



PRIORITIZATION

Approved Changes Guide

What Is New About this Methodology?

With input from all stakeholders—government at all levels, industry, researchers, safety advocates, and the public—FMCSA has identified a set of changes that build on the sound design of the Safety Measurement System (SMS) to improve safety.

REORGANIZED “BASICS”

Reorganizing the Vehicle Maintenance and Unsafe Driving BASICS, now called “compliance categories,” to focus on motor carriers with higher crash rates and more accurately pinpoint unsafe behaviors.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

The Behavior Analysis and Safety Improvement Categories (BASICS) from SMS would be called “compliance categories” in the new methodology. The following compliance categories would be reorganized in the new methodology.

Unsafe Driving would include the following violations:

- Controlled Substances/Alcohol violations (no longer in their own standalone category).
- All Operating while Out-of-Service (OOS) violations, regardless of which compliance category violation resulted in the OOS Order.

Example: “396.9(c)(2): Operating an OOS vehicle” is included in the Vehicle Maintenance BASIC in SMS, but will be part of the Unsafe Driving Compliance Category in the new methodology.

Vehicle Maintenance would be divided into two categories:

- **Vehicle Maintenance: Driver Observed** includes violations that could reasonably be observed by a driver or detected as part of a Walk-Around (Level 2) roadside inspection.
- **Vehicle Maintenance** includes all other vehicle maintenance violations, more commonly identified by a mechanic doing routine maintenance or detected as part of a Full (Level 1) roadside inspection.

Download a complete [list of the violations in each reorganized compliance category](#).

WHY IS THIS IMPORTANT?

Moving Controlled Substances/Alcohol violations to Unsafe Driving would help focus FMCSA’s investigative resources on carriers with higher crash rates.

Reorganizing these two categories would also provide more specific information to help motor carriers and enforcement pinpoint unsafe driver behavior and sources of vehicle maintenance issues.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

REORGANIZED ROADSIDE VIOLATIONS

Reorganizing more than 2,000 violation codes into approximately 100 violation groups of similar safety behaviors to prevent inconsistencies that occur when multiple violations are cited for a single or very similar underlying issue.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

The new methodology would organize the more than 2,000 existing violation codes into approximately 100 violation groups. While any of the violations can still be cited during a roadside inspection, for prioritization purposes, violations that identify the same or similar underlying safety issue would be grouped together. If a motor carrier receives more than one of the violations in a violation group during a single inspection, the new methodology would treat that set of violations as a single violation when calculating the carrier’s measure in that compliance category. For example, the Hours of Service violations below are part of a violation group related to the safety issue of violating Hours of Service regulations:

Violation Group: Hours of Service Requirements

- **395.3A2-PROP:** Driving beyond 14 hour duty period (Property Carrying Vehicle)
- **395.3A3-PROP:** Driving beyond 11 hour driving limit (Property Carrying Vehicle)
- **395.3(a)(3)(ii):** Driving beyond 8 hour driving limit since the end of the last on duty, off duty, or sleeper period of at least 30 minutes
- **395.3B2:** Driving after 70 hours on duty in an 8 day period (Property Carrying Vehicle)

If a motor carrier is cited for two or more of the violations above in the same inspection, these violations would all appear in the inspection report. However, when FMCSA analyzes the carrier’s data to determine if the carrier should be prioritized, the new methodology would count this set of violations as one violation under the “Hours of Service Requirements” violation group.

Download a complete [list of the new roadside violation groups](#).

WHY IS IT IMPORTANT?

There are often multiple ways to cite a carrier for the same underlying safety issue. FMCSA’s analysis indicated that, for prioritization purposes, determining *whether* a safety issue is identified is more important than determining *how many ways* it was documented.

Grouping a motor carrier’s violations before analyzing their data would ensure that motor carriers are treated fairly by holding carriers with similar safety issues to the same standards, regardless of how those issues were documented. This would prevent the inconsistencies in compliance category measures that occur when multiple violations are cited for the same underlying safety issue during one inspection.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

SIMPLIFIED SEVERITY WEIGHTS

Simplifying violation severity weights to adopt a more straightforward approach.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

The new methodology would replace the “1-10” weighting scale for violations in SMS with a two-value scale: a severity weight of either 1 or 2.

Severity weights would be determined by the set of violations cited during an inspection, within a violation group. For more details on violation groups, see [Reorganized Roadside Violations](#).

If a motor carrier receives one or more violations within a violation group, that set of violations would be assigned a severity weight of 2 if any of the violations meet the following criteria:

- Out-of-Service (OOS) violations (apply to all compliance categories except Unsafe Driving).
- Driver Disqualifying violations (apply to Unsafe Driving only, as defined in 49 [CFR 383.51](#)).

If none of the violations in a set are OOS or Driver Disqualifying violations, that set will receive a weight of 1.

WHY IS IT IMPORTANT?

After conducting analysis on multiple approaches, FMCSA determined that assigning customized weights to all violations was not as important as noting that the violation occurred. This simplified approach identifies carriers with higher crash rates for prioritization and makes it clearer why a specific violation is weighted more heavily than others.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

IMPROVED INTERVENTION THRESHOLDS

Adjusting the Intervention Thresholds for three compliance categories to focus on carriers with the highest crash rates.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

The new methodology would adjust the Intervention Thresholds in the following compliance categories to better reflect their relationships to crash rate.

The new **Vehicle Maintenance: Driver Observed** and **Vehicle Maintenance Compliance Categories** will have the same thresholds as the SMS Vehicle Maintenance BASIC.

The **Driver Fitness** thresholds will adjust as follows:

- 80% to 90% for general carriers.
- 65% to 75% for passenger carriers.
- 75% to 85% for hazardous material (HM) carriers.

The **Hazardous Materials** thresholds will adjust from 80% to 90% for all carrier types.

For criteria for the general carrier, passenger carrier, and HM carrier thresholds, download the current [SMS Methodology](#).

WHY IS IT IMPORTANT?

FMCSA's analysis showed that every compliance category has a different relationship to crash rate, with some having a higher correlation than others. Adjusting the thresholds ensures that FMCSA focuses its enforcement program resources on the carriers with the highest crash rates.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

PROPORTIONATE PERCENTILES

Eliminating large percentile changes that occur for non-safety related reasons to more precisely indicate how a motor carrier's performance is trending from month to month.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

Proportionate percentiles use the exact number of inspections and crashes to assign a percentile for a motor carrier, rather than relying on the cutoffs in SMS established by safety event groups.

This methodology has several benefits compared to the safety event group approach used in SMS:

- Customized to a carrier's exact number of events.
- Ensures stable results for carriers by only allowing for gradual percentile changes from month to month when dropping or adding events.
- Allows an individual carrier's change in measure to have greater influence on their percentile. There will no longer be substantial percentile increases without a corresponding measure increase.

WHY IS IT IMPORTANT?

This approach would improve the Agency's ability to compare carriers with similar carriers, and more precisely and accurately indicate how a carrier's performance is trending from month to month.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

GREATER FOCUS ON RECENT VIOLATIONS

Only calculating percentiles for compliance categories in which a carrier has received a violation within the last 12 months to focus on carriers with more recent safety issues.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

In SMS, motor carriers may be prioritized in Hours of Service, Vehicle Maintenance, Hazardous Materials, and Driver Fitness Compliance Categories even if they have not received a recent violation in these categories.

The new methodology would only calculate percentiles in a compliance category if the motor carrier has received at least one roadside violation in that category within the past 12 months. This means that a carrier with violations in a compliance category that are all 12 months or older will not be assigned a percentile and would not be prioritized in that category based on roadside inspection data alone.

The proposed change applies to the following safety categories:

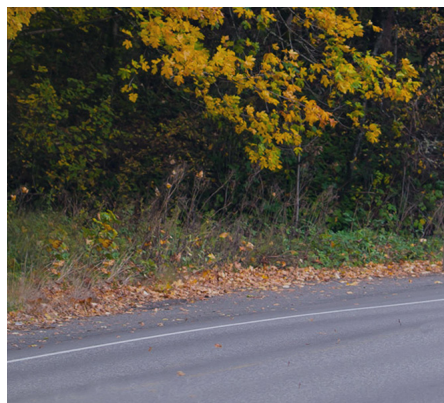
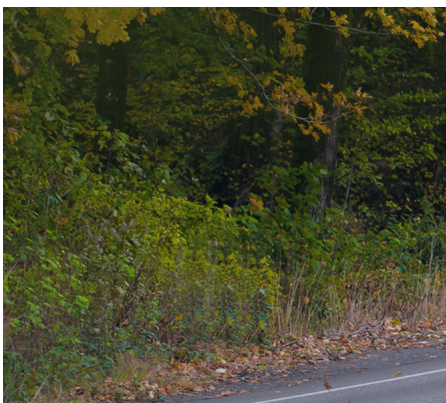
- Hours of Service;
- Vehicle Maintenance;
- Vehicle Maintenance: Driver Observed;
- Hazardous Materials; and
- Driver Fitness.

WHY IS IT IMPORTANT?

This change will improve FMCSA's focus on carriers with recent violations and higher crash risk.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.



UPDATED UTILIZATION FACTOR

More accurately accounts for the on-road exposure of motor carriers with the most Vehicle Miles Traveled (VMT) per vehicle.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

The Utilization Factor helps ensure that measures in the Unsafe Driving and Crash Indicator Compliance Categories account for carriers' different levels of exposure to inspections and crashes. In SMS, the Utilization Factor is applied to carriers that drive up to 200,000 VMT per average Power Units (PU)—in other words, a carrier's VMT per average number of vehicles they have on the road. The new methodology would extend the Utilization Factor to carriers that drive up to 250,000 VMT per average PU.

WHY IS IT IMPORTANT?

After analyzing carrier-reported VMT data, FMCSA found that carriers are reporting more complete and timely VMT now than in 2009 when the Utilization Factor was developed and first applied. Extending the Utilization Factor to include motor carriers that drive up to 250,000 VMT per average PU reflects these recent data trends and leads to more accurate measures, helping the Agency focus on carriers in most need of intervention.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.

NEW SEGMENTATION

Extending segmentation of carriers by operation and vehicle type to additional compliance categories to improve carrier-to-carrier comparisons.

About the Proposed Change

HOW IS THE METHODOLOGY CHANGING?

In SMS, carriers are only segmented when calculating percentiles for the Unsafe Driving and Crash Indicator BASICS. The new methodology would retain this segmentation, and would also segment the following compliance categories:

- Segment Hazardous Materials by Cargo Tank and Non-Cargo Tank carriers.
- Segment Driver Fitness by Straight and Combination carriers.

WHY IS IT IMPORTANT?

Extending segmentation to the Hazardous Materials and Driver Fitness Compliance Categories will ensure motor carriers are treated fairly by comparing them to other carriers with similar operations and patterns of violations.

Learn more

Download the [New Prioritization Methodology Foundational Document](#) to read the analysis behind this proposed change.



EXCLUDING NOT PREVENTABLE CRASHES

Continuing to exclude crashes determined to be “not preventable” when calculating SMS results.

About the Crash Preventability Determination Program

HOW DOES THIS EFFECT THE METHODOLOGY?

The new methodology would continue to exclude from SMS crashes that are determined by FMCSA to be not preventable, and to note the “Not Preventable” determinations in the Pre-Employment Screening Program.

WHY IS IT IMPORTANT?

FMCSA is listening to motor carriers and making adjustments to the SMS methodology that align with FMCSA's core safety mission.

Learn more

For more information, visit the [Crash Preventability Determination Program website](#).