Safety Measurement System Changes

The Federal Motor Carrier Safety Administration’s (FMCSA) Safety Measurement System (SMS) quantifies the on-road safety performance and compliance history of motor carriers, to prioritize enforcement resources, determine the safety and compliance problems that a motor carrier may exhibit, and track each motor carrier’s safety. FMCSA designed the SMS expecting that changes would be made as new data, and additional analysis became available. This release is the first in a series of expected improvements to the SMS that will take place periodically.

FMCSA provided a preview period and opportunity to comment for enforcement personnel and motor carriers prior to the implementation of these SMS changes. In March 2012, the Agency announced in the Federal Register a proposed set of SMS modifications. The Agency also developed and released an SMS Preview, allowing a motor carrier to see the impact of the proposed modifications on the carrier’s SMS results in advance of the changes. The Agency collected and analyzed feedback from stakeholders through July 2012, and subsequently announced a package of SMS enhancements in December 2012.

This foundational document updates the June 2012 version of the foundational document and reflects SMS Methodology version 3.0. This updated version includes the final set of enhancements, including the original seven that were previewed as well as the four additional SMS changes that were recommended during the preview period.

The first package of the SMS enhancements includes:

1. Strengthening the Vehicle Maintenance Behavior Analysis and Safety Improvement Category (BASIC) by incorporating cargo/load securement violations from the Cargo-Related BASIC.
2. Changing the Cargo-Related BASIC to the Hazardous Materials (HM) Compliance BASIC to better identify HM-related safety and compliance problems.
3. Better aligning the SMS with Intermodal Equipment Provider (IEP) regulations.
4. Aligning violations that are included in the SMS with Commercial Vehicle Safety Alliance (CVSA) inspection levels by eliminating vehicle violations derived from driver-only inspections and driver violations from vehicle-only inspections.
5. More accurately identifying carriers that transport significant quantities of HM.
7. Modifying the SMS display to: 1. Change current terminology, “inconclusive” and “insufficient data,” to fact-based descriptions. 2. Separate crashes with injuries from crashes with fatalities.
8. Removing 1 to 5 mph speeding violations.
9. Lowering the severity weight for speeding violations that do not designate the mph range above the speed limit.
10. Aligning the severity weight of paper and electronic logbook violations. With these changes, all violations related to not having a logbook, electronic or paper, now have a severity weight of 5.
11. Changing the name of the Fatigued Driving (Hours-of-Service (HOS)) BASIC to the HOS Compliance BASIC.
Why Are These Changes Being Implemented?

FMCSA actively seeks feedback from law enforcement, the motor carrier industry, and other stakeholders on ways to improve the SMS. The SMS changes were the result of suggestions from these stakeholders, and support FMCSA’s efforts to more efficiently and effectively direct its resources toward the motor carriers most in need of safety and compliance improvement. Under the new approach, slightly fewer carriers will be identified for FMCSA intervention, but those carriers that are identified demonstrate higher crash involvement, as well as higher HM violation rates. Overall, these new changes will help FMCSA identify carriers for intervention that pose a higher safety risk both in terms of future crash involvement and the potential for increased consequences resulting from the presence of HM, if a crash occurs. As shown in the data below, motor carriers identified for interventions under the new SMS changes are shown to have a higher future crash rate and higher HM violation rate than the motor carriers identified under the current SMS methodology.

Predicting future crash risk and HM violation rates: the SMS Effectiveness Test

To assess the impact of the new changes, an evaluation, or “The SMS Effectiveness Test,” was modeled after the SafeStat Effectiveness Test.\(^1\) The test was accomplished by: (1) performing a simulated SMS implementation run that calculated carrier percentile ranks for each BASIC using historical data (calendar year 2008 to 2009); (2) observing each carrier’s crash involvement and HM violation rate over the 18-month period immediately following the simulated SMS timeframe (i.e., the Post-Identification Crash and HM Violation Period, January 2010 to June 2011); and (3) observing the relationship between the percentile ranks (from 0 to 100) in each BASIC and the subsequent post-SMS carrier crash and HM violation rates.

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The results presented in the following tables show the impact of the SMS changes on two groups: (Table 1) carriers identified for interventions (i.e., with one or more BASICs above the thresholds) and (Table 2) carriers identified as “high-risk.” High-risk carriers are those carriers prioritized for FMCSA investigation due to problems across multiple BASICs. To be considered high-risk, the carrier must meet criteria below:

(A) BASIC percentile of 85% or higher in either Unsafe Driving BASIC, Fatigued Driving (HOS) BASIC, or Crash Indicator and at least one other BASIC percentile above the intervention threshold, or

(B) Four BASIC percentiles at or above the “All Other” Intervention Thresholds.

Table 1: The SMS Effectiveness Test Results of Carriers Identified for Interventions (With One or More BASICs Above or at the Intervention Thresholds)

<table>
<thead>
<tr>
<th>Carriers Identified for Interventions</th>
<th>Effectiveness Test Crash Rate*</th>
<th># of Crashes</th>
<th>Effectiveness Test HM Violation Rate per Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS version 2.1</td>
<td>52,515</td>
<td>13.63</td>
<td>50,569</td>
</tr>
<tr>
<td>SMS version 3.0</td>
<td>51,106</td>
<td>14.62</td>
<td>53,246</td>
</tr>
<tr>
<td>% Difference</td>
<td>-2.9%</td>
<td>3.9%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Table 2: SMS Effectiveness Test Results Carriers Identified as High-Risk

<table>
<thead>
<tr>
<th>Carriers Identified As High-Risk</th>
<th>Effectiveness Test Crash Rate*</th>
<th># of Crashes</th>
<th>Effectiveness Test HM Violation Rate per Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS version 2.1</td>
<td>7,938</td>
<td>22.8</td>
<td>10,058</td>
</tr>
<tr>
<td>SMS version 3.0</td>
<td>7,628</td>
<td>23.1</td>
<td>10,227</td>
</tr>
<tr>
<td>% Difference</td>
<td>-3.9%</td>
<td>1.0%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

* Number of time- and severity-weighted crashes per 100 Power Units (PUs)

In both of the tables above, the new version of the SMS identifies slightly fewer carriers for interventions or as high-risk as the current SMS. More importantly, the crash rate, number of crashes, and HM violation rate all increased under the new SMS. This demonstrates that the new changes to the SMS methodology are more effective at identifying the carriers more likely to have crashes.
The SMS Change Details

The content below provides detailed information and analysis about each enhancement. The entire SMS methodology, including the new changes, can be found in the methodology document (http://csa.fmcsa.dot.gov/Documents/SMSMethodology.pdf).

1. **Strengthening the Vehicle Maintenance BASIC by incorporating cargo/load securement violations from today’s Cargo-Related BASIC**

**Overview:** Industry and enforcement stakeholders pointed out that carriers hauling predominantly open trailers (e.g., flatbeds) are subject to bias in the Cargo-Related BASIC because their numbers of load securement violations per inspection are evaluated against operators that exclusively operate closed van trailers, where load securement violations are often not visible. After analyzing the issue carefully, FMCSA developed a way to address the bias and strengthen SMS’s ability to identify carriers that pose a greater safety risk for safety interventions.

**Analysis Summary:** While cargo/load securement violations comprise 82% of violations in the Cargo-Related BASIC, they comprise just 4% of violations when included in the Vehicle Maintenance BASIC. FMCSA compared the "flatbed bias" of the old Cargo-Related BASIC with that of the new Vehicle Maintenance BASIC which incorporates the cargo/securement violations. Previously, the SMS identified carriers with Cargo-Related BASIC percentiles of 80 and higher for interventions. Carriers at or above this 80th percentile Intervention Threshold represented the worst 20% of carriers assessed in the Cargo-Related BASIC. The analysis determined that while the Cargo-Related BASIC identified 54% of a sample of 77 known flatbed carriers at or above the Intervention Thresholds in the Cargo-Related BASIC, the new Vehicle Maintenance BASIC identified 23% of these carriers at or above the Intervention Thresholds. The details about this analysis are outlined below.

**Background and Analysis Details:** During the preview period prior to the national SMS implementation in December 2010, some members of the enforcement community and the motor carrier industry observed that it was extremely difficult for carriers with extensive flatbed or open trailer operations to be below the Cargo-Related BASIC Intervention Threshold of the 80th percentile. The concern was that the Cargo-Related BASIC’s percentile was heavily influenced by how much a carrier hauled in open trailers, because it is easier to observe cargo securement violations.

FMCSA information systems and roadside inspection data do not distinguish between flatbed (open-deck) operators and closed van trailers. Therefore, to conduct this analysis, FMCSA reached out to the motor carrier industry and was provided with a sample list of 77 known flatbed operators, which was corroborated by FMCSA field staff.

This sample of 77 known flatbed operators was tracked under the (1) old Vehicle Maintenance BASIC, (2) old Cargo-Related BASIC, and (3) new Vehicle Maintenance BASIC to determine the level of "flatbed bias" under each of these BASICs.
Under the old Cargo-Related BASIC, as of March 2012, 42 of the 77 (54%) tracked flatbed carriers identified by the field and industry had a Cargo-Related BASIC at or above the 80th percentile Intervention Threshold. In an unbiased system using the 80th percentile as the Intervention Threshold, it would be expected that approximately 20% of the tracked carriers would be at or above the 80th percentile. The 54% determined from the analysis of the sample of tracked flatbed carriers suggests a bias against flatbed operators.

Under the new Vehicle Maintenance BASIC, 18 of the 77 (23%) would have a Vehicle Maintenance BASIC above the threshold. This percentage is much closer to the approximately 20% of carriers that would be expected to be above the threshold in an unbiased system. On the other hand, the average Vehicle Maintenance BASIC percentile for these carriers increased from 52% (current) to 57% (new). These results show the cargo/load securement violations that are moved into the new Vehicle Maintenance BASIC still impact flatbed operations’ percentiles.

Under the new Vehicle Maintenance BASIC, significant cargo/load securement violations will continue to be identified for safety intervention through an increase in the carrier’s Vehicle Maintenance BASIC percentile. The next analysis examines whether this new approach identifies carriers more likely to be involved in crashes.

A comparison of the crash rates using the SMS Effectiveness Test methodology for the Cargo-Related and Vehicle Maintenance BASICS is presented below:

**Table 3: The SMS Effectiveness Test Results (using 80% Threshold to Identify Carriers for Interventions)**

<table>
<thead>
<tr>
<th>BASIC(s)</th>
<th>Carriers Identified for Interventions</th>
<th>Post-Identification Crash Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo-Related BASIC and/or Vehicle BASIC (old)</td>
<td>22,644</td>
<td>11.6</td>
</tr>
<tr>
<td>Vehicle BASIC (new)</td>
<td>19,945</td>
<td>16.5</td>
</tr>
<tr>
<td>Carriers Added Under the New Vehicle BASIC (not identified in old Cargo-Related or Vehicle BASIC)</td>
<td>2,472</td>
<td>11.7</td>
</tr>
<tr>
<td>Carriers Removed Under the New Vehicle BASIC</td>
<td>5,171</td>
<td>8.2</td>
</tr>
</tbody>
</table>

*Number of time/severity weighted crashes per 100 Power Units (PUs)

As shown above, the new Vehicle Maintenance BASIC identifies carriers with higher crash risk than the old Cargo-Related and Vehicle Maintenance BASIC. Under the new Vehicle Maintenance BASIC, the post-period crash rate for carriers above the 80th percentile increased to 16.5 from the current 11.6.

In summary, the new approach (1) identifies carriers with a higher future crash risk for FMCSA interventions and (2) effectively addresses the bias associated with carriers that haul open trailers. By moving load securement violations to the Vehicle Maintenance BASIC and recalibrating the severity weights, FMCSA has mitigated the known bias created by information system limitations; ensured that the
carriers with actual load securement violations are still identified; and strengthened the Vehicle Maintenance BASIC by improving the identification of carriers with the highest future crash rates.

**The SMS Change:** FMCSA moved the cargo/load securement violations from the old Cargo-Related BASIC into the Vehicle Maintenance BASIC.

2. **Changing the Cargo-Related BASIC to the HM Compliance BASIC to better identify HM-related safety compliance problems**

**Overview:** The presence of HM can greatly increase the consequences of crashes. The Hazardous Materials Regulations (HMRs) are designed to reduce the likelihood of these consequences by preventing HM cargo release, and increasing the ability of emergency responders to mitigate the consequences of an HM spill. FMCSA’s stakeholders have asked the Agency to review the SMS methodology to ensure that HM safety compliance problems are adequately identified and addressed. FMCSA reviewed the methodology to determine if HM compliance issues were adequately being identified in the Cargo-Related BASIC.

**Analysis Summary:** FMCSA consulted with Federal and State subject matter experts and the industry to identify and apply severity weightings to the 239 HM violations contained in the Cargo-Related BASIC and 112 additional HM safety-based violations attributable to the motor carrier. The Agency then conducted effectiveness testing to compare the Cargo-Related BASIC with a new BASIC containing only the HM violations to determine which better identified carriers with a high risk of HM safety compliance problems. The analysis found that the new HM Compliance BASIC is more effective at identifying the carriers with HM compliance problems, specifically HM inspections with violations and HM out-of-service (OOS) violations; it identified carriers with more future violations and with higher HM violation rates than the old Cargo-Related BASIC.

The goal of the HM Compliance BASIC is not to predict future crash risk. It is to be an indicator of a motor carrier’s ability to properly package, transport, and accurately identify and communicate hazardous cargo in the event of a crash or spill. Given the results stated below, the new HM Compliance BASIC does a better job of identifying HM compliance problems than the old Cargo-Related BASIC.

**Analysis Details:** Table 4 below shows the results of the SMS Effectiveness Test for the old Cargo-Related BASIC and the new HM Compliance BASIC. The table includes the number of HM inspections and HM inspections with violations, the HM violation rate, the number of HM OOS inspections, and the HM OOS inspection rate.
Table 4: The SMS Effectiveness Test Results (Using 80% Threshold to Identify Carriers for Interventions)

<table>
<thead>
<tr>
<th>BASIC</th>
<th>HM Inspections</th>
<th>HM Inspections w/ Violations</th>
<th>HM Violation Rate*</th>
<th>HM OOS Inspections</th>
<th>HM OOS Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo-Related (old)</td>
<td>37,675</td>
<td>10,956</td>
<td>29.1%</td>
<td>1,518</td>
<td>4.0%</td>
</tr>
<tr>
<td>HM Compliance (new)</td>
<td>36,188</td>
<td>12,214</td>
<td>33.8%</td>
<td>1,960</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

*For the overall carrier population, the HM violation rate is 23% and HM OOS rate is 3.4%.

While the new HM Compliance BASIC identifies fewer total HM inspections, it identifies more HM inspections with violations, which means it better identifies the carriers with HM compliance problems. Correspondingly, the HM Compliance BASIC identifies carriers with higher HM violation rates (33.8% vs. 29.1%) and HM OOS rates (5.4% vs. 4.0%). This finding demonstrates that the HM Compliance BASIC is more effective at identifying carriers with HM compliance problems. The HM Compliance BASIC percentile ranks will not be public for one year to ensure that stakeholders understand that BASIC, the regulations that underpin it, and that it accomplishes the Agency's goal of better identifying carriers with HM compliance problems.

The following graph shows the relationship between HM Compliance BASIC percentiles and future HM compliance violations.
Each point in the graph represents the collective HM violation rate (HM violation per placardable HM inspection) of all carriers with BASIC results close to that percentile. For example, the leftmost point on the graph represents the HM violation rate (0.04 HM violations per placardable HM inspection) of all carriers that had an HM Compliance BASIC percentile at or above 0 and below 1. The second point represents the violation rate of those at or above 1 and below 2, etc. The best fit trend-line with an R2 value of 0.89 shows a strong positive relationship between HM Compliance BASIC percentiles and future HM violation rates. In other words, carriers with high HM Compliance BASIC percentiles are the carriers most likely to have HM compliance issues in the future.

The SMS Change: FMCSA created a new HM Compliance BASIC based on vehicle inspections (i.e., Level 1, 2, 5 and 6) and HM violations where the vehicle was transporting placardable quantities of HM. This BASIC will allow the Agency to better identify HM-related compliance issues for FMCSA interventions to mitigate the consequences of crashes or spills involving HM. The HM Compliance BASIC is available only to logged-in motor carriers and enforcement personnel as of December 2012. Further examination of this BASIC will take place over the next year before it becomes available to the public.

3. Better aligning the SMS with Intermodal Equipment Provider (IEP) regulations

Overview: The SMS does not currently include any roadside violations associated with an IEP trailer distinct from the motor carrier. Some of these violations, however, should be attributed to the motor carrier. For example, when a motor carrier’s driver agrees to haul equipment from an IEP, the driver is required under 49 CFR Part 390.40 to conduct a pre-trip inspection to determine if the IEP trailer is in safe condition. Per the policy regarding IEP trailers, violations that should be found during the pre-trip inspection are the motor carrier’s responsibility and thus should be applied in the SMS.

Analysis: FMCSA worked collaboratively with law enforcement officials and industry to identify the violations that can be found during a pre-trip inspection of an IEP trailer. These violations are now applied to the motor carrier when there is evidence that the driver performed a pre-trip inspection.

The SMS Change: In cases where (1) the driver conducted a pre-trip inspection, and (2) the violation is the type that should be found on a pre-trip inspection, that violation will be attributed to the motor carrier. FMCSA applied this rule to the past 24 months of roadside inspections, resulting in an increase of approximately 22,000 violations included in the SMS Vehicle Maintenance BASIC. The list of violations that may be found during a pre-trip inspection, and therefore may be used in the calculation of the Vehicle Maintenance BASIC for a carrier, can be found at: https://csa.fmcsa.dot.gov/Documents/IEP_Attributable_Violations.xlsx.
4. **Aligning violations that are included in SMS with Commercial Vehicle Safety Alliance (CVSA) inspection levels by eliminating vehicle violations derived from driver-only inspections and driver violations from vehicle-only inspections**

**Overview:** Previously, the SMS included Level 3 (driver-only) inspections in the Vehicle Maintenance BASIC only when vehicle violations were noted on the inspection. Industry and enforcement were concerned that many vehicle violations fell outside the scope of the inspection and could have biased the Vehicle Maintenance BASIC results.

**Analysis:** FMCSA evaluated the extent to which inspectors are citing vehicle violations during driver-only inspections and confirmed that this problem merits the attention that stakeholders have requested. Approximately 139,000 violations, or 2.6% of all vehicle violations used in the SMS, are vehicle violations cited during a driver-only inspection. While very few driver violations are ever documented in vehicle-only inspections, this change was made to ensure that only violations within the scope of a particular type of inspection are included in the SMS.

**The SMS Change:** FMCSA removed vehicle violations found during driver-only inspections and driver violations found during vehicle-only inspections to align the SMS with existing CVSA policies regarding inspection levels.

5. **More accurately identifying carriers that transport significant quantities of HM**

**Overview:** When FMCSA introduced the SMS, the Agency changed the way it identified carriers involved in transporting HM. The methodology applies more stringent intervention thresholds for these carriers. In August 2011, the criteria for identifying carriers subject to the more stringent HM thresholds were changed to any carrier with HM activity (i.e., a placarded HM inspection, review, or permit) in the past two years. This change came from the prior criteria, based strictly on the HM commodities hauled information, which motor carriers provide in the MCS-150 registration form. It was noted that some carriers that were identified under these new criteria, rarely transported placardable quantities of HM, or were mistakenly identified as hauling placardable quantities of HM in the inspection form.

**Analysis:** FMCSA conducted analysis to determine new criteria for excluding carriers that haul HM as a minimal part of their businesses. These criteria took two forms: (1) requiring HM activity within the last 12 months, excluding carriers that stopped hauling HM, and (2) requiring that HM inspections constitute a sizable proportion of the carrier’s total inspections. This change excludes approximately 11,500 of the 24,000 carriers subject to HM thresholds, while still covering 94% of the placardable HM inspections recorded in the past 24 months.

**The SMS Change:** FMCSA has retained HM placardable inspection criteria and permit criteria, to focus intervention resources on carriers involved in the majority of placardable HM transport. For a carrier to be subject to the HM threshold due to HM inspection activity, that carrier must have:
• At least two HM placardable inspections within the past 24 months, with one inspection occurring within the past 12 months, and
• At least 5% of total inspections that are HM placardable inspections.

6. **More accurately identifying carriers involved in transporting passengers**

**Overview:** Motor carriers subject to the passenger carrier threshold in the SMS are held to a significantly higher standard than non-passenger carriers. Enforcement stakeholders support updating this definition within the SMS to better focus FMCSA resources on carriers involved in passenger transportation.

**Analysis:** FMCSA conducted analysis to determine how many carriers would be subject to the passenger carrier intervention threshold under a new definition in the SMS. This change would remove 4,200 carriers, of which 26 no longer have any BASICs above the intervention threshold, while adding 5,700 carriers, of which 75 now will have one or more BASICs above the intervention threshold.

**The SMS Change:** FMCSA updated the definition of passenger carrier within the SMS as follows:

• Added all for-hire carriers with 9-15 passenger capacity vehicles and private carriers with 16-plus passenger capacity vehicles, as these carriers/entities are under FMCSA’s authority.
• Removed all carriers with only 1-8 capacity vehicles and private carriers with 1-15 passenger capacity vehicles (effectively removing many limousines, vans, taxis, etc.), as these carriers/entities are generally outside most of FMCSA’s authority.
• Removed carriers where less than 2% of their respective fleets are passenger vehicles to exclude carriers that do not transport passengers as a significant part of their businesses.
7. Modifying the SMS display to:

A) Change current terminology, “inconclusive” and “insufficient data,” to fact-based descriptions

Overview: In the BASIC summary on the SMS Website (http://ai.fmcsa.dot.gov/sms), FMCSA uses two terms to describe carriers: “Inconclusive” describes carriers that have enough inspections, but too few violations to warrant being considered for FMCSA interventions. “Insufficient data” describes carriers that do not have enough inspections to produce a measure robust enough to even be assessed. Stakeholders have asked FMCSA to offer more specific fact-based descriptions, as the terms “inconclusive” and “insufficient data” are difficult to understand and interpret.

Analysis: FMCSA developed alternative terminology and a new display to clarify “inconclusive” and “insufficient data” based on a stakeholder preference for more detailed information.

The SMS Change: FMCSA modeled the new terminology during the SMS Preview and it was released later in 2012.

B) Separate crashes with injuries and crashes with fatalities

Overview: In the “Summary of Activities” section of a carrier’s information on the SMS Website, FMCSA displays a count of reportable crashes broken into two categories: “fatal/injury” and “tow-away.” Stakeholders have asked FMCSA to separate the combined “fatality/injury” category.

The SMS Change: FMCSA developed a method to display injury crashes and fatality crashes separately in the SMS Preview site and it has been displayed as of December 2012.

8. Removing 1 to 5 mph speeding violations

Overview: In the current SMS, the Unsafe Driving BASIC uses all speeding violations regardless of the range exceeding the speed limit. Current speedometer regulations (49 CFR 393.82) only require accuracy within 5 mph. This change therefore aligns SMS with the regulatory requirement.

The SMS Change: FMCSA removed commercial motor vehicle speeding violations in the 1 to 5 mph over the speed limit range from the SMS. The Unsafe Driving BASIC no longer includes any speeding violations that fall into the 1 to 5 mph over the speed limit range, regardless of when the inspection occurred. This change applies to the prior 24 months of data used by the SMS and all the SMS data moving forward.
9. **Lowering the severity weight for speeding violations that do not designate the mph range above the speed limit.**

**Overview:** In the previous version of SMS, the Unsafe Driving BASIC applied a severity weight of 5 to general speeding violations that did not specify the range exceeding the speed limit.

**The SMS Change:** FMCSA reduced the severity weight for general speeding violations (49 CFR 392.2S) to 1 for those violations occurring on or after January 1, 2011. By this date, many of the inspectors had access to updated roadside inspection software, ASPEN, to record violations broken out by mile per hour categories above the speed limit. The following severity weights now apply to recorded speeding violations:

<table>
<thead>
<tr>
<th>Specified mph Range Above the Speed Limit</th>
<th>Violation Severity Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not specified</td>
<td>1 *</td>
</tr>
<tr>
<td></td>
<td>For all recorded violations with an unspecified range above the speed limit occurring after January 1, 2011</td>
</tr>
<tr>
<td>1-5</td>
<td>0</td>
</tr>
<tr>
<td>6-10</td>
<td>4</td>
</tr>
<tr>
<td>11-14</td>
<td>7</td>
</tr>
<tr>
<td>15+</td>
<td>10</td>
</tr>
</tbody>
</table>

10. **Aligning the severity weight of paper and electronic logbook violations**

**Overview:** In the previous version of SMS, Hours-of-Service (HOS) form and manner violations had different weights for paper (weight of 2) and electronic form, and manner logbook (weight of 1) violations.

**The SMS Change:** FMCSA is now equally weighting paper and electronic logbook form and manner violations with a severity weight of 1, for consistency purposes.
11. Changing the name of the Fatigued Driving (HOS) BASIC to the HOS Compliance BASIC

**Overview:** The Fatigued Driving (HOS) BASIC includes violations such as “form and manner” and “logbook not current” that, by themselves, do not necessarily indicate fatigued driving or driving in excess of allowable hours.

**The SMS Change:** Upon careful review of comments concerning the proposed SMS changes and stakeholder feedback, FMCSA changed the name of the Fatigued Driving (HOS) BASIC to the HOS Compliance BASIC.

**Next Steps**

FMCSA plans to periodically develop enhancements to SMS, make them available for preview to law enforcement and motor carriers, and collect comments. The next set of packaged enhancements is under development. The Agency is examining the following: comprehensive modifications to roadside violation severity weights, recalibration of the Utilization Factor used to incorporate Vehicle Miles Traveled for the Crash Indicator and Unsafe Driving BASIC, and adjustments to safety event groups in all BASICs. The CSA Website (http://csa.fmcsa.dot.gov/) is the best source for the most up-to-date information about the SMS Preview and its implementation.

With the implementation of the first package of changes to the SMS, motor carriers should:

1. View their operational information. Are they subject to placardable HM, or passenger carrier intervention thresholds?
2. View the new HM Compliance BASIC. Review applicable inspections and HM violations.
3. View the Vehicle Maintenance BASIC. Note cargo/load securement violations previously recorded in the Cargo-Related BASIC, the impact of the Vehicle Maintenance BASIC percentile, and more IEP-related violations.
4. Note that all vehicle violations found during driver-only inspections and driver violations found during vehicle-only inspections have been removed from the Vehicle Maintenance BASIC.
5. Review alternative terminology for “inconclusive” and “insufficient data” in the BASIC summary.
6. View the “Summary of Activities” section of the SMS Website to see the new breakout of injury crashes and fatal crashes.