



DEPARTMENT OF TRANSPORTATION

[4910-EX-P]

Federal Motor Carrier Safety Administration

[Docket No. FMCSA-2019-0277]

Request for Information Concerning Large Truck Crash Causal Factors Study

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice: request for information

SUMMARY: FMCSA seeks information on how best to design and conduct a study to identify factors contributing to all FMCSA reportable large truck crashes (towaway, injury and fatal). Methodologically, the Agency seeks information on how best to balance sample representativeness, comprehensive data sources, ranges of crash types, and cost efficiency. The methodology should also address the use of on-board electronic systems which can generate information about speeding, lane departure, and hard braking. The study should be designed to yield information that will help FMCSA and the truck safety community to identify activities and other measures likely to lead to significant reductions in the frequency, severity, and crash rate involving commercial motor vehicles. As practicable, the study shall rank such activities and measures by the reductions each would likely achieve, if implemented. This RFI supports a two-part process to gather information for the development of a Large Truck Crash Causal Factors Study (LTCCFS) and to promote transparency and innovation by enabling the public, academics, experts, and industry to comment on how best to conduct this study. This study will help improve FMCSA and its State partners' ability to:

1. Evaluate crashes involving large trucks and identify emerging trends;
2. Monitor crash trends and identify causes and contributing factors; and

3. Develop effective safety improvement policies and programs.

DATES: Comments on this notice must be received on or before [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA-2019-0277 using any of the following methods:

- Federal eRulemaking Portal: Go to www.regulations.gov. Follow the on-line instructions for submitting comments.
- Mail: Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery or Courier: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington DC, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal Holidays.
- Fax: 1-202-493-2251.

Instructions: Each submission must include the Agency name and the docket number for this notice. Note that DOT posts all comments received without change to www.regulations.gov, including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to www.regulations.gov at any time or visit Room W12-140 on the ground level of the West Building, 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., ET, Monday through Friday, except Federal holidays. The on-line FDMS is available 24 hours each day, 365 days each year. If you want acknowledgment that

FMCSA received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgement page that appears after submitting comments online.

Privacy Act: In accordance with 5 USC 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

FOR FURTHER INFORMATION CONTACT: Jenny Guarino, Statistician, Analysis Division, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001 by telephone at 202-366-4143 or by email, Jenny.Guarino@dot.gov. If you have questions on viewing or submitting material to the docket, contact Docket Services, telephone (202) 366-9826.

SUPPLEMENTARY INFORMATION:

I. Public Participation and Request for Comments

FMCSA encourages you to participate by submitting comments and related materials.

Submitting Comments

If you submit a comment, please include the docket number for this notice (FMCSA-2019-0277), indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and a

mailing address, an e-mail address, or a phone number in the body of your document so the Agency can contact you if it has questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov> and put the docket number, “FMCSA-2019-0277” in the “Keyword” box, and click “Search.” When the new screen appears, click on “Comment Now!” button and type your comment into the text box in the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the facility, please enclose a stamped, self-addressed postcard or envelope.

FMCSA will consider all comments and material received during the comment period and may change this notice based on your comments.

Viewing Comments and Documents

To view comments, as well as documents mentioned in this preamble as being available in the docket, go to <http://www.regulations.gov> and insert the docket number, “FMCSA-2019-0277” in the “Keyword” box and click “Search.” Next, click “Open Docket Folder” button and choose the document listed to review. If you do not have access to the Internet, you may view the docket online by visiting the Docket Management Facility in Room W12-140 on the ground floor of the DOT West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., e.t., Monday through Friday, except Federal holidays.

II. Background

In response to a statutory directive, FMCSA conducted a comprehensive large truck crash causation study (LTCCS) in 2001-2003. The original LTCCS provided the Department, and safety research community, valuable insight into the factors which contribute to crashes involving at least one CMV. For example, a primary finding of the study was that in the vast majority of crashes where the critical reason for the crash was assigned to the large truck, it was attributed to a driver-related action or inaction. The original study can be found at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810646>, and the report to Congress can be found at <https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/lccs-2006.pdf>.

The original study collected data on crashes at 24 sites of NHTSA's National Automotive Sampling System Crashworthiness Data System (NASS/CDS) from 2001 through 2003 and used a nationally representative approach. In order to be included in this study, the crash must have involved at least one large truck with a gross vehicle weight rating of more than 10,000 pounds, and resulted in at least one fatality or at least one incapacitating or non-incapacitating but evident injury. Data were collected on up to 1,000 elements in each crash. To get the highest quality data possible, the onsite investigations began as soon as possible after the crash occurred. Data collection was performed at each crash site by a two-person team consisting of a trained NASS/CDS researcher and an inspector qualified to perform North American Standard Inspections. The researchers collected data at crash scenes through driver, passenger, and witness interviews. The 28-page truck driver interview form, for example, covered areas such as:

- crash scene description, including roadway and weather;
- vehicle rollover, fire, jackknife, cargo shift, and component problems with brakes, tires, steering, engine, and lights; driver credentials, history, method of wage payment, physical condition, fatigue (sleep pattern, work schedule, recreational activities, etc.), inattention/distraction, perception, and decisions; and
- trip information, including intended start time, purpose, intended length, and familiarity with the route.

After the crash, each truck and truck driver were subjected to a thorough inspection/evaluation. The inspection covered thirteen critical areas such as brakes, exhaust systems, frames, cargo securement, tires, wheels and rims, and fuel systems. It covered driver data on licenses, medical cards, duty status, and log books. After leaving the crash scene, researchers collected additional interview data by telephone from the motor carriers responsible for the trucks, and drivers of trucks and other vehicles when the actual drivers could not be interviewed due to a fatality or serious injury. Researchers also reviewed police crash reports, hospitals records, and coroners' reports. In addition, researchers often revisited the crash scene to make more accurate scene diagrams and search for additional data. Together the teams collected data on approximately 1,000 variables on each crash.” (p.5 Report to Congress, March 2006.)

In the more than 15 years since the original study, many changes in technology, vehicle safety, driver behavior and roadway design have occurred that effect how a driver performs. Since the study ended in 2003, fatal crashes involving large trucks decreased until 2009 when they hit their lowest point in recent years (2,893 fatal crashes). Since 2009, fatal crashes involving large trucks have steadily increased to 4,415 fatal crashes in

2018, a 52.6 percent increase when compared to 2009. Over the last three years (2016-2018), fatal crashes involving large trucks increased 5.7 percent. This study will help FMCSA identify factors that are contributing to the growth in fatal large truck crashes, and in both injury and property damage only (PDO) crashes. These factors will drive new initiatives to reduce crashes on our nations roadways.

This includes factors such as the dramatic increase in distraction caused by cell phones and texting, the level of driver restraint use, the advent of in-cab navigation and fleet management systems, as well as equipment designed to enhance safety, such as automatic emergency braking (AEB) systems. Therefore, FMCSA is interested in conducting a revised crash study and is seeking information on the most effective methodology for best collecting a representative set of crash data for identifying the primary factors involved in large truck crashes. Findings from the study can be used to inform technology developers in the autonomous vehicle environment of the kinds of driver behaviors that need to be addressed.

This new study will develop a baseline of large truck crash factors to help guide mitigating crash avoidance strategies to prevent future crashes even in the SAE International driving automation level 4 and 5 vehicles¹. Knowing more about driver behaviors will identify areas where new driving automation systems can be of help, and aid in formulating performance metrics and standards that may need to be considered if they are to reduce crashes involving large trucks. In addition, because some of the driver assistance systems are already deployed in many fleets, this study can provide data on

¹ SAE Level 4 is High Automation, where the vehicle is capable of performing all driving functions under certain conditions. SAE Level 5 is Full Automation, where the vehicle is capable of performing all driving functions under all conditions. For more information on the SAE levels, and automated vehicles please refer to: <https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety>.

their effectiveness in determining what crash avoidance capabilities may need to be incorporated in the Automated Driving Systems (ADS) that may be provided on the CMV platforms in the future.

In your proposal please include the answers to the following:

1. Should FMCSA pursue a nationally representative sampling approach or can convenience sampling serve the needs?
2. What type of study are you recommending (e.g. nationally representative vs. convenience sampling), and what are the pros and cons of this approach?
3. How important is it for the new study results to be comparable with findings of the original LTCCS?
4. What other sources of data can enrich the new study? How can they be identified and included?

Issued on: January 9, 2020.

Jim Mullen,
Acting Administrator.