



§ 490.105 Establishing Targets – **State DOTs**

- Establish 2-year and 4-year targets for each performance period
 - First set of targets within 1 year of the effective date of the final rule: May 20, 2018 (23 USC 150(d))
 - **Targets must be reported to FHWA by October 1, 2018**
 - For the 1st Performance Period Only - 2-year target is NOT required for non-Interstate NHS Travel Time Reliability measure - phase-in requirements
- Establish a single, unified target (both 2-year and 4-year) for entire urbanized area for PHED and non-SOV Travel measures:
 - For the 1st Performance Period – applicable to State DOTs with NHS in the urbanized area with a population greater than 1 million containing any part of a nonattainment or maintenance area (For the 1st Performance Period Only - 2-year target is NOT required for PHED measure - phase-in requirements)
 - Beginning with the 2nd Performance Period and beyond – applicable to State DOTs with NHS in the urbanized area with a population greater than 200,000 containing any part of a nonattainment or maintenance area
- Adjustment of 4-year target allowed at the mid-point of performance period





§ 490.105 Establishing Targets - **MPOs**

- Establish 4-year targets by supporting the State DOT target or establishing a quantifiable target for Travel Time Reliability and Freight Reliability measures:
 - Establish targets within 180 days relevant State DOT(s) establish targets
 - A multistate planning area - may choose different target establishment options for the portion of the planning area within each State
- Targets for Emissions Reduction Measure:
 - MPOs serving TMA with a population over 1 million representing a nonattainment or maintenance area – must establish quantifiable 2-year and 4-year targets
 - Other MPOs with a nonattainment or maintenance area within metropolitan planning area – only required to establish 4-year target
- Establish a single, unified target (both 2-year and 4-year) for entire urbanized area for PHED and non-SOV Travel measures:
 - For the 1st Performance Period – applicable to MPOs with NHS in the intersected area of the urbanized area with a population greater than 1 million, metropolitan planning area, and a nonattainment or maintenance area (For the 1st Performance Period Only - 2-year target is NOT required for PHED measure - phase-in requirements)
 - Beginning with the 2nd Performance Period and beyond – applicable to MPOs with NHS in the intersected area of the urbanized area with a population greater than 200,000, metropolitan planning area, and a nonattainment or maintenance area



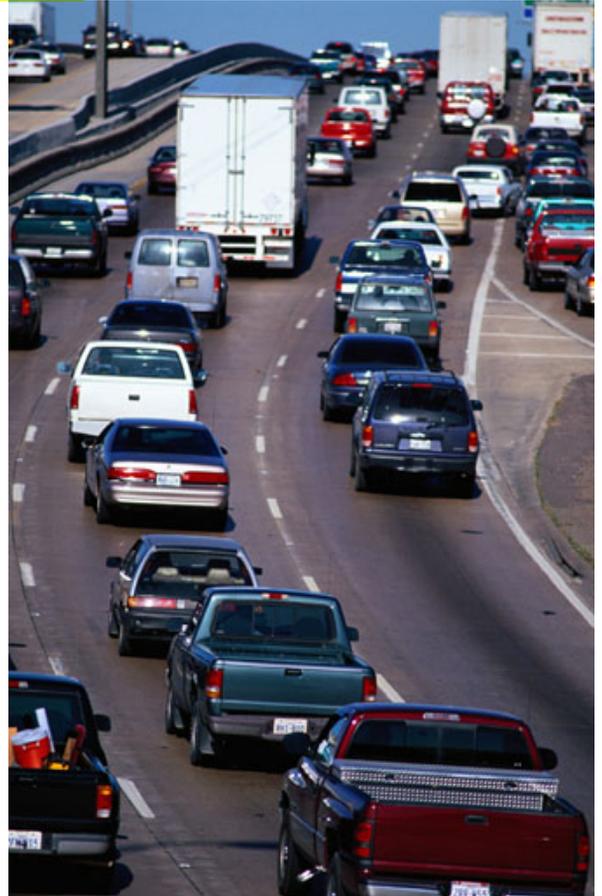
TRANSPORTATION PERFORMANCE MANAGEMENT

The Federal Highway Administration (FHWA) has finalized six interrelated performance rulemakings to implement the TPM framework established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act.

Collectively, the rules address challenges facing the U.S. transportation system, including:

- improving safety
- maintaining infrastructure condition
- reducing traffic congestion
- improving efficiency of the system and freight movement
- protecting the environment and
- reducing delays in project delivery.

The rules establish national performance measures; **State Departments of Transportation (DOTs)**



and metropolitan planning organizations (MPOs) will establish targets for applicable measures. New and existing plans will document the strategies and investments used to achieve the targets; progress toward the targets will be reported through new and existing mechanisms.

Learn more at the FHWA TPM web site:
[\(http://www.fhwa.dot.gov/tpm/\)](http://www.fhwa.dot.gov/tpm/)



Safety Performance Measures Fact Sheet

Safety Performance Measures

Number of Fatalities: The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.

Rate of Fatalities: The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.

Number of Serious Injuries: The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.

Rate of Serious Injuries: The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.

Number of Non-motorized Fatalities and Non-motorized Serious Injuries: The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

| Five Performance Measures | |
|---------------------------|---|
| ✓ | Number of Fatalities |
| ✓ | Rate of Fatalities per 100 Million VMT |
| ✓ | Number of Serious Injuries |
| ✓ | Rate of Serious Injuries per 100 Million VMT |
| ✓ | Number of Non-motorized Fatalities and Non-motorized Serious Injuries |

Data Sources

Fatality Data: Fatality Analysis Reporting System (FARS). Final FARS data is to be used if it is available, otherwise FARS Annual Report File (ARF) data may be used, which is generally available one year before Final FARS data.

Volume Data: State VMT data is derived from the Highway Performance Monitoring System (HPMS). Metropolitan Planning Organization (MPO) VMT, if applicable, is estimated by the MPO.

Serious Injury Data: State motor vehicle crash database. Agencies must use the definition for "Suspected Serious Injury (A)" from the MMUCC, 4th edition by April 15, 2019. Prior to April 15, 2019 agencies may use injuries classified as "A" on the KABCO scale through use of serious injury conversion tables. However, agencies are encouraged to begin using the MMUCC, 4th edition definition and attributes at the beginning of 2019 for a complete and consistent data file for the calendar year.

Number of Non-motorized Fatalities and Non-motorized Serious Injuries: FARS and State motor vehicle crash database. The number of non-motorized fatalities is the total number of fatalities with the FARS person attribute codes: (5) Pedestrian, (6) Bicyclist, (7) Other Cyclist, and (8) Person on Personal Conveyance. The number of non-motorized serious injuries is the total number of serious injuries where the injured person is, or is equivalent to, a pedestrian (2.2.36) or a pedalcyclist (2.2.39) as defined in ANSI D16.1-2007.

What You Need to Know About Establishing Targets

States:

- States will first establish statewide targets in their August 31, 2017 HSIP Annual Report for calendar year 2018, and annually thereafter.
- Targets are applicable to all public roads regardless of functional classification or ownership.
- For common performance measures (number of fatalities, rate of fatalities and number of serious injuries), targets must be identical to the targets established for the NHTSA Highway Safety Grants program in the Highway Safety Plan.
- States also have the option to establish any number of urbanized area targets and one non-urbanized area target for any or all of the measures. If a State chooses to do so, it is required to report the urbanized area boundaries used and evaluate and report progress for each target. Urbanized and non-urbanized area targets are not included in the significant progress determination.

Coordination and Collaboration:

- Performance management connects the Highway Safety Improvement Program (HSIP) and Highway Safety Plan (HSP) to the Strategic Highway Safety Plan (SHSP) to promote a coordinated relationship for common performance measures, resulting in comprehensive transportation and safety planning.
- The State DOT and MPOs in the State must coordinate when establishing targets, to the maximum extent practicable.
- A wide range of stakeholders should work together to establish targets. This includes, the State DOT, State Highway Safety Office, MPOs, FHWA Division Office, NHTSA Regional Office, Law Enforcement Agencies and EMS (include all 4 E's of Highway Safety)
- Set targets that are data-driven and realistic, maintain momentum and remain focused.



What You Need to Know About Establishing Targets (continued)

MPOs:

- MPOs must establish targets specific to the MPO planning area for the same five safety performance measures for all public roads in the MPO planning area within 180 days after the State establishes each target. MPOs may select one of the following options for each individual safety performance measure:
 - agreeing to support the State target; **OR**
 - establishing specific numeric targets for a safety performance measure (number or rate).
- MPOs that choose to establish a rate target must report the VMT estimate used to establish that target and the methodology to develop the VMT estimate. MPOs should make maximum use of data prepared for HPMS when preparing the rate-based target denominator. If an MPO develops data specifically for the denominator, it should use methods to compute VMT that are consistent with those used for other Federal reporting purposes.
- MPO targets are reported to the State DOT, and made available to FHWA, upon request. MPO targets are not included in the assessment of whether a State has met or made significant progress toward meeting its targets.

| Performance Measure | State Target | | MPO Target For Each Performance Measure, Support State Target or Establish MPO-Specific Target |
|--|---|---|--|
| | Target Reported in HSIP Annual Report for FHWA | Target Reported in Highway Safety Plan for NHTSA | |
| Number of Fatalities | ✓ | = ✓ | ✓ |
| Rate of Fatalities per 100 Million VMT | ✓ | = ✓ | ✓ |
| Number of Serious Injuries | ✓ | = ✓ | ✓ |
| Rate of Serious Injuries per 100 Million VMT | ✓ | Not required | ✓ |
| Number of Non-motorized Fatalities and Non-motorized Serious Injuries | ✓ | Not required | ✓ |

Example Target Calculations

5-Year Rolling Average: Each target is based on a 5-year rolling average, which is the average of 5 individual, consecutive points of data. The 5-year rolling average provides a better understanding of the overall data over time without eliminating years with significant increases or decreases; and provides a mechanism for accounting for regression to the mean. If a particularly high or low number of fatalities and/or serious injuries occur in one year, a return to a level consistent with the average in the previous year may occur.

The **number targets** are calculated by adding the number for the measure for each of the most recent 5 consecutive years ending in the year for which the targets are established, dividing by 5, and rounding to the **tenth** decimal place. The **rate targets** are calculated similarly yet rounded to the **thousandth** decimal place. This more accurately reveals the change from one 5-year average to another that might otherwise be obscured if the number was truncated.

Example: Number of Fatalities

| Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------------|------|------|------|------|------|
| Number of Fatalities | 471 | 468 | 493 | 468 | 462* |

*From FARS Annual Report File, if Final FARS is not available

To determine the target for number of fatalities:

- Add the number of fatalities for the most recent 5 consecutive calendar years ending in the year for which the targets are established: $471 + 468 + 493 + 468 + 462 = 2,362$
- Divide by five and round to the nearest tenth decimal place: $2,362 / 5 = 472.4$

Example: Rate of Fatalities per 100 Million VMT

| Year | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------------|--------|--------|--------|--------|--------|
| Number of Fatalities | 471 | 468 | 493 | 468 | 462* |
| Per 100 Million VMT | 454.21 | 487.50 | 466.48 | 492.27 | 495.97 |
| Rate of Fatalities | 1.04 | 0.96 | 1.06 | 0.95 | 0.93 |

*From FARS Annual Report File, if Final FARS is not available

To determine the target for rate of fatalities:

- Add the rate of fatalities for the most recent 5 consecutive calendar years ending in the year for which the targets are established: $1.04 + 0.96 + 1.06 + 0.95 + 0.93 = 4.94$
- Divide by five and round to the nearest thousandth decimal place: $4.94 / 5 = 0.988$



PAVEMENT PERFORMANCE MEASURES



Final Rulemaking

The Federal Highway Administration (FHWA) published in the *Federal Register* (82 FR 5886) a [final rule](#) establishing performance measures for State Departments of Transportation (DOTs) to use in managing pavement and bridge performance on the National Highway System (NHS). The National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program Final Rule addresses requirements established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and reflects passage of the Fixing America's Surface Transportation (FAST) Act. **The rule is effective May 20, 2017.**

Performance Measures

- | | |
|---|---|
| ✓ | % of Interstate pavements in Good condition |
| ✓ | % of Interstate pavements in Poor condition |
| ✓ | % of non-Interstate NHS pavements in Good condition |
| ✓ | % of non-Interstate NHS pavements in Poor condition |

About Condition

- **Good condition:** Suggests no major investment is needed.
- **Poor condition:** Suggests major reconstruction investment is needed.

Penalty Provisions

If FHWA determines the State DOT's Interstate pavement condition falls below the minimum level for the most recent year, the State DOT must obligate a portion of National Highway Performance Program (NHPP) and transfer a portion of Surface Transportation Program (STP) funds to address Interstate pavement condition.

Target Setting

State DOTs:

- Must establish targets, regardless of ownership, for the full extent of the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets for the non-Interstate NHS and 4-year targets for the Interstate **by May 20, 2018, and report by October 1, 2018.**
- May adjust targets at the Mid Performance Period Progress Report (October 1, 2020).

Metropolitan Planning Organizations (MPOs):

- Support the relevant State DOT(s) 4-year target or establish their own **by 180 days after the State DOT(s) target is established.**



PAVEMENT PERFORMANCE MEASURES



Key Dates

| | |
|--|---|
| May 20, 2017 | Final rule effective date. |
| January 1, 2018 | 1st 4-year performance period begins. |
| May 20, 2018 | State DOT targets must be established. |
| January 1, 2018 | State DOTs collect data for Interstate pavements that conform to the final rule (IRI, Rutting, Cracking %, Faulting, and Inventory). |
| Within 180 days of relevant State DOT(s) target establishment | MPOs must commit to support state target or establish separate quantifiable target. |
| October 1, 2018 | Baseline Performance Period Report for 1 st Performance Period due. State DOTs report 4-year targets for Interstate and 2-year and 4-year targets for non-Interstate NHS; etc. |
| April 15, 2019, and each April 15 thereafter | State DOTs submit first Interstate data that conform to the final rule. |
| January 1, 2020 | State DOTs collect data for non-Interstate NHS pavements that conform to the final rules. |
| October 1, 2020 | Mid Performance Period Progress Report for the 1st Performance Period due. State DOTs report 2-year condition/performance; progress toward achieving 2-year targets; etc. |
| June 15, 2021, and each June 15 thereafter | State DOTs submit non-Interstate NHS data that conform to the final rule. |
| December 31, 2021 | 1st 4-year performance period ends. |
| October 1, 2022 | Full Performance Period Progress Report for 1 st Performance Period due. State DOTs reports 4-year condition/performance; progress toward achieving 4-year targets, etc. Baseline Performance Period Report for 2 nd Performance Period due. State DOTs report 2-year and 4-year targets for Interstate and non-Interstate NHS; baseline condition; etc. |

Visit www.fhwa.dot.gov/tpm/ to learn about training, guidance, and other implementation-related information.



BRIDGE

PERFORMANCE MEASURES



Final Rulemaking

The Federal Highway Administration (FHWA) published in the *Federal Register* (82 FR5886) a [final rule](#) establishing performance measures for State Departments of Transportation (DOTs) to use in managing pavement and bridge performance on the National Highway System (NHS). The National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program Final Rule addresses requirements established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and reflects passage of the Fixing America's Surface Transportation (FAST) Act. **The rule is effective May 20, 2017.**

Performance Measures

- ✓ % of NHS bridges by deck area classified as in Good condition
- ✓ % of NHS bridges by deck area classified as in Poor condition

Condition-Based Performance Measures

- Measures are based on deck area.
- The classification is based on National Bridge Inventory (NBI) condition ratings for item 58 - Deck, 59 - Superstructure, 60 - Substructure, and 62 - Culvert.
- Condition is determined by the lowest rating of deck, superstructure, substructure, or culvert. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if is less than or equal to 4, the classification is poor. (Bridges rated below 7 but above 4 will be classified as fair; there is no related performance measure.)
- Deck area is computed using NBI item 49 - Structure Length, and 52 - Deck Width or 32 - Approach Roadway Width (for some culverts).

Target Setting

State DOTs:

- Must establish targets for all bridges carrying the NHS, which includes on- and off-ramps connected to the NHS within a State, and bridges carrying the NHS that cross a State border, regardless of ownership.
- **Must establish statewide 2- and 4-year targets by May 20, 2018, and report targets by October 1, 2018, in the Baseline Performance Period Report.**
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).

Metropolitan Planning Organizations

(MPOs):

- Support the relevant State DOT(s) 4-year target or establish their own by **180 days after the State DOT(s) target is established.**



Key Dates

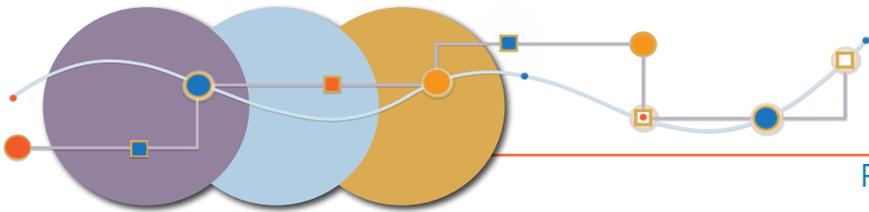
| | |
|--|--|
| May 20, 2017 | Final rule effective date. |
| January 1, 2018 | 1st 4- year performance period begins. |
| May 20, 2018 | Initial 2- and 4-year targets established. |
| October 1, 2018 | Baseline Performance Period Report for the 1 st Performance Period due. State DOTs report 2-year and 4-year targets; etc. |
| Within 180 days of relevant State DOT(s) target establishment | MPOs must commit to support State target or establish separate quantifiable target. |
| October 1, 2020 | Mid Performance Period Progress Report for the 1 st Performance Period due. State DOTs report 2-year condition/performance; progress toward achieving 2-year targets; etc. |
| December 31, 2021 | 1st 4-year performance period ends. |
| October 1, 2022 | Full Performance Period Progress Report for 1 st performance period due. State DOTs report 4-year condition/performance; progress toward achieving 4-year targets; etc. Baseline report due for 2 nd performance period due. State DOTs report 2- and 4-year targets; baseline condition, etc. |

Other Specifics

- State DOT targets should be determined from asset management analyses and procedures and reflect investment strategies that work toward achieving a state of good repair over the life cycle of assets at minimum practicable cost. State DOTs may establish additional measures and targets that reflect asset management objectives.
- The rule applies to bridges carrying the NHS, including bridges on on- and off-ramps connected to the NHS.
- If for 3 consecutive years more than 10.0% of a State DOT's NHS bridges' total deck area is classified as Structurally Deficient, the State DOT must obligate and set aside National Highway Performance Program (NHPP) funds for eligible projects on bridges on the NHS.
- Deck area of all border bridges counts toward both States DOTs' totals.

Visit www.fhwa.dot.gov/tpm/ to learn about training, guidance, and other implementation-related information.





Sections discussed in this NPRM for Part 490, National Performance Management Measures, include:

- Subpart A** – General Information
- Subpart E** – Measures to Assess Performance of the National Highway System
- Subpart F** – Measures to Assess Freight Movement on the Interstate System
- Subpart G** – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion
- Subpart H** – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions

This technical fact sheet provides a general overview of the NPRM's performance measures and requirements. Three additional fact sheets provide details, including data requirements and calculation methodologies, for the measures in Subparts E - H. These can be found on the TPM website (<http://www.fhwa.dot.gov/tpm/rule.cfm>), along with recorded webinars and information on related but previously published performance management NPRMs.

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

Overview of the Proposed Rulemaking

The Moving Ahead for Progress in the 21st Century Act (MAP-21) initiated and the Fixing America's Surface Transportation Act (FAST Act) continues the mandate that the Secretary develop regulations (23 CFR 490) to establish Transportation Performance Management (TPM) requirements to carry out the National Highway Performance Program (NHPP), Freight Movement on the Interstate, and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. This is the third of three proposed rules that together establish a set of performance measures for State DOTs and Metropolitan Planning Organizations (MPOs). This proposed rulemaking is available in docket number FHWA-2013-0054 at <https://www.regulations.gov>. The public is encouraged to review the proposed rule and submit comments to the docket, which will be considered in the process of writing the final rule.

Proposed Target Establishment

Within one year of the effective date of the rule, all State DOTs would establish 2-year and 4-year targets where their respective geographic boundary contains portions of the transportation network or project that are applicable to the measure. State DOTs would report their target(s) to FHWA within 30 days of establishment. For each measure area, State DOTs would be required to coordinate with relevant MPOs on the selection of targets to ensure consistency to the maximum extent practicable.

MPOs would have 180 days from when the State DOT establishes a target to establish a corresponding target within their metropolitan planning area (MPA). MPOs would establish 4-year targets for all applicable measures. MPOs would also establish 2-year targets for the Performance of the NHS, Traffic Congestion, and On-Road Mobile Source Emissions measures, as applicable. For all but the two Peak Hour Travel Time measures under Subpart E and the Traffic Congestion measure, MPOs would establish targets by either agreeing to support the Statewide target or establishing a quantifiable target specific to the applicable area. For the Peak Hour Travel Time and Traffic Congestion measures, State DOTs and MPOs would collectively establish single, unified 2-year and 4-year targets for each applicable urbanized area. For the On-Road Mobile Source Emissions measure, only MPOs that have applicable projects and are within MPAs that overlap urbanized areas with populations over one million would establish both 2-year and 4-year targets. For the first performance period, the non-Interstate NHS providing for Reliable Travel Times measure under Subpart E and the Traffic Congestion measure would not require 2-year targets.

Proposed Data Sources

The key data source for calculating measures in Subparts E, F, and G is the National Performance Management Research Data Set (NPMRDS) or an equivalent data set approved by FHWA. The primary source for calculating the Subpart H measure is the CMAQ Public Access System.

Proposed Performance of the National Highway System, Freight Movement on the Interstate, Congestion and Air Quality Performance Measures*

| Part 490 Subpart | Proposed Performance Measures** | Proposed Metrics | Applicability |
|---|--|--|---|
| Performance of the National Highway System (NHS) (Subpart E) | Percent of the Interstate System providing for Reliable Travel Times | Level of Travel Time Reliability (LOTTR) | Interstate System mileage within the State or each MPA |
| | Percent of the non-Interstate NHS providing for Reliable Travel Times | Level of Travel Time Reliability (LOTTR) | Non-Interstate NHS mileage within the State or each MPA |
| | Percent of the Interstate System where Peak Hour Travel Times meet expectations | Peak Hour Travel Time Ratio (PHTRR) | Interstate System mileage within each urbanized area with a population over one million |
| | Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations | Peak Hour Travel Time Ratio (PHTRR) | Non-Interstate NHS mileage within each urbanized area with a population over one million |
| Freight Movement (Subpart F) | Percent of the Interstate System Mileage providing for Reliable Truck Travel Times | Truck Travel Time Reliability (TTTR) | Interstate System mileage within the State or each MPA |
| | Percent of the Interstate System Mileage Uncongested | Average Truck Speed | Interstate System mileage within the State or each MPA |
| CMAQ Traffic Congestion (Subpart G) | Annual Hours of Excessive Delay Per Capita | Total Excessive Delay | NHS roads in urbanized areas with populations over one million that are, all or in part, designated as nonattainment or maintenance areas for ozone (O ₃), carbon monoxide (CO), or particulate matter (PM) |
| CMAQ On-Road Mobile Source Emissions (Subpart H) | 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor | Annual Tons of Emission Reductions by project for each applicable criteria pollutant and precursor | All projects funded by CMAQ program in areas designated as nonattainment or maintenance for O ₃ , CO, or PM for each State or MPA |

* State DOTs and MPOs would be required to establish targets for applicable measures. See page one for discussion of specific applicability for State DOTs and MPOs for establishing targets for each measure.

** Measures pertain to the mainline of the roadway for all applicable roadways.

Proposed Reporting Requirements

An initial performance report is due October 1, 2016. For each 4-year performance period, a Baseline Performance Period Report and Mid and Full Performance Period Progress Reports would be required. The biennial reports would be due at the beginning, middle, and end of the performance period. The first performance period is expected to begin January 1, 2018. For the On-Road Mobile Source Emissions measure (Subpart H), the first performance period would begin October 1, 2017. Baseline Reports would include the State DOT's targets for the performance period. Mid Period Reports would include analysis of the first two years and any adjustments to 4-year targets. Full Period Reports would include the analysis of conditions over the full period.

Proposed Significant Progress Assessment Process

The NPRM calls for FHWA to biennially assess progress made by each State DOT in achieving each individual NHPP and NHFP target. The four measures in Subpart E are the

only NHPP measures in this NPRM. Subpart F contains the only two NHFP measures. A State DOT's progress would be considered significant if the actual condition is equal to or better than the established target or better than the baseline performance.

For NHPP and NHFP measures, if a State DOT has not made significant progress, then it would document in its next biennial performance report a description of the actions it will undertake to achieve targets. However, States DOTs are encouraged to document the actions sooner.

Additional Information:

Francine Shaw Whitson
Team Leader, TPM Programs
Office of Transportation Performance
Management
Federal Highway Administration
1200 New Jersey Ave., SE
Washington, DC 20590
Email:
PerformanceMeasuresRulemaking@dot.gov
FSWhitson@dot.gov
www.fhwa.dot.gov/tpm/

NPRM Docket Number:
FHWA-2013-0054

Please note:
The comment period on this NPRM will be open for 120 days from publication.

April 2016



NHS Travel Time Reliability Measures



WHAT: Measurement of travel time reliability on the Interstate and non-Interstate National Highway System (NHS). Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: State DOTs, as well as MPOs with Interstate and/or non-Interstate NHS within their metropolitan planning area.

WHY: Through MAP-21, Congress required FHWA to establish measures to assess performance in 12 areas, including performance on the Interstate and non-Interstate NHS. [See 23 CFR 490.507(a)]

WHEN: Implementation differs for the Interstate and non-Interstate NHS measures for the first performance period. State DOTs must establish 2- and 4-year targets for the Interstate, but only a 4-year target for the non-Interstate NHS, by **May 20, 2018**. Those targets will be reported in the State's baseline performance period report due by **October 1, 2018**. The State DOTs have the option to adjust 4-year targets in their mid performance period progress report, due **October 1, 2020**. For the first performance period only, there is no requirement for States to report baseline condition/performance or 2-year targets for the non-Interstate NHS before the mid performance period progress report. This will allow State DOTs to consider more complete data. The process will align for both Interstate and non-Interstate measures with the beginning of the second performance period on **January 1, 2022**.

MPOs must either support the State target or establish their own quantifiable 4-year targets within 180 days of the State target establishment.

HOW: Level of Travel Time Reliability (LOTTR) is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. Person-miles take into account the users of the NHS. Data to reflect the users can include bus, auto, and truck occupancy levels.

Note: The FHWA is preparing guidance on how all rules should be implemented.



Freight Reliability Measure



WHAT: Measurement of travel time reliability on the Interstate System (Truck Travel Time Reliability (TTTR) Index). Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: State DOTs and MPOs.

WHY: Through MAP-21, Congress required FHWA to establish measures to assess performance in 12 areas, including freight movement on the Interstate. The measure considers factors that are unique to this industry, such as the use of the system during all hours of the day and the need to consider more extreme impacts to the system in planning for on-time arrivals. [23 CFR 490.607]

WHEN: State DOTs must establish 2- and 4-year targets by **May 20, 2018**. Those targets will be reported in the State's baseline performance period report due by **October 1, 2018**. The State DOTs have the option to adjust 4-year targets in their mid performance period progress report, due **October 1, 2020**.

MPOs must either support the State target or establish their own quantifiable 4-year targets within 180 days of the State target establishment.

HOW: Freight movement will be assessed by the TTTR Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. The TTTR Index will be 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.

State DOTs and MPOs will have the data they need in FHWA's National Performance Management Research Data Set (NPMRDS) as data set includes truck travel times for the full Interstate System. State DOTs and MPOs may use an equivalent data set if they prefer.

Note: The FHWA is preparing guidance on how all rules should be implemented.



On-Road Mobile Source Emissions Measure

WHAT: Assessment of the Congestion Mitigation and Air Quality Improvement (CMAQ) Program through measurement of total emissions reduction of on-road mobile source emissions. Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: State DOTs whose geographic boundaries include any part of a nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter will establish separate targets for each of these applicable criteria pollutants and precursors. The measure does not apply to a State that does not have any of these nonattainment or maintenance areas.

WHY: The CMAQ program's purpose is to fund transportation projects or programs that contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS) in those specific areas. Congress through MAP-21 required FHWA to establish performance measures in 12 areas, including on-road mobile source emissions for the purpose of carrying out the CMAQ program. [23 CFR 490.807]

WHEN: The first performance period for this measure begins **October 1, 2017**, and ends on **September 30, 2021**. States required to establish 2- and 4-year targets must do so by **May 20, 2018**, for the first performance period. The targets will be reported in the first State baseline performance period report due **October 1, 2018**.

MPOs must either support the State target or establish their own quantifiable targets within 180 days of the State target establishment. MPOs with a population more than 1 million population and with designated nonattainment and maintenance areas must develop both 2-year and 4-year quantifiable targets. Otherwise, only 4-year targets are required.

HOW: Total emissions reduction is calculated by summing 2- and 4-year totals of emissions reductions of applicable criteria pollutant and precursor, in kilograms per day, for all projects funded with CMAQ funds.

Note: The FHWA is preparing guidance on how all rules should be implemented.



Non-Single Occupancy Vehicle (SOV) Travel Measure

WHAT: Measurement of non-SOV travel in specific urbanized areas. This may include travel via carpool, van, public transportation, commuter rail, walking, or bicycling as well as telecommuting. Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: Initially, the rule applies to urbanized areas of more than 1 million people that are also in nonattainment or maintenance areas for ozone, carbon monoxide or particulate matter. In the second performance period (which begins on **January 1, 2022**), the population threshold changes to areas of more than 200,000. **All States and MPOs with NHS mileage** that overlaps within an applicable urbanized area must coordinate on a single, unified target and report on the measures for that area.

WHY: This measure will help carry out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. The program recognizes investments that increase multimodal solutions and vehicle occupancy levels as strategies to reduce both criteria pollutant emissions and congestion. [23 CFR 490.707(b)]

WHEN: **Applicable State DOTs and MPOs must collectively establish a single, unified 2-year and 4-year targets for each applicable urbanized area for the first performance period by May 20, 2018. A baseline report for the first performance period is due October 1, 2018,** and must include 2- and 4-year targets and a description of the data collection method to be used.

HOW: There are three options to calculate modal share. A minimum option for measurement will be use of the American Community Survey (ACS) Commuting (Journey to Work) data from the U.S. Census Bureau. State DOTs and MPOs also may use localized surveys. Finally, State DOTs and MPOs may use volume/usage counts for each mode to determine the percent non-SOV travel, and will be encouraged to report any data not available in national sources today (such as bike counts) to FHWA.

Note: The FHWA is preparing guidance on how all rules should be implemented.



Peak Hour Excessive Delay Measure



WHAT: Measurement of annual hours of peak hour excessive delay per capita. Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: Initially, the rule applies to urbanized areas of more than 1 million people that are also in nonattainment or maintenance areas for ozone, carbon monoxide or particulate matter. In the second performance period (which begins on **January 1, 2022**), the population threshold changes to more than 200,000. States and MPOs with NHS mileage within an applicable urbanized area must coordinate on a single, unified target.

WHY: Through MAP-21, Congress required FHWA to establish measures to assess performance in 12 areas, including CMAQ traffic congestion. [23 CFR 490.707(a)]

WHEN: Applicable State DOTs and MPOs collectively establish a single target for each applicable urbanized area for the first performance period by **May 20, 2018**. As part of a phased implementation approach, only 4-year targets will be reported in the State's baseline performance period report due by **October 1, 2018**. There is no requirement for States to report 2-year targets or baseline condition for this specific measure in that report for the first performance period. With the first mid performance period progress report, due **October 1, 2020**, 4-year targets may be adjusted, and 2-year condition/performance will be reported as baselines.

HOW: Traffic congestion will be measured by the annual hours of peak hour excessive delay (PHED) per capita on the NHS. The threshold for excessive delay will be based on the travel time at 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and will be measured in 15-minute intervals. Peak travel hours are defined as 6-10 a.m. local time on weekday mornings; the weekday afternoon period is 3-7 p.m. or 4-8 p.m. local time, providing flexibility to State DOTs and MPOs. The total excessive delay metric will be weighted by vehicle volumes and occupancy.

Note: The FHWA is preparing guidance on how all rules should be implemented.



On-Road Mobile Source Emissions Measure

WHAT: Assessment of the Congestion Mitigation and Air Quality Improvement (CMAQ) Program through measurement of total emissions reduction of on-road mobile source emissions. Read the final rule in the [Federal Register](#) [82 FR 5970 (January 18, 2017)].

WHO: State DOTs whose geographic boundaries include any part of a nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter will establish separate targets for each of these applicable criteria pollutants and precursors. The measure does not apply to a State that does not have any of these nonattainment or maintenance areas.

WHY: The CMAQ program's purpose is to fund transportation projects or programs that contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS) in those specific areas. Congress through MAP-21 required FHWA to establish performance measures in 12 areas, including on-road mobile source emissions for the purpose of carrying out the CMAQ program. [23 CFR 490.807]

WHEN: The first performance period for this measure begins **October 1, 2017**, and ends on **September 30, 2021**. States required to establish 2- and 4-year targets must do so by **May 20, 2018**, for the first performance period. The targets will be reported in the first State baseline performance period report due **October 1, 2018**.

MPOs must either support the State target or establish their own quantifiable targets within 180 days of the State target establishment. MPOs with a population more than 1 million population and with designated nonattainment and maintenance areas must develop both 2-year and 4-year quantifiable targets. Otherwise, only 4-year targets are required.

HOW: Total emissions reduction is calculated by summing 2- and 4-year totals of emissions reductions of applicable criteria pollutant and precursor, in kilograms per day, for all projects funded with CMAQ funds.

Note: The FHWA is preparing guidance on how all rules should be implemented.



Transit Asset Management

Final Rule Fact Sheet

The Moving Ahead for Progress in the 21st Century Act (MAP-21) required the Secretary to develop rules to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance measures, and the Fixing America's Surface Transportation (FAST) Act reaffirmed this requirement. On July 26, 2016, FTA published the Transit Asset Management (TAM) Final Rule. You may view the Final Rule at:

<https://federalregister.gov/a/2016-16883>



State of Good Repair

The purpose of the Final Rule is to help achieve and maintain a state of good repair (SGR) for the nation's public transportation assets. Transit asset management is a business model that uses transit asset condition to guide the optimal prioritization of funding. Currently, there is an estimated \$85.9 billion transit SGR backlog.

The regulations apply to all Transit Providers that are recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage transit capital assets used in the provision of public transportation.

State of Good Repair

The condition in which a capital asset is able to operate at a full level of performance. A capital asset is in a state of good repair when that asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its lifecycle investments must have been met or recovered.

TAM Plans

Tier I vs. Tier II Applicability

The Final Rule groups providers into two categories: Tier I and Tier II.

| Tier I | Tier II |
|---|---|
| Operates rail | Subrecipient of 5311 funds |
| OR | OR |
| ≥ 101 vehicles across all fixed route modes | American Indian Tribe |
| OR | OR |
| ≥ 101 vehicles in one non-fixed route mode | ≤ 100 vehicles across all fixed route modes |
| | OR |
| | ≤ 100 vehicles in one non-fixed route mode |

TAM Plan Elements

The following graphic shows the TAM Plan elements that are required by each category of provider. Since Tier II providers generally operate less complex systems, their TAM Plan requirements are not as extensive.

| | |
|----------------------------------|------------------------|
| 1. Inventory of Capital Assets | |
| 2. Condition Assessment | <u>Tier I & II</u> |
| 3. Decision Support Tools | |
| 4. Investment Prioritization | |
| 5. TAM and SGR Policy | |
| 6. Implementation Strategy | <u>Tier I Only</u> |
| 7. List of Key Annual Activities | |
| 8. Identification of Resources | |
| 9. Evaluation Plan | |

Assets Included in Plan

It is expected that all assets used in the provision of public transit will be included in the TAM Plan asset inventory. This includes (with the exception of equipment) assets that are owned by a third party or shared resources. The inventory must include all service vehicles, and any other owned equipment assets over \$50,000 in acquisition value. Agencies only need to include condition assessment for assets for which they have direct capital responsibility.

Plan Responsibility

Tier I providers must develop and carry out their own TAM plans. Tier II providers may develop their own plans or participate in a Group Plan, which is compiled by a Group Plan Sponsor (generally the State DOT or designated §5310 recipient). Tier II §5307 sub-recipients are not required to be offered a Group Plan, but may participate in one if a Sponsor invites them. Each Transit Provider must designate an Accountable Executive to ensure that the necessary resources are available to carry out the TAM plan and the Transit Agency Safety Plan, regardless of whether it develops its own TAM Plan or participates in a Group Plan.

Performance Management

Asset performance is measured by asset class, which means a subgroup of capital assets within an asset category. The following table shows assets for which performance needs to be reported to the NTD and the measure which will be reported.

| Assets: <i>Only those for which agency has direct capital responsibility</i> | Performance Measure |
|---|--|
| Equipment: Non-revenue support-service and maintenance vehicles | Percentage of non-revenue vehicles met or exceeded Useful Life Benchmark |
| Rolling Stock: Revenue vehicles by mode | Percentage of revenue vehicles met or exceeded Useful Life Benchmark |
| Infrastructure: Only rail fixed-guideway, track, signals and systems | Percentage of track segments with performance restrictions |
| Facilities: Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities | Percentage of assets with condition rating below 3.0 on FTA TERM Scale |

Target Setting

Targets should be set by each transit provider or TAM plan sponsor for each applicable asset class for the coming year. Initial targets must be set by January 1, 2017 and then every fiscal year thereafter. It is recognized that Transit Providers may not have complete data while setting initial targets. To the extent feasible, targets should be supported by data such as the most recent condition data and reasonable financial projections for the future, but the overall end goal is to be in a system-wide SGR.

Timeframes/Reporting

TAM Plans

A TAM plan must be updated in its entirety at least every 4 years, and it must cover a horizon period of at least 4 years. An initial TAM plan must be by October 1, 2018.

NTD

Each entity developing a TAM Plan will have to report annually to FTA's National Transit Database (NTD). This submission should include: (1) projected targets for the next fiscal year; (2) condition assessments and performance results; and (3) a narrative report on changes in transit system conditions and the progress toward achieving previous performance targets.



Additional Information

Mshadoni Smith (Mshadoni.Smith@dot.gov)

Final Rule Docket Number: FTA-2016-16883

<https://www.transit.dot.gov/TAM>

Useful Life Benchmark

The expected lifecycle of a capital asset for a particular Transit Provider's operating environment, or the acceptable period of use in service for a particular Transit Provider's operating environment

April 2017

Fact Sheet: Public Transportation Safety Program Final Rule

Overview

The Public Transportation Safety Program Rule establishes substantive and procedural rules for FTA's administration of the Public Transportation Safety Program authorized at 49 U.S.C. § 5329.

Effective Date

The final rule becomes effective on September 12, 2016.

What does the Public Transportation Safety Program Final Rule do?

- Establishes FTA's Safety Management Systems (SMS) approach to the development and implementation of the Safety Program
- Sets rules of practice for FTA's enforcement authority
- Describes contents of a National Public Transportation Safety Plan

Safety Management Systems (SMS) Policy

Consistent with the methods and principles of SMS, FTA will give priority in rulemaking, enforcement, oversight, and resources towards those issues that pose the highest risk to the safety of public transportation systems.

National Public Transportation Safety Plan

- FTA's strategic plan for improving transit safety performance
- A policy document and communications tool
- A repository of standards, guidance, best practices, tolls, technical assistance, and other resources

FTA Authorities

- 
 Conduct inspections, investigations, audits, examinations, and testing of equipment, facilities, rolling stock, and operations
- 
 Withhold or direct use of federal funds
- 
 Issue Safety Advisories and Safety Directives
- 
 Require more frequent oversight by a SSOA or more frequent reporting
- 
 Require corrective action plans
- 
 Issue restrictions and prohibitions of operations, facilities, and rolling stock

Questions

Candace Key, FTA Office of Chief Counsel

Email: Candace.Key@dot.gov

Phone: 202.366.1936

