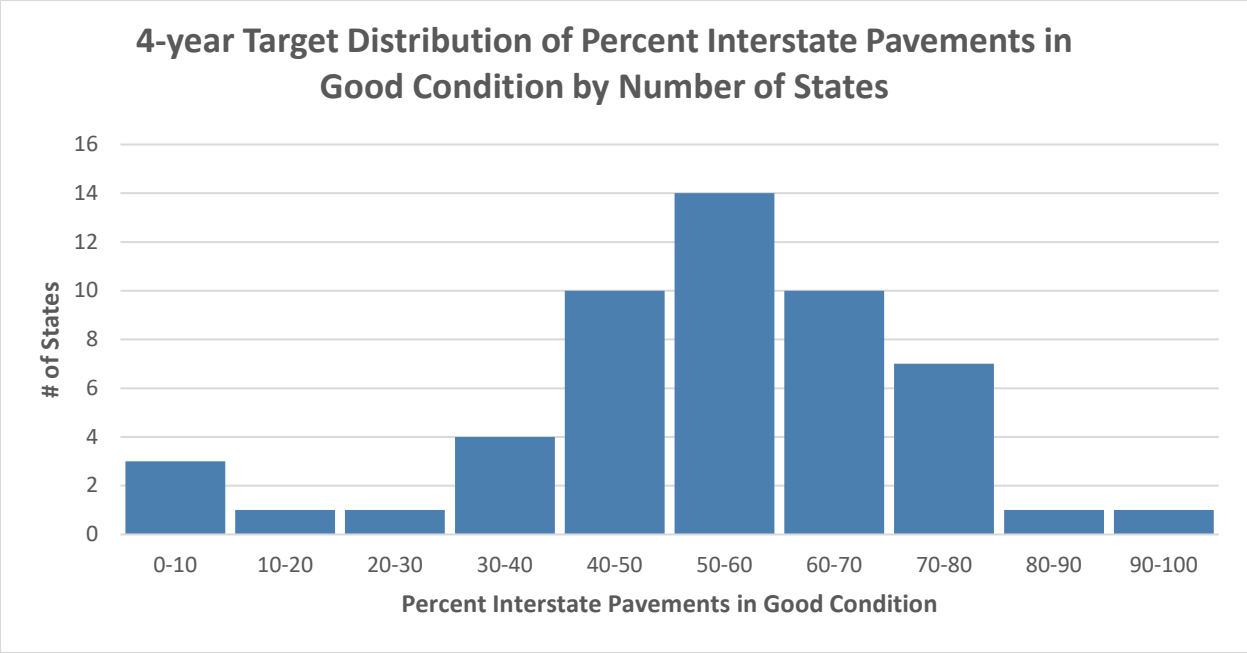

Figure 12: 4-year Target Distribution of Interstate Pavement Miles in Good Condition by Number of States

Percentage of Pavements of the Interstate System in Poor Condition

For the October 2018 Report, State DOTs were only required to submit 4-year targets for the percent of

[20] FHWA Computation Procedure for the Pavement Condition Measures https://www.fhwa.dot.gov/tpm/guidance/
[21] FHWA Computation Procedure for the Pavement Condition Measures https://www.fhwa.dot.gov/tpm/guidance/
[22] 23 CFR 490.105(e)(4)(iii) and (iv)
[23] 23 CFR 490.105(e)(7)(i) and (ii)

pavements on the Interstate System in Good and Poor condition. [24]

Figure 13 displays the distribution of the percent of Interstate pavement in Poor condition across the States based on the 4-year targets, showing the number of States with condition in each category.

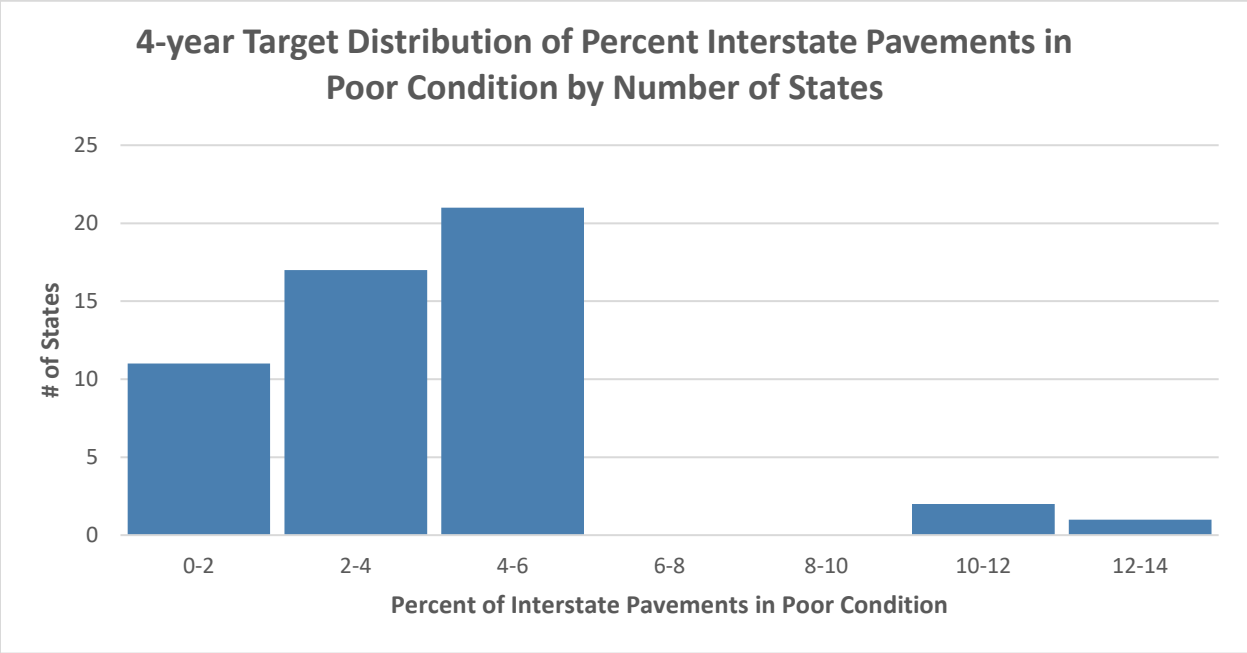

Figure 13: Distribution of Interstate Pavement Miles in Poor Condition by Number of States (4-yr target)

Percentage of Pavements of the non-Interstate NHS in Good Condition and Percentage of Pavement of non-Interstate NHS in Poor Condition

The national pavement condition measures require International Roughness Index (IRI), Cracking Percent, Rutting, and Faulting data[25] to rate the pavement condition as Good, Fair, or Poor for each pavement section on the non-Interstate NHS.[26] The State DOTs are required to report on the full-extent,[27] full-distress data for the non-Interstate NHS to the HPMS beginning in 2022[28]; however, until then, State DOTs are required to report only the full-extent IRI data. Accordingly, 23 CFR 490.313(e) requires non-Interstate NHS pavement measures to be based only on IRI data for the first performance period. To make the measures and targets comparable, State DOTs were expected to establish their targets reflecting the condition based only on IRI.

However, during the 2018 State biennial reporting, FHWA learned that most State DOTs established targets based on the "full-distress plus IRI" data and not solely on the IRI component (therefore

[24] 23 CFR 490.105(e)(7)(i) and (ii)

[25] For purposes of this document, the term Full-distress plus IRI data refers to full-extent Cracking Percent and IRI for all pavement sections; full-extent Rutting for all pavement sections with asphalt pavement Surface Types; full-extent Faulting for all pavement sections with jointed concrete pavement Surface Types; and full-extent inventory data in accordance with in 23 CFR 490.309 and 23 CFR 490.311.

[26] 23 CFR Part 490, Subpart C

[27] Full Extent Data is data reported for an entire roadway system or systems (page 1-3 HPMS Field Manual, Dec 2016)

[28] Data collected in 2020 and 2021 to be reported to HPMS in 2022 [23 CFR 490.309(a), 23 CFR 490.311(c) and (d)]

expediting the transition period). In 2019, FHWA reached out to each State DOT to confirm what method (IRI only or "full-distress plus IRI" data) it used; nine set targets based on IRI only, 42 used "full-distress plus IRI" data, and one State DOT used IRI only data for its 2-year target and "full-distress plus IRI" for its 4-year target. Due to the difference in the data used for the States' targets, the reported targets and baselines comparison are not possible. As the data transition period ends and future State biennial reports are submitted, greater analysis can be made in future versions of this report.

Bridge Measures

As previously shown in Table 1, there are two performance measures associated with bridge condition:

- Percentage of NHS bridges classified as in Good condition
- Percentage of NHS bridges classified as in Poor condition

Table 4 provides additional background information on the bridge performance measures.

Table 4: Background on Bridge Measures

Criteria	**NHS Bridges**
Applicability	Bridges carrying the NHS, which includes on- and off-ramps connected to the NHS and State border bridges.
Measure Data Collection	Data collection varies.[29] Annual metric reporting to National Bridge Inventory (NBI) by March 15.[30]
Metric(s)	Bridge condition ratings for Deck, Superstructure, Substructure, and Culvert.[31]
Measure Calculation	Percentage of bridges carrying NHS classified as in Good and Poor condition weighted by deck area.
State DOT Target Requirements	2-year and 4-year statewide targets.[32]
Target Phase-In	N/A

Percentage of NHS Bridges Classified as in Good Condition

Figure 14 displays the baseline distribution of the percent of NHS bridges in Good condition by deck area across the States, showing the number of States with condition in each category.

[29] Data collection cycle varies; however, 24 months for most of bridges. Please see the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges https://www.fhwa.dot.gov/bridge/bripub.cfm

[30] 23 CFR 490.411(e)

[31] FHWA Computation Procedure for the Bridge Condition Measures https://www.fhwa.dot.gov/tpm/guidance/

[32] 23 CFR 490.105(e)(4)(iii) and (iv)

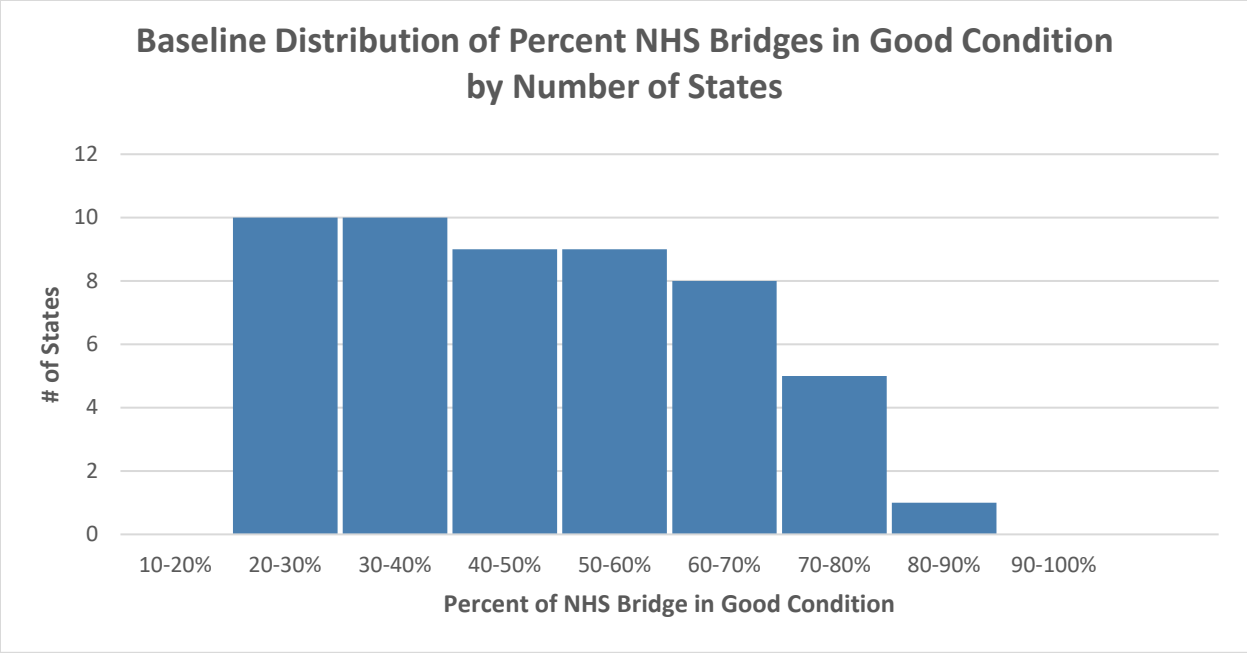

Figure 14: Baseline Distribution of NHS Bridges in Good Condition by Number of States

Figure 15 shows the number of State DOTs that set targets reflecting improving, steady, or declining condition for percent of NHS bridges in Good condition by deck area when comparing baseline with the target.

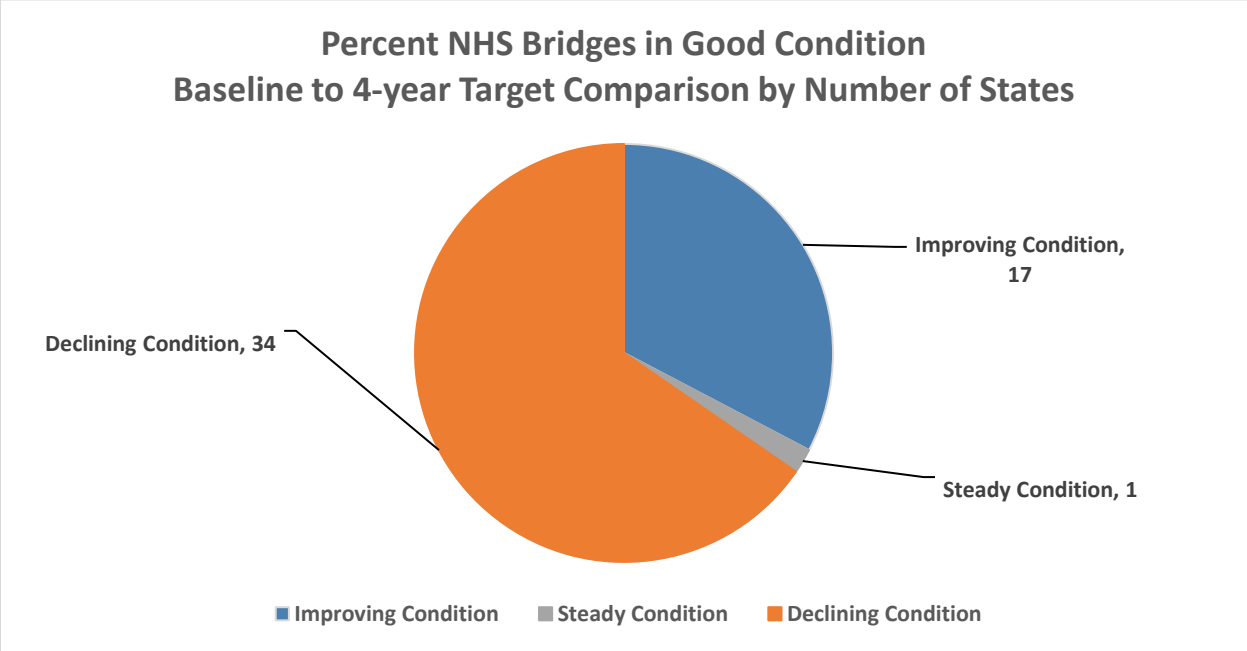

Figure 15: Percent NHS Bridges in Good Condition Baseline to 4-year Target Comparison by Number of States

Figure 16 shows the comparison of baseline to 2-year and 4-year targets for percent of NHS bridges in Good condition by deck area.

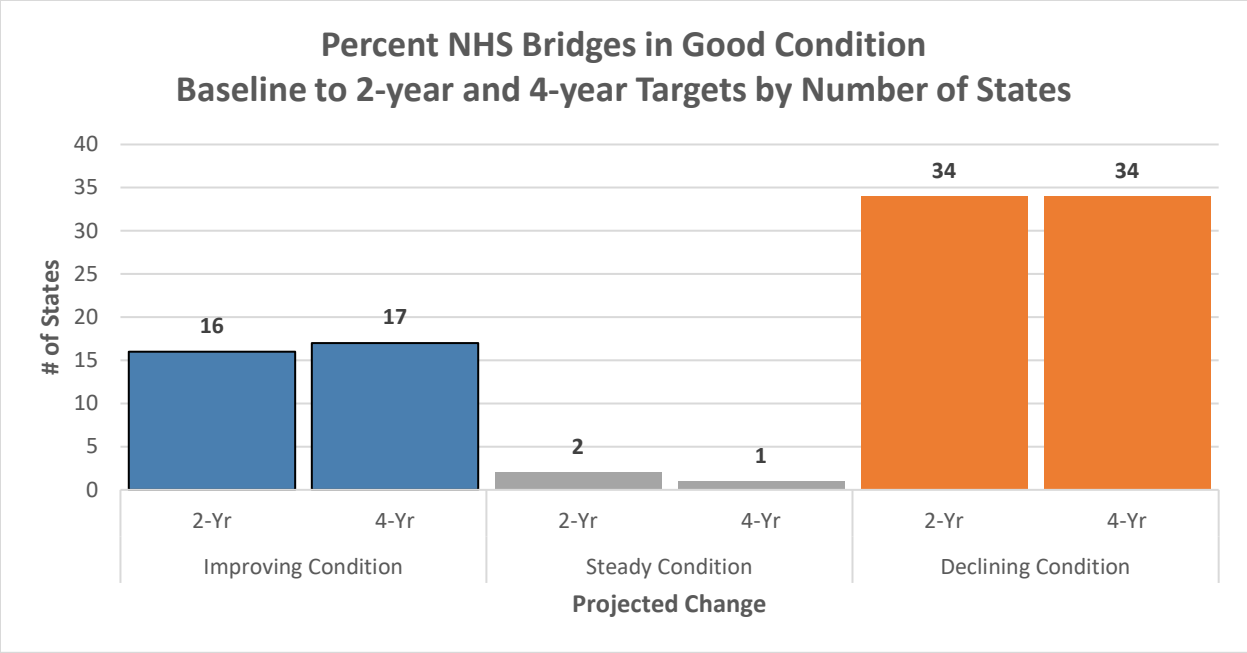

Figure 16: Percent NHS Bridges in Good Condition Baseline to 2-year and 4-year Targets Comparison by Number of States

Figure 17 shows the magnitude of anticipated improvements or declines in percent of NHS bridges in Good condition by deck area when comparing baseline with the 4-year target. The orange bars indicate the number of States with declining condition of up to 20 percent, and the blue bars indicate number of States with improving condition of up to 15 percent. The black line indicates the dividing line at zero.

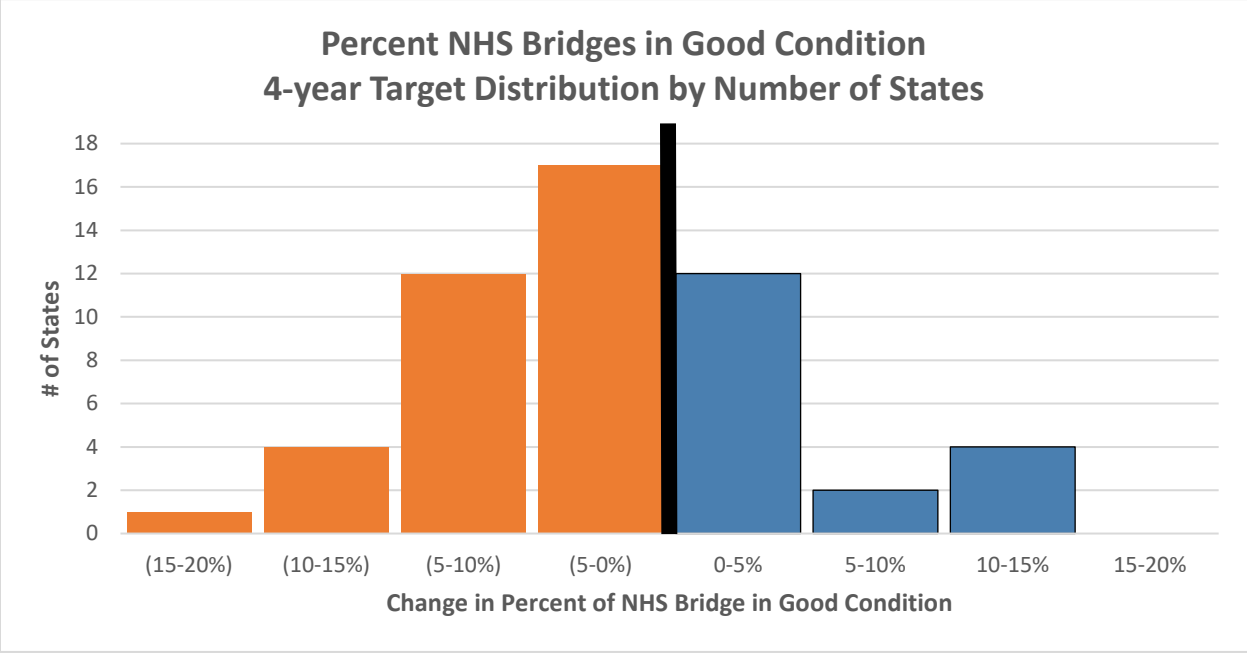

Figure 17: Changes in Percent NHS Bridges in Good Condition 4-year Target Distribution by Number of States

Percentage of NHS Bridges Classified as in Poor Condition

Figure 18 displays the baseline distribution of the percent of NHS bridge in Poor condition by deck area across the States, showing the number of States with condition in each category.

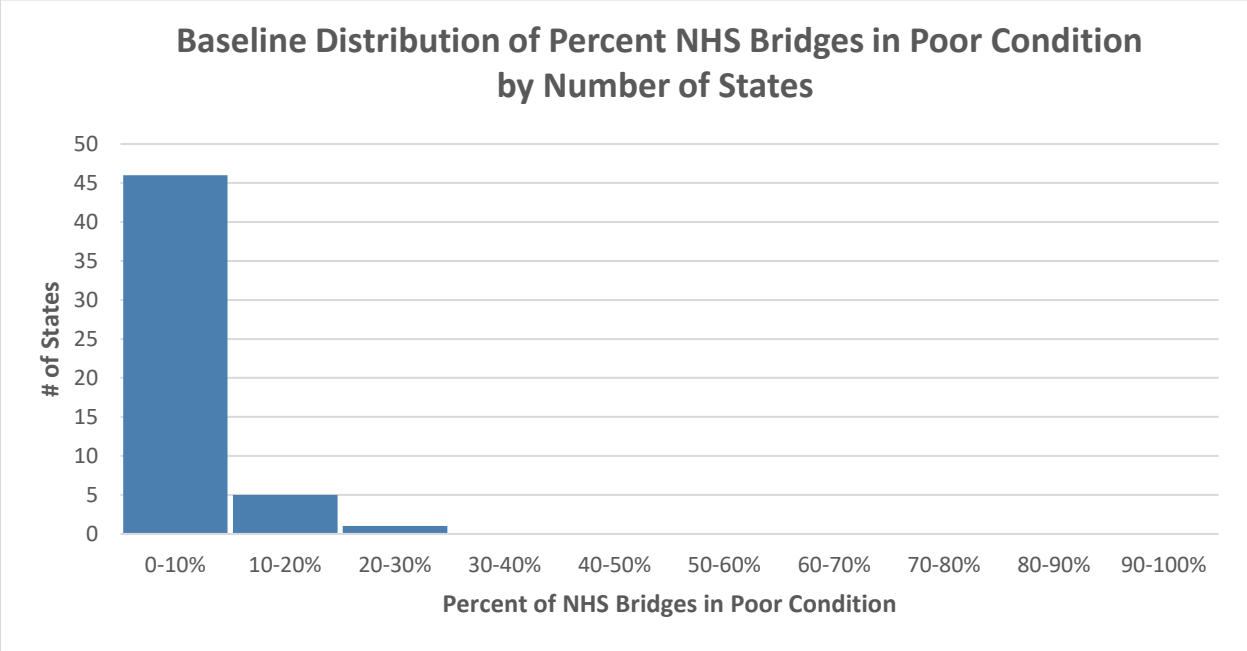

Figure 18: Baseline Distribution of Percent NHS Bridges in Poor Condition by Number of States

Figure 19 provides the number of State DOTs that set targets reflecting improving, steady, or declining condition for percent of NHS bridges in Poor condition by deck area when comparing baseline with the target.

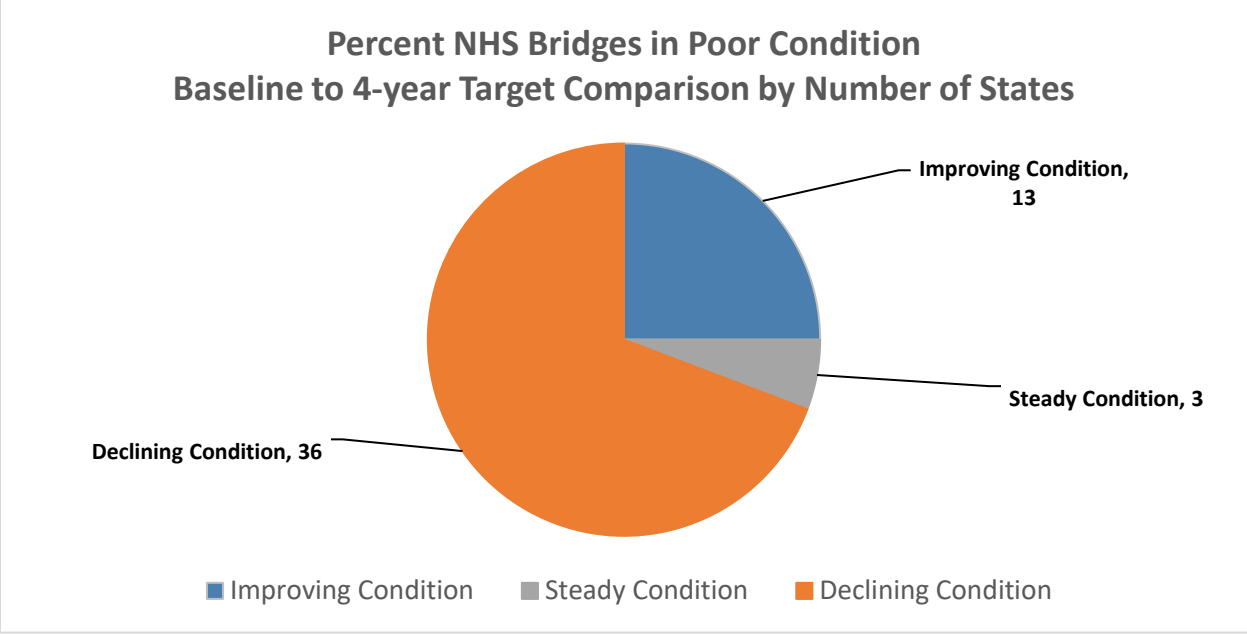

Figure 19: Percent NHS Bridges in Poor Condition Baseline to 4-year Target Comparison by Number of States

Figure 20 shows the comparison of baseline to 2-year and 4-year targets for percent of NHS bridges in Poor condition by deck area.

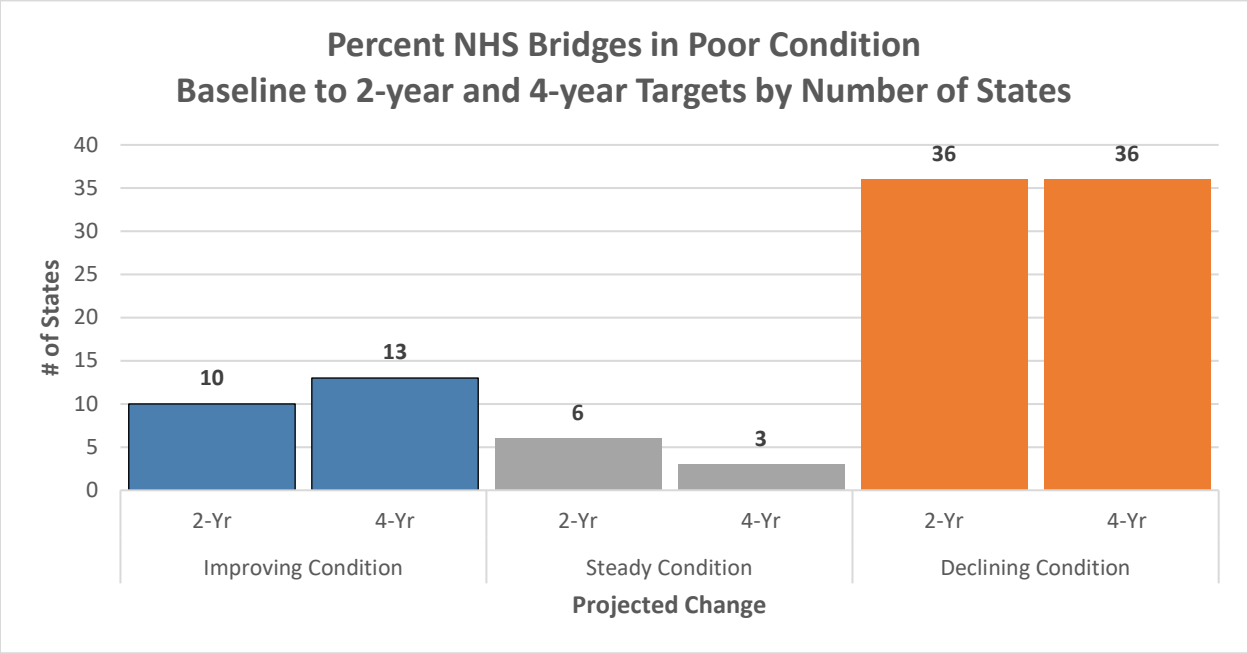

Figure 20: Percent NHS Bridges in Poor Condition Baseline to 2-year and 4-year Targets Comparison by Number of States

Figure 21 shows the magnitude of anticipated improvements or declines in percent of NHS bridges in Poor condition by deck area when comparing baseline with the 4-year target. The orange bars indicate the number of States with declining condition of up to 10 percent, and the blue bars indicate number of States with improving condition, of up to 10 percent. The black line indicates the dividing line at zero.

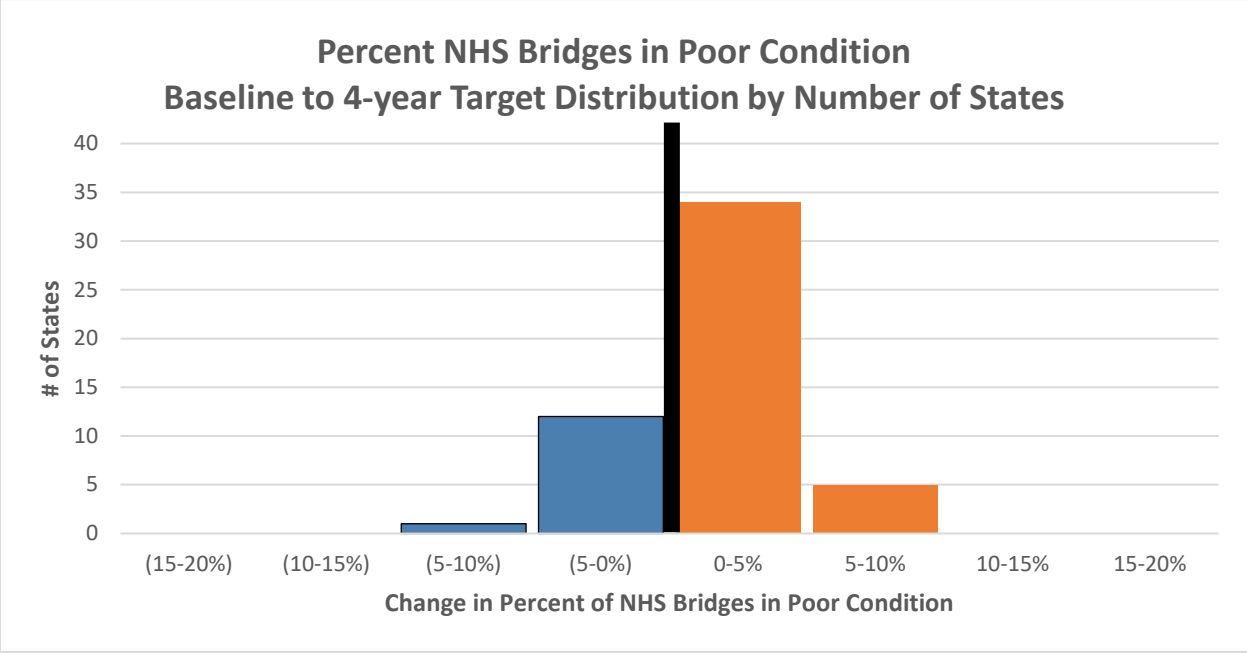

Figure 21: Percent NHS Bridges in Poor Condition 4-year Target Distribution by Number of States

Travel Time Reliability

As previously shown in Table 1, there are two performance measures associated with travel time reliability:

- Percentage of person-miles traveled on the Interstate that are reliable
- Percentage of person-miles traveled on the non-Interstate NHS that are reliable

Table 5 provides additional background information on the travel time reliability performance measures.

Table 5: Background on Travel Time Reliability Measures

Criteria	**Travel Time Reliability**
Applicability	Mainline of the Interstate System or Non-Interstate NHS.
Measure Data Collection	All traffic/vehicle travel time data in National Performance Management Research Data Set (NPMRDS) or equivalent dataset. Annual metric reporting to HPMS by June 15.[33]
Metric(s)	Level of Travel Time Reliability (LOTTR)[34] - 80th percentile travel time divided by the 50th percentile travel time. Four LOTTR metrics are calculated for each reporting segment[35]: • "AM Peak" (6am-10am) for every weekday; • "Midday" (10am-4pm) for every weekday; • "PM Peak" (4pm-8pm) for every weekday; and • "Weekend" (6am-8pm) for every weekend day.
Measure Calculation	Percent of Interstate or non-Interstate NHS direction-miles of reporting segments (weighted by person miles traveled) with "LOTTR < 1.5" for all 4 time periods.[36]
State DOT Target Requirements	2-year and 4-year statewide targets.[37]
Target Phase-In	*For Non-Interstate NHS:* For the first performance period only, no 2-year targets or baseline data were reported; State DOTs only reported 4-year targets.

[33] 23 CFR 490.511(e)

[34] For each segment, the data is used to create a ranked list of all travel times within 15-minute periods for each day. This is then used to calculate the LOTTR metric for each reporting segment for each of the 4 time periods.

[35] 23 CFR 490.511(b)(1)

[36] FHWA Computation Procedure for the Bridge Condition Measures https://www.fhwa.dot.gov/tpm/guidance/

[37] 23 CFR 490.105(e)(4)(iii) and (iv) and 23 CFR 490.105(e)(7)(i) and (ii)

Percentage of Person-Miles Traveled on the Interstate that are Reliable

Figure 22 displays the baseline distribution of the percent of person-miles traveled on the Interstate that are reliable across the States, showing the number of States with performance in each category. The improving trend for this measure is upward, to have more person-miles traveled as reliable. The improving trend for the distribution is rightward, with more States moving to a higher percentage of person-miles traveled that are reliable.

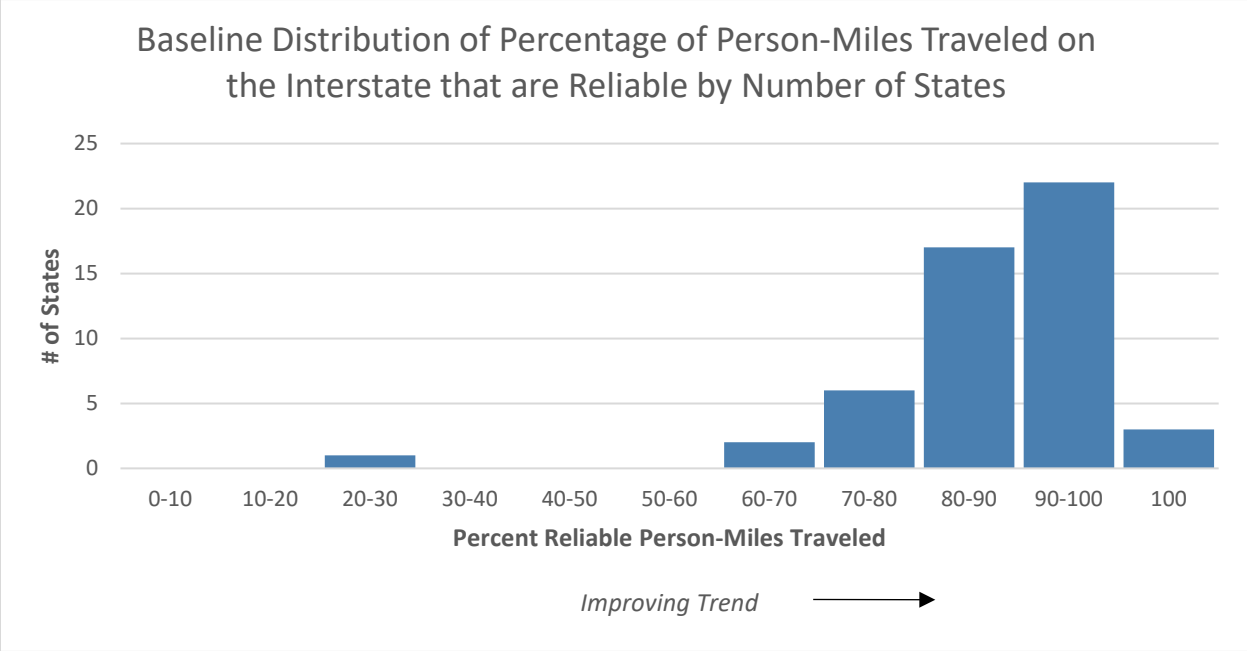

Figure 22: Baseline Distribution of Percentage of Person-Miles Traveled on the Interstate that are Reliable by Number of States

Figure 23 provides the number of State DOTs that set targets reflecting improving, steady, or declining of percent of reliable person-miles traveled on the interstate when comparing baseline to the 4-year target.

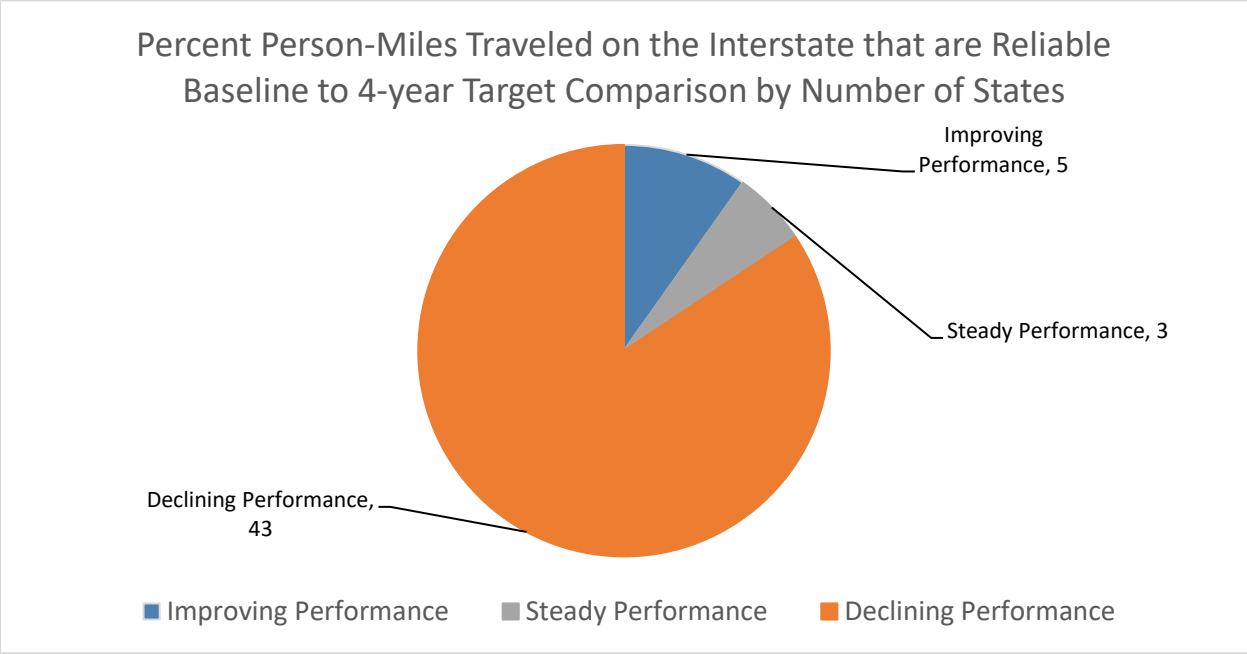

Figure 23: Percent Person-Miles Traveled on the Interstate that are Reliable Baseline to 4-year Target Comparison by Number of States

Figure 24 shows the baseline to the 2-year and 4-year targets comparison for percent of reliable person-miles traveled on the interstate.

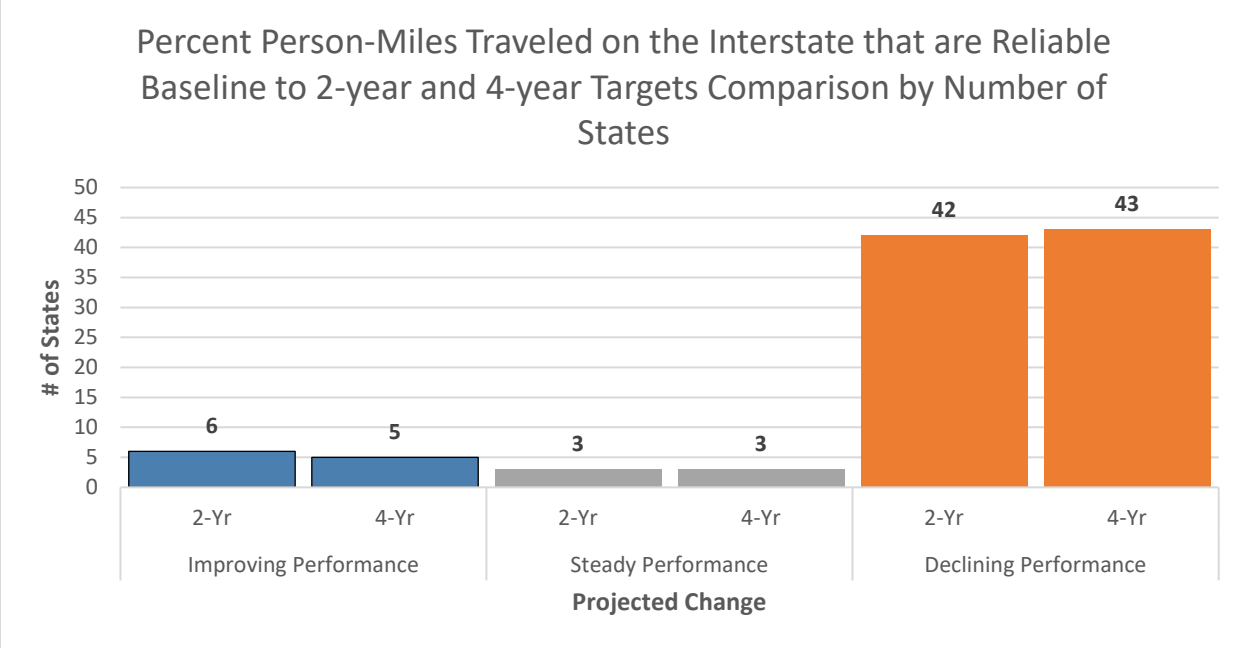

Figure 24: Percent Person-Miles Traveled on the Interstate that are Reliable Baseline to 2-year and 4-year Targets Comparison by Number of States

Figure 25 shows the magnitude of anticipated improvements or declines in percent of reliable person-miles traveled on the Interstate when comparing baseline with the 4-year target. The orange bars indicate the number of States with declining performance of up to 15 percent, and the blue bars indicate number of States with improving performance, of up to 10 percent. The black line indicates the dividing line at zero.

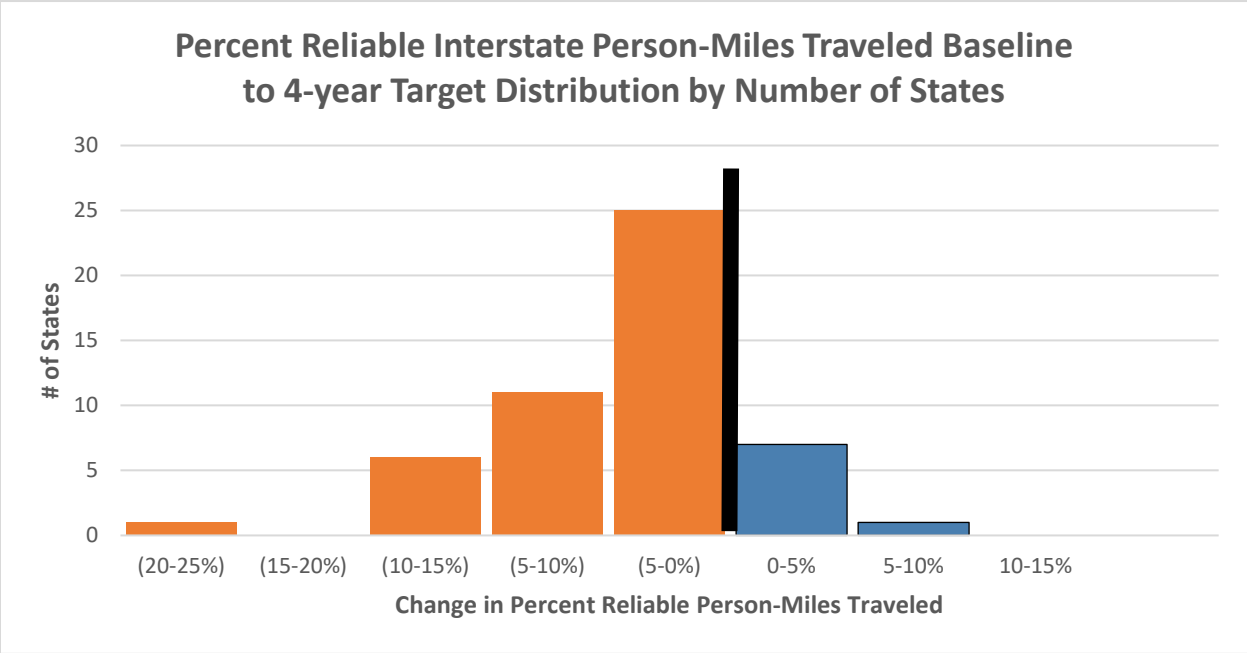

Figure 25: Percent Person-Miles Traveled on the Interstate that are Reliable 4-year Target Distribution by Number of States

Percentage of Person-Miles Traveled on the non-Interstate NHS that are Reliable

For the October 2018 PMF Report, State DOTs were only required to submit 4-year targets for the percent of person-miles traveled on the non-Interstate NHS that are reliable.[38]
Figure 26 displays the projected distribution of the percent of person-miles traveled on the non-Interstate NHS that are reliable across the States based on the 4-year targets, showing the number of States with performance in each category.

The improving trend for this measure is upward, to have more person-miles traveled on the non-Interstate NHS that are reliable. The improving trend for the distribution is rightward, with more States moving to a higher percentage of person-miles traveled that are reliable.

[38] 23 CFR 490.105(e)(7)(i) and (ii)

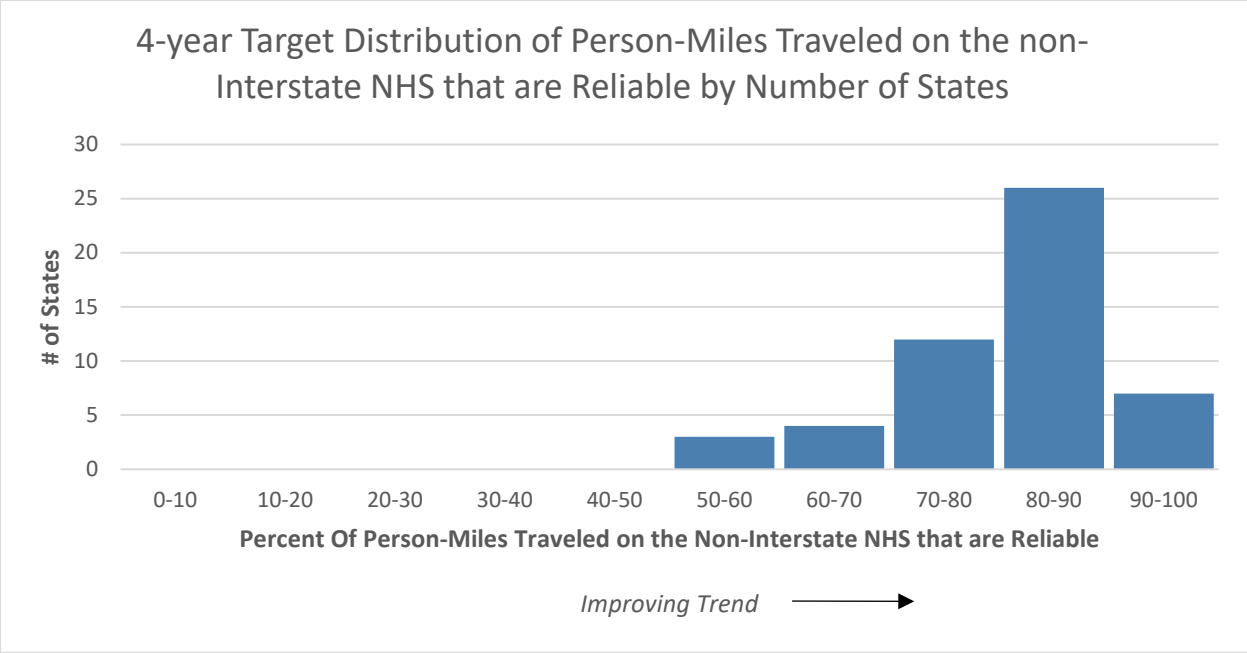

Figure 26: 4-year Target Distribution of Person-Miles Traveled on the non-Interstate NHS that are Reliable by Number of States

Freight

As previously shown in Table 1, there is one performance measure associated with freight reliability:

- Truck Travel Time Reliability (TTTR) Index

Table 6 provides additional background information on the freight reliability measure.

Table 6: Background on Freight Reliability Measure

Criteria	**Truck Travel Time Reliability**
Applicability	Mainline of the Interstate System.
Measure Data Collection	Truck travel times in the NPMRDS. States may request FHWA approval for use of an equivalent dataset. Annual metric reporting to HPMS by June 15.[39]
Metric(s)	Truck Travel Time Reliability (TTTR)[40] ratio - 95th percentile travel time divided by the 50th (normal) percentile travel time. Five TTTR metrics are calculated for each reporting segment[41]: • "AM Peak" (6am-10am) for every weekday; • "Midday" (10am-4pm) for every weekday; • "PM Peak" (4pm-8pm) for every weekday; • "Weekend" (6am-8pm) for every weekend day; and • "Overnights" (8pm-6am) for all days.
Measure Calculation	The TTTR Index is generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate.[42]
State DOT Target Requirements	2-year and 4-year statewide targets.[43]
Target Phase-In	N/A

Truck Travel Time Reliability Index

Figure 27 displays the baseline distribution of the Truck Travel Time Reliability (TTTR) index across the State DOTs (one State DOT did not submit a baseline), showing the number of States with performance in each category. The improving trend for this measure is downward, to have a lower difference between the 95th percentile and 50th percentile travel times. The improving trend for the distribution is leftward,

[39] 23 CFR 490.611(b)
[40] 23 CFR 490.611(a)(1)
[41] 23 CFR 490.611(a)(1)
[42] FHWA Computation Procedure for the Bridge Condition Measures https://www.fhwa.dot.gov/tpm/guidance/hif18040.pdf
[43] 23 CFR 490.105(e)(4)(iii) and (iv)

to have more with a smaller difference between the 95th percentile and 50th percentile travel times.

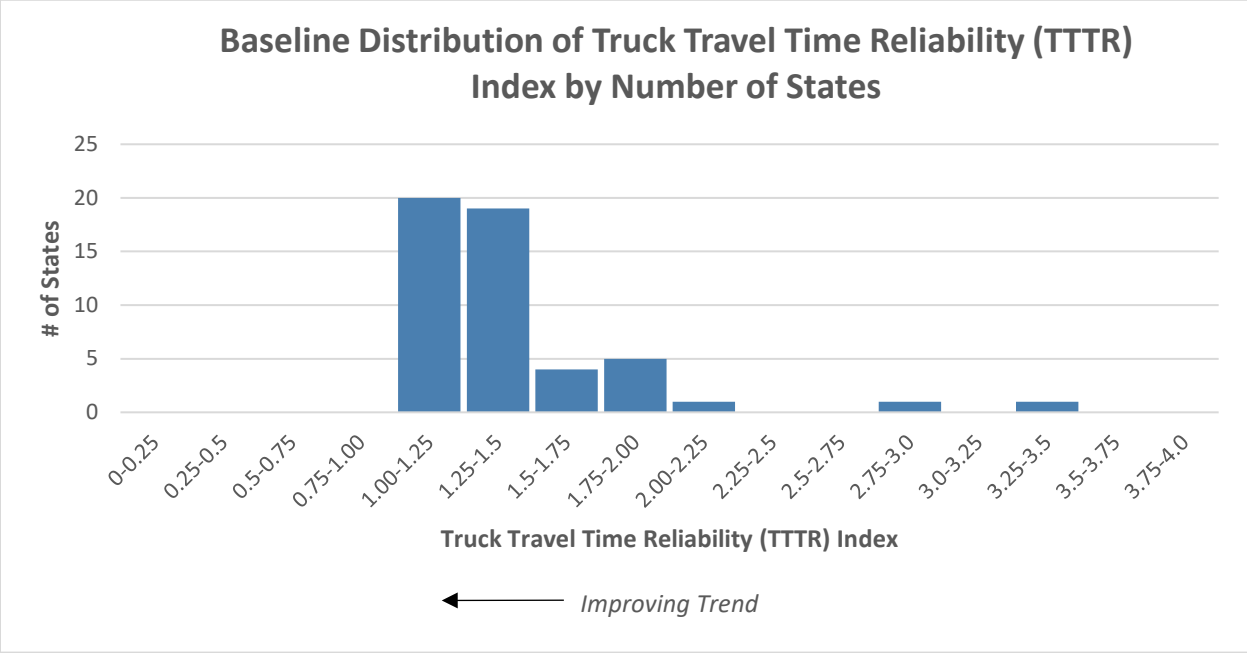

Figure 27: Baseline Distribution of Truck Travel Time Reliability Index by Number of States

Figure 28 provides the number of State DOTs that set targets reflecting improving, steady, or declining TTTR index when comparing baseline with the target. For this chart, "improving" indicates that there would be a lower TTTR index value, and "declining" indicates that there would be a higher TTTR index value.

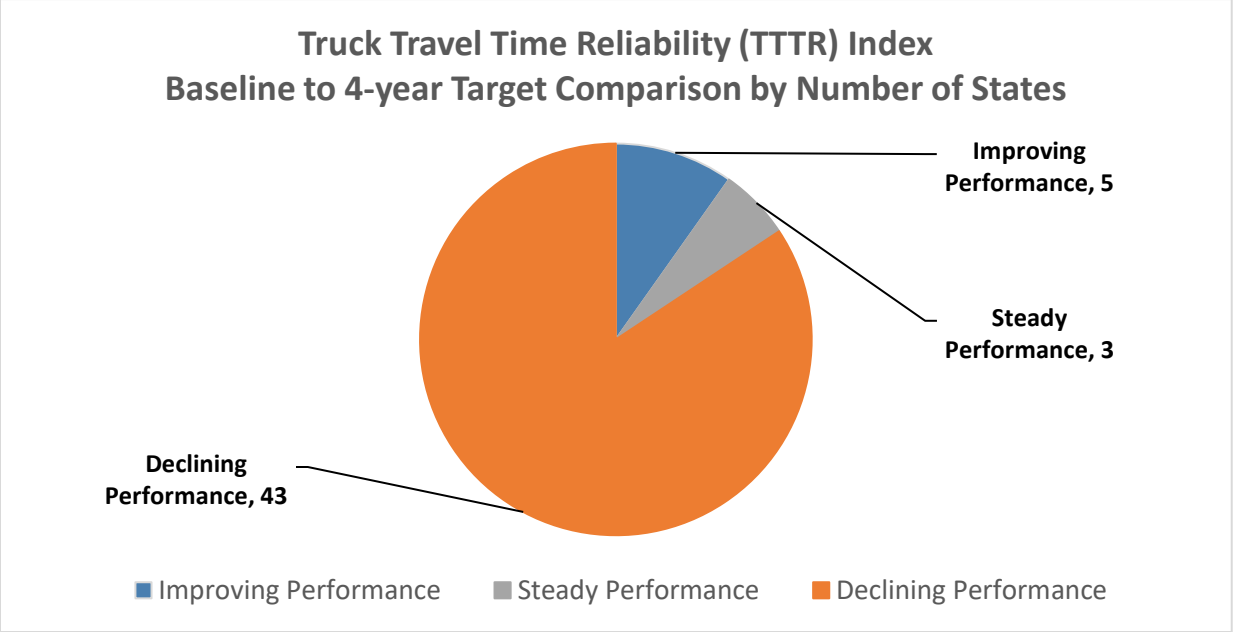

Figure 28: Truck Travel Time Reliability Index Baseline to 4-year Target Comparison by Number of States

Figure 29 shows the baseline to 2-year and 4-year targets comparison for TTTR index.

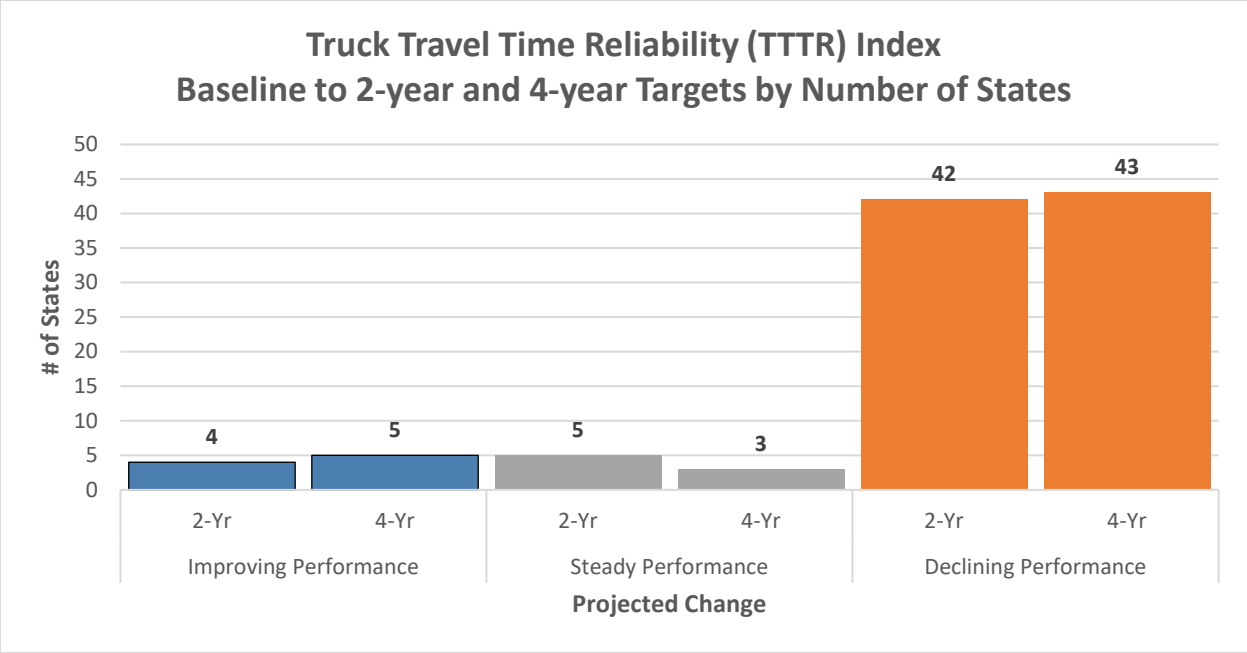

Figure 29: Truck Travel Time Reliability Index Baseline to 2-year and 4-year Targets Comparison by Number of States

Figure 30 shows the magnitude of anticipated improvements or declines in TTTR index based on the 4-year target. The orange bars indicate the number of States with declining condition of up to 0.3, and the blue bars indicate number of States with improving condition, of up to 0.1. The black line indicates the dividing line at zero.

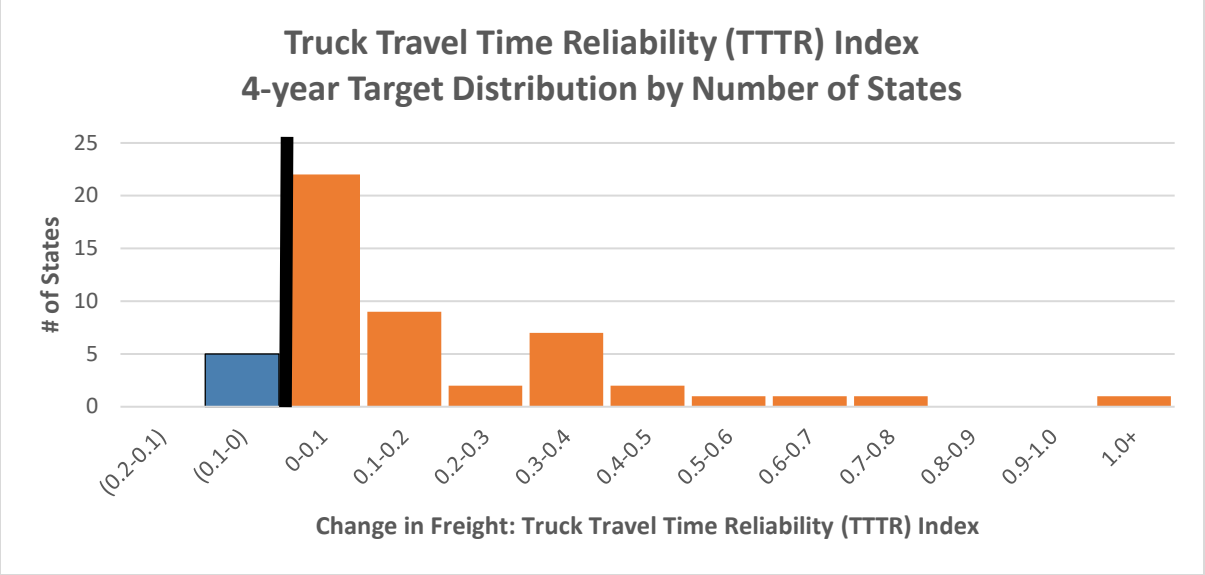

Figure 30: Truck Travel Time Reliability Index 4-year Target Distribution by Number of States

Traffic Congestion

As previously shown in Table 1, there are two performance measures associated with traffic congestion:

- Annual Hours of Peak-Hour Excessive Delay (PHED)
- Percent of non-Single Occupancy Vehicle Travel (Non-SOV)

Table 7 provides additional background information on the traffic congestion performance measures.

Table 7: Background on Traffic Congestion Measures

Criteria	**Annual Hours of Peak-Hour Excessive Delay**	**Percent of non-Single Occupancy Vehicle travel**
Applicability	*Applicability Transition*: For the first performance period only, the requirements apply to mainline NHS in urbanized areas with a population more than 1 million that are also in nonattainment or maintenance areas for any of the criteria pollutants under the CMAQ program (ozone, carbon monoxide or particulate matter).[44] In all subsequent performance periods, the population threshold changes to urbanized areas with populations more than 200,000.[45]	
Measure Data Collection	All traffic/vehicle data in the NPMRDS. States may request FHWA approval for use of an equivalent dataset. Annual percent share of traffic volume by vehicle class developed using data from HPMS, or State DOT collected data. Annual vehicle occupancy factors for urbanized areas provided by FHWA, or the State may use more specific alterative estimates for a specific reporting segment(s). Annual metric reporting to HPMS by June 15.[46]	The data to determine the percent of non-Single Occupancy Vehicle (Non-SOV) travel measure can come from one of three methods: • American Community Survey (ACS) Commuting (Journey to Work) data from the U.S. Census Bureau. • Localized surveys of work or household travel. • System use measurements of the actual use of each transportation mode as sample or continuous measurements. State DOTs will report the method used for each urbanized area in their Baseline Performance Period Report, and that method shall be used for the full performance period. [47]

[44] 23 CFR 490.105(e)(8)(i)

[45] 23 CFR 490.105(e)(8)(ii)

[46] 23 CFR 490.711(f)

[47] 23 CFR 490.709(f)(2)

Criteria	Annual Hours of Peak-Hour Excessive Delay	Percent of non-Single Occupancy Vehicle travel
Metric(s)	Total Peak-Hour Excessive Delay in person hours (accounting for the delay of all people travelling). Excessive delay is the additional amount of time it takes to traverse a travel time segment compared to the time needed to traverse the same segment at either 20 mph or 60 percent of the posted speed limit, whichever is greater. Excessive delay is calculated for each reporting segment in 15 minute intervals for the peak travel hours across the full reporting year. Peak hour travel times are defined as 6-10 a.m. local time on weekday mornings and either 3-7 p.m. or 4-8 p.m. local time on weekday afternoons. The excessive delay is then multiplied by the traffic volumes and average vehicle occupancy to determine the total person hours of excessive delay for each reporting segment.	This measure does not include a metric.
Measure Calculation	Annual Hours of Peak-Hour Excessive Delay per Capita (PHED) is the sum of the peak-hour excessive delay metrics for all reporting segments in the urbanized area divided by the population of that urbanized area. [48]	Percent non-SOV travel for each urbanized area calculated from one of the three allowable methods. [49]
State DOT Target Requirements	All States and MPOs with NHS mileage within an applicable urbanized area must coordinate on a single, unified 2-year and 4-year target for each applicable urbanized area.[50]	
Target Phase-In	For the first performance period only, no 2-year targets or baseline data were reported. State DOTs were to report 4-year targets only.[51]	

The two traffic congestion measures apply to certain urbanized areas (UZA) and require State DOTs and MPOs to establish unified targets for each of these UZAs. For the first performance period, these measures are applicable to larger urbanized areas with a population of more than 1,000,000; in 2018, 33 UZAs reported these measures. In all subsequent performance periods, the population threshold changes to urbanized areas with populations more than 200,000.[52]

Annual Hours of Peak-Hour Excessive Delay (PHED)

For the October 2018 PMF Report, State DOTs were only required to submit 4-year targets for the annual

[48] 23 CFR 490.713(b)
[49] I23 CFR.713(d)
[50] 23 CFR 490.105(d)(2) and (e)(8)(iii)(B)
[51] 23 CFR 490.105(e)(7)(i) and (ii)
[52] 23 CFR 490.105(e)(8)(i) and (ii)

hours of PHED. [53]

Figure 31 displays the projected distribution of the annual hours of PHED across the UZAs based on the 4-year targets, showing the number of UZAs in each category. The improving trend for this measure is downward, to have fewer hours of peak-hour excessive delay. The improving trend of the distribution is leftward, to have more UZAs in the categories of fewer hours of peak-hour excessive delay.

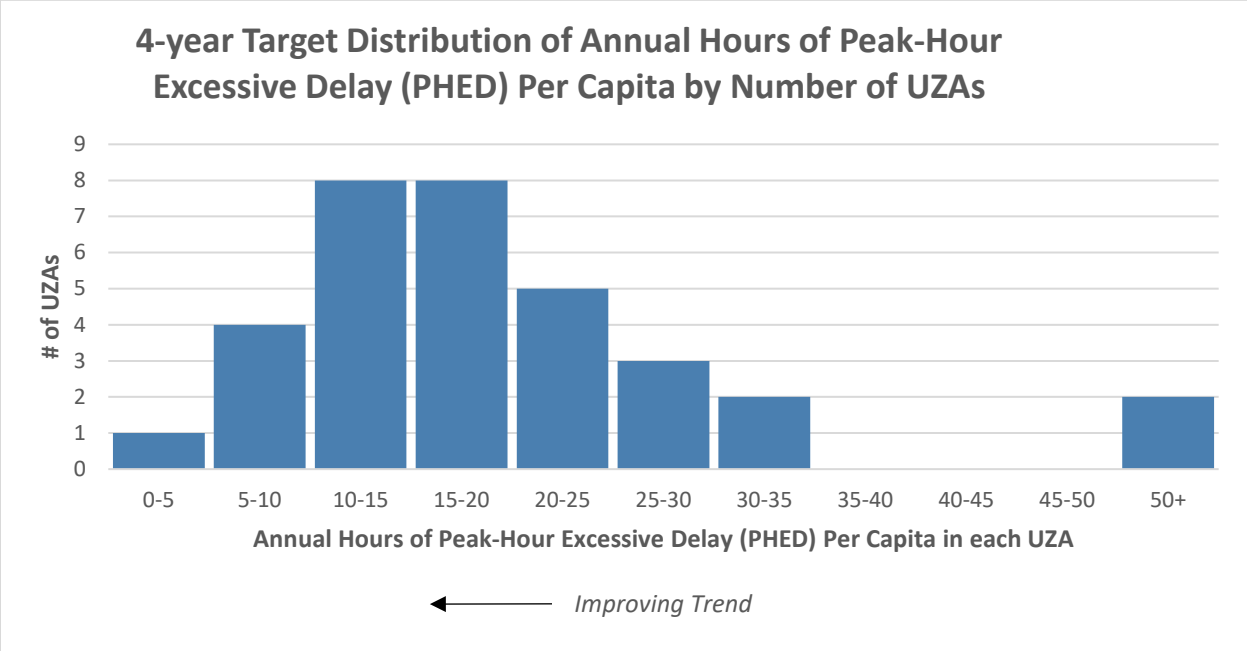

Figure 31: 4-year Target Distribution of Annual Hours of Peak-Hour Excessive Delay by Number of UZAs

Percent of Non-Single Occupancy Vehicle (SOV) Travel

For UZAs in multiple States, each State DOT must establish a single unified target for the UZA.[54] For reporting this measure, the information from all States should be consistent. This measure is also unique in that there are three data methods that may be used for any given applicable urbanized area. State DOTs were required to report the data method used to establish each target, and all reported using the ACS Commuting Data from the U.S. Census Bureau.[55]

Figure 32 displays the distribution of non-SOV travel across the UZAs, showing the number of UZAs with values in each category. The improving trend for this measure is upward, to have a higher percentage of non-SOV travel. The improving trend for the distribution is rightward, to have more UZAs in the categories with a higher percentage of non-SOV travel.

[53] 23 CFR 490.105(e)(8)(vi)

[54] 23 CFR 490.105(f)(5)(iii)

[55] 23 CFR 490.709(f)(2)

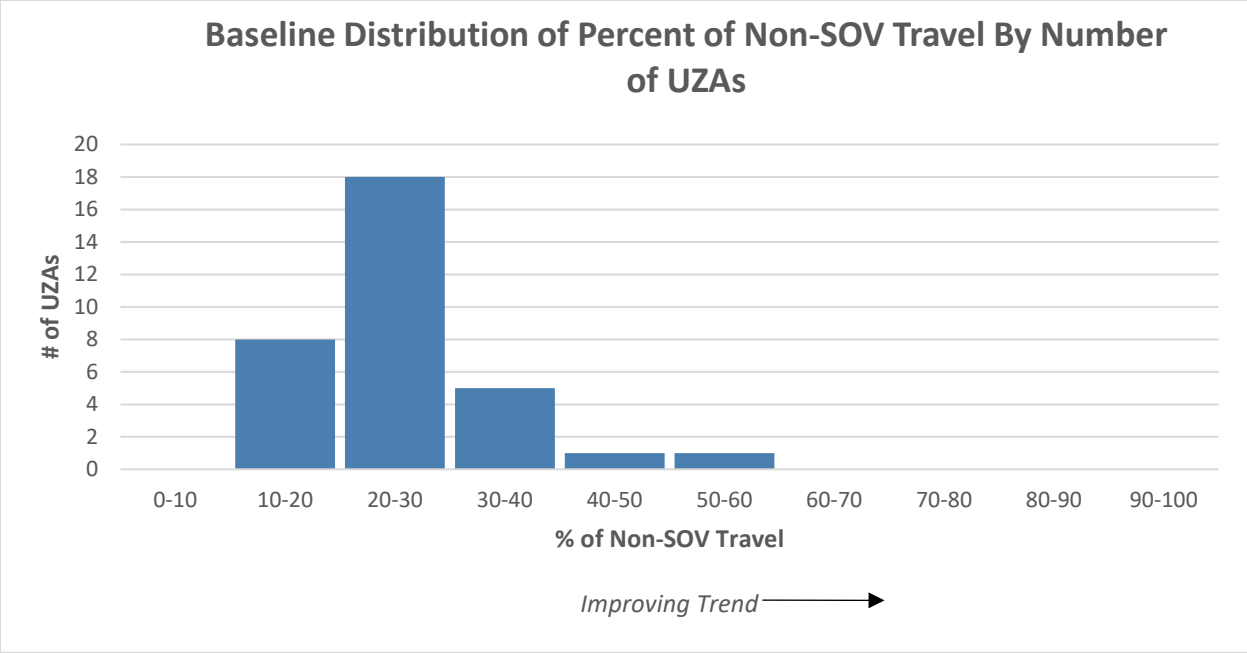

Figure 32: Baseline Distribution of Percentage of non-SOV Travel by Number of UZAs

Figure 33 provides the number of UZAs with targets reflecting improving, steady, or declining non-SOV travel when comparing baseline with the 4-year target.

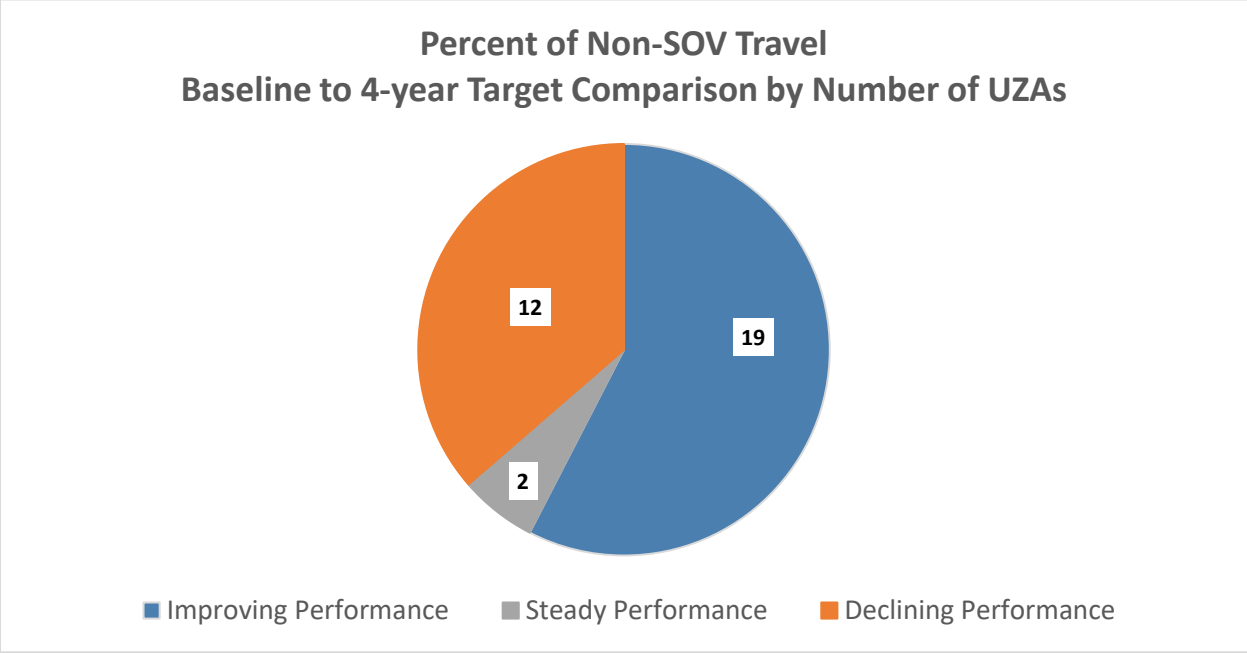

Figure 33: Percent non-SOV Travel Baseline to 4-year Target Comparison by Number of UZAs

Figure 34 shows the baseline to 2-year and 4-year targets comparison for non-SOV travel in the relevant UZAs.

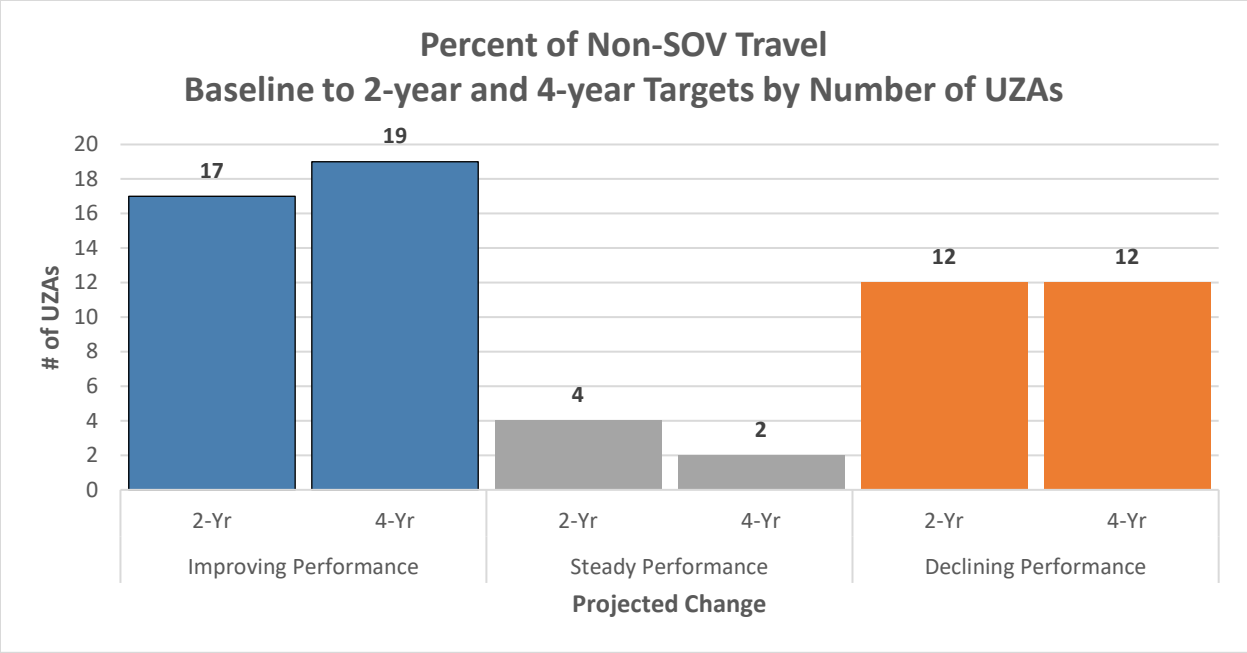

Figure 34: Percent non-SOV Travel Baseline to 2-year and 4-year Targets Comparison by Number of UZAs

Figure 35 shows the magnitude of anticipated improvements or declines in percent non-SOV travel when comparing baseline with the 4-year target. The orange bars indicate the number of UZAs with declining non-SOV travel of up to 0.3 percent, and the blue bars indicate number of UZAs with improving non-SOV travel, of up to 0.1 percent. The black line indicates the dividing line at zero.

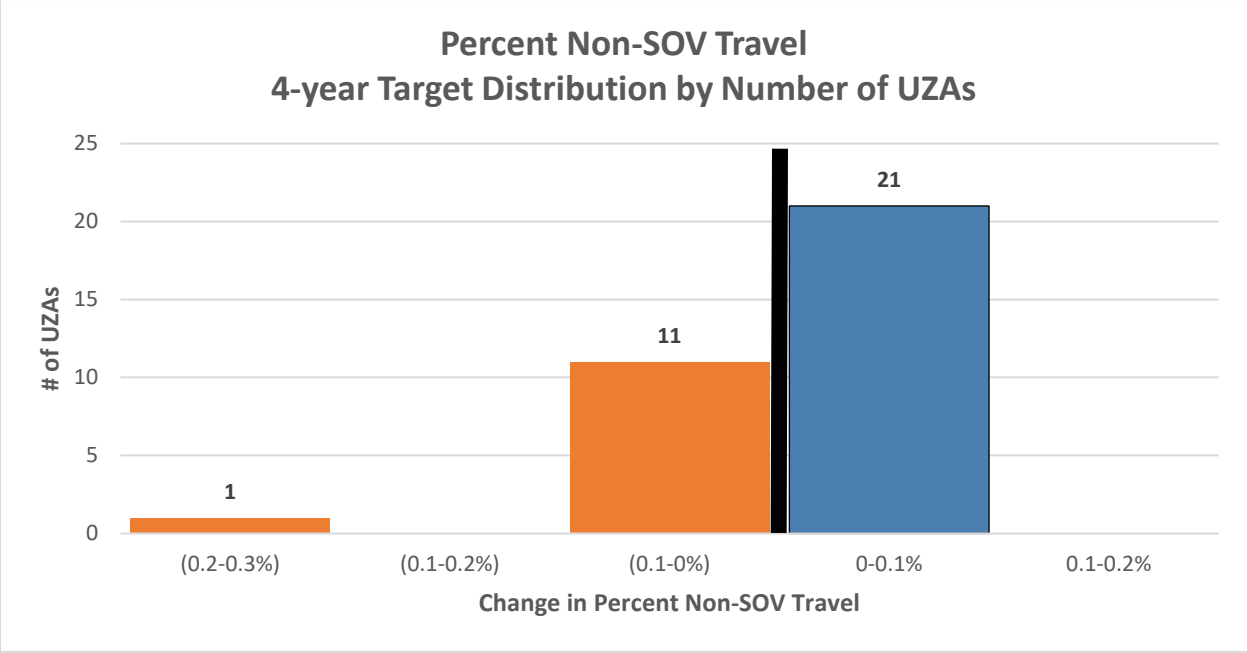

Figure 35: Non-SOV Travel 4-year Target Distribution by UZA

On-Road Mobile Source Emissions

As previously shown in Table 1, there is one performance measure associated with on-road mobile source emissions:

- Total emissions reduction for applicable criteria pollutants and precursors –
    - Particulate matter that have a diameter less than or equal to 2.5 micrometers (PM2.5),
    - Particulate matter that have a diameter less than or equal to 10 micrometers (PM10),
    - Carbon monoxide (CO),
    - Volatile organic compounds (VOC), and
    - Nitrogen oxides (NOx).

Table 8 provides additional background information on the emissions reduction measure.

Table 8: Background on Emissions Reduction Measure

Criteria	**Emissions Reduction for Applicable Criteria Pollutants**
Applicability	State DOTs whose geographic boundaries include any part of a nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter.
Measure Data Collection	State DOTs enter the estimated emission reductions (kilograms per day) for all projects funded by CMAQ funds into the CMAQ project tracking system in the first year the project is obligated by March 1, annually.[56]
Metric(s)	None

[56] 23 CFR 490.809(b)(1)

Criteria	Emissions Reduction for Applicable Criteria Pollutants
Measure Calculation	Cumulative emissions reductions (kilograms per day) from all CMAQ funded projects in nonattainment or maintenance areas for each of the criteria pollutants or precursors (PM2.5, PM10, CO, VOC and NOx). The measure is calculated individually for each applicable criteria pollutant or precursor. The calculation is a summation of emissions reductions associated with applicable projects as recorded in the CMAQ Public Access System[57] for the relevant Federal fiscal years (FFY). The baseline considers the four years of data prior to the start of the performance period (projects obligated for funding in FFY 2014, 2015, 2016, 2017). The 2-year target considers projects funded in FFY 2018 and 2019. The 4-year target considers projects funded in FFY 2018, 2019, 2020, 2022.[58] *Baseline Calculation:* For the 2018 reporting, the State DOTs calculated the baseline value for each applicable criteria pollutant or precursor and reported it to FHWA their 2018 Biennial Performance Report in the PMF. This is the only measure for which State DOTs calculated the baseline value.
State DOT Target Requirements	State DOTs establish separate 2 and 4-year targets for each of the CMAQ criteria pollutants and precursors ($PM_{2.5}$, PM_{10}, CO, VOC and NOx) applicable to the nonattainment or maintenance area(s) in their state as of October 1 in the year previous to the year the baseline report is due.
Target Phase-In	N/A

Total Emissions Reduction for Applicable Criteria Pollutants

There are five pollutants or precursors included in the CMAQ Emissions Reduction Measure: NOx, VOC, CO, PM10, and PM2.5. State DOTs were required to establish targets for only those pollutants for which their State had a non-attainment or maintenance area as of the applicable date.[59] Table 9 provides the number of States that submitted targets for each criteria pollutant or precursor during the first reporting period.

[57] CMAQ Public Access System https://fhwaapps.fhwa.dot.gov/cmaq_pub/Reports/Criteria
[58] Computation Guidance for Congestion Mitigation and Air Quality Improvement (CMAQ) Program Total Emissions Reduction Measure https://www.fhwa.dot.gov/tpm/guidance/emission_reduction_guide.pdf
[59] 23 CFR 490.809(c)(1)

Table 9: Number of State DOTs that Submitted Targets for Each Criteria Pollutant in the PMF

Pollutant	Number of State DOTs Setting Targets
NOx	31
VOC	29
CO	20
PM10	14
PM2.5	21

Some States set targets for only one pollutant, while others were required to set targets for up to all five; a total of 37 States set targets under this performance measure area. Figure 36 shows the distribution of number of criteria pollutants and precursors submitted by number of States.

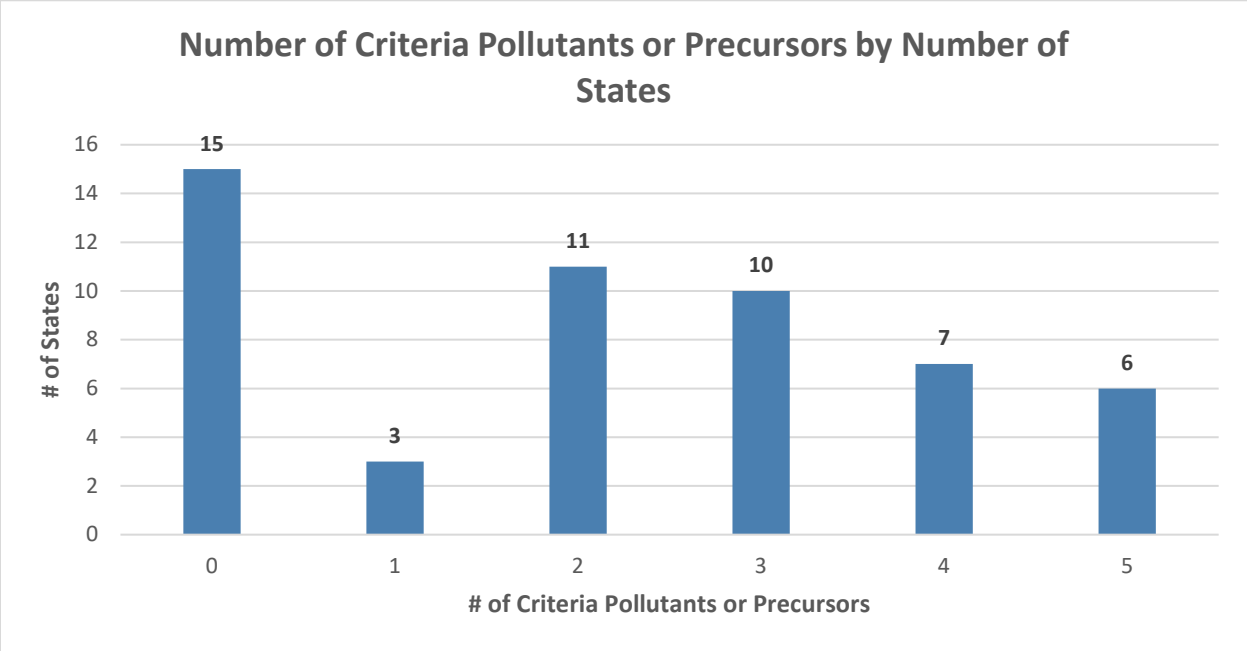

Figure 36: Number of Criteria Pollutants or Precursors data submitted by Number of States

Next Steps

State DOTs and MPOs continue to report on safety, infrastructure condition, and system performance, with the annual Safety reporting and the next biennial reporting for infrastructure condition and system performance due October 1, 2020. The FHWA intends to publish the significant progress determinations for use by all relevant stakeholders.

The FHWA is committed to ongoing communication and transparency with stakeholders regarding TPM implementation activities, and to continuing to gather feedback on challenges and needs. The FHWA will continue to work with partners such as State DOTs, MPOs, the Federal Transit Administration (FTA), and National Highway Traffic Safety Administration (NHTSA) to review and adapt activities based on feedback mechanisms such as evaluations of events and workshops, training evaluations, the national TPM surveys, review of targets and reports and progress determinations, discussions with national transportation stakeholder organizations, Transportation Management Area Planning Certification Reviews and results of national meetings.

The FHWA will continue to maintain the TPM website with the updated resources and transportation performance data.

Appendix 1: Performance Measure Rules

Table 10: Performance Measure Rules

Measure Area	Performance Measures
National Performance Management Measures for the Highway Safety Improvement Program (Safety) *Rule Effective Date: April 14, 2016* *Regulatory Chapter: 23 CFR 924; 23 CFR 490 (Subpart A and B)*	• Number of fatalities • Rate of Fatalities per 100 million vehicle miles traveled • Number of serious injuries • Rate of Serious injuries per 100 million vehicle miles traveled • Number of non-motorized fatalities and non-motorized serious injuries
National Performance Management Measures to Assess **Pavement Condition** *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Subpart A and C)*	• Percentage of pavements of the Interstate System in Good condition • Percentage of pavements of the Interstate System in Poor condition • Percentage of pavements of the non-Interstate NHS in Good condition • Percentage of pavements of the non-Interstate NHS in Poor condition
National Performance Management Measures to Assess **Bridge Condition** *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Subpart A and D)*	• Percentage of NHS bridges classified as in Good condition • Percentage of NHS bridges classified as in Poor condition
Performance of the National Highway System **(System Performance)** *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Sub. A and E)*	• **Interstate Travel Time Reliability Measure**: Percent of person-miles traveled on the Interstate that are reliable • **Non-Interstate Travel Time Reliability Measure**: Percent of person-miles traveled on the non-Interstate NHS that are reliable
Freight Movement on the Interstate System *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Sub. A and F)*	• **Freight Reliability Measure**: Truck Travel Time Reliability (TTTR) Index
Measures to Assess the CMAQ Program: **Traffic Congestion** *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Sub. A and G)*	• **Peak Hour Excessive Delay (PHED) Measure:** Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita • **Non-Single Occupancy Vehicle (non-SOV) Travel Measure:** Percent of Non-Single Occupancy Vehicle (SOV) Travel
Measure to Assess the CMAQ Program: **On-Road Mobile Source Emissions** *Rule Effective Date: May 20, 2017* *Regulatory Chapter: 23 CFR 490 (Sub. A and H)*	• **Emissions Measure:** Total Emission Reductions for applicable criteria pollutants

Appendix 2: Requirements Associated with Meeting Targets and Minimum Condition as per 23 CFR part 490

Table 11: Significant Progress Determinations and Consequences (Peak Hour Excessive Delay, Non-Single Occupancy Vehicle Travel, and On-Road Mobile Source measures are not subject to the FHWA significant progress determination)

Performance Measure Area	Significant Progress Determination	Consequence if State Has Not Met Significant Progress
Safety	FHWA will assess State safety performance target achievement to determine whether States have met or made significant progress toward meeting their performance targets, per 23 U.S.C. 148(i). At least four out of the five safety performance targets must be either met or the actual outcome for the target is better than baseline performance to make significant progress. States have the option to establish any number of urbanized area targets and one non-urbanized area target, in addition to the required statewide targets, for any or all of the Safety Performance Measures. The urbanized and non-urbanized targets are not included in the determination of whether a State has met or made significant progress toward meeting its targets.	If a State has not met or made significant progress toward meeting its targets, the State must comply with the provisions set forth in 23 U.S.C. 148(i) for the subsequent fiscal year. The State shall: 1. Use obligation authority equal to the HSIP apportionment for the year prior to the target year, only for HSIP projects. 2. Submit an HSIP Implementation Plan that describes actions the State will take to meet or make significant progress toward meeting its targets. The HSIP Implementation Plan should guide the State's project decisions so that the combined 148(i) provisions lead to the State meeting or making significant progress toward meeting its safety performance targets in subsequent years.
Pavements on the Interstate System	State DOTs subject to determination every two years. The FHWA will use data extracted from HPMS on June 15th of the year the biennial report is due. *Phase-in:* For the first performance period only, since the States did not establish 2-year targets they will not be assessed for significant progress after the Mid Performance Period Progress Report is	If significant progress is not made for either target established for the Interstate System pavement condition measures, § 490.307(a)(1) and (2), then the State DOT shall document the actions it will take to achieve the Interstate Pavement condition targets.

Performance Measure Area	Significant Progress Determination	Consequence if State Has Not Met Significant Progress
	submitted in 2020. The actual condition reported in the Mid Performance Period Progress Report will be used as the baseline against which the 4-year target will be assessed for significant progress in 2022.	
Condition of Pavements on the non-Interstate NHS	State DOTs are subject to determination every two years based on data extracted from HPMS on August 15 of the year of biennial reporting. *Significant Progress Determination During Data Transition:* FHWA calculated the baseline for the measures using IRI data alone, and State DOTs were instructed to establish targets using IRI data. However, of the States that had full distress and IRI data, many chose to establish targets using all four metrics. To ensure these State's aren't penalized for using the most complete data available, FHWA agreed to modify the significant progress determination for 2020 and 2022 to account for the different datasets used. This process is documented in the FHWA Procedure for Determining Significant Progress for the NHPP and NHFP [PENDING].[60]	If significant progress is not made for either target established for the non-Interstate NHS pavement condition measures, §490.307(a)(3) and (4), then the State DOT shall document the actions it will take to achieve non-Interstate Pavement condition target.
NHS Bridges	State DOTs are subject to determination every two years based on data extracted from NBI annually on June 15.	If significant progress is not made for either target established for the NHS bridge condition measures, § 490.407(c)(1) and (2), then the State DOT shall document the actions it will take to achieve NHS bridge condition target.
Travel Time Reliability	State DOTs are subject to the determination every two years based on data extracted from HPMS on August 15 of the year of biennial reporting.	If significant progress is not made for either target established for the Travel Time Reliability measures, § 490.507(a)(1) and(2), then the State DOT shall document the actions it will take to achieve the

[60] TPM Guidance website https://www.fhwa.dot.gov/tpm/guidance/

Performance Measure Area	Significant Progress Determination	Consequence if State Has Not Met Significant Progress
	Phase-in for Non-Interstate NHS: For the first performance period only, since the States did not establish 2-year targets they will not be assessed for significant progress after the Mid Performance Period Progress Report is submitted. The actual condition reported in the Mid Performance Period Progress Report in 2020 will be used as the baseline against which the 4-year target will be assessed for significant progress in 2022.	NHS travel time targets.
Freight	State DOTs are subject to the determination every two years based on data extracted from HPMS on August 15 of the year of biennial reporting.	If FHWA determines that a State DOT has not made significant progress toward achieving the target established for the Freight Reliability measure in § 490.607, then the State DOT shall include as part of the next performance target report under 23 U.S.C. 150(e) [the Biennial Performance Report] the following: 1. An identification of significant freight system trends, needs, and issues within the State. 2. A description of the freight policies and strategies that will guide the freight-related transportation investments of the State. 3. An inventory of truck freight bottlenecks within the State and a description of the ways in which the State DOT is allocating funding under title 23 U.S.C. to improve those bottlenecks. A. The inventory of truck freight bottlenecks shall include the route and milepost location for each identified bottleneck, roadway section inventory data reported in HPMS, Average Annual Daily Traffic (AADT), Average Annual Daily Truck Traffic (AADTT), Travel-time data and measure of delay, such as travel time reliability, or Average Truck Speeds, capacity feature causing the bottleneck or any other constraints

Performance Measure Area	Significant Progress Determination	Consequence if State Has Not Met Significant Progress
		applicable to trucks, such as geometric constrains, weight limits or steep grades. B. For those facilities that are State-owned or operated, the description of the ways in which the State DOT is improving those bottlenecks shall include an identification of methods to address each bottleneck and improvement efforts planned or programed through the State Freight Plan or MPO freight plans; the Statewide Transportation Improvement Program and Transportation Improvement Program; regional or corridor level efforts; other related planning efforts; and operational and capital activities. 4. A description of the actions the State DOT will undertake to achieve the target established for the Freight Reliability measure in § 490.607.

Table 12: Minimum Conditions and Associated Penalties for Pavement and Bridge Performance Measures

Performance Measure	Minimum Condition	Penalty
Percent of pavements of the Interstate System in Poor condition	Percentage of pavements in poor condition is not to exceed 5.0 percent.[61] Annual determination based on data extracted from HPMS June 15. First data extraction was in 2019.	If the percentage of Interstate System pavement in poor condition exceeds the minimum level for the most recent year, the State DOT must obligate a portion of NHPP funds and transfer a portion of Surface Transportation Program (STP) funds to address Interstate pavement condition.
Percent NHS bridge deck area in Poor condition	Percentage of the deck area of bridges categorized as structurally deficient is not to exceed 10.0 percent. Annual determination based on data extracted from NBI on June 15th. First data extraction was in 2017.	If more than 10 percent of the total deck area of a State DOT's NHS bridges is classified as structurally deficient for three consecutive years, the State DOT must obligate and set aside NHPP funds for eligible projects on the NHS.

[61] Alaska not to exceed 10 percent poor condition