

September 6, 2018

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building, Ground Floor, Room W12-140  
Washington, DC 20590-0001

**Re: Hours of Service of Drivers: Federal Motor Carrier Safety Administration (FMCSA),  
Department of Transportation (DOT); Advance notice of proposed rulemaking (ANPRM)  
[Docket No. FMCSA–2018–0248]**

The National Waste & Recycling Association (NWRA) submits these comments on behalf of the waste and recycling industry in response to a request for public input from FMCSA and DOT contained in the ANPRM on Hours of Service of Drivers; Docket No. FMCSA–2018–0248.

We appreciate FMCSA’s recognition of the challenges that the Electronic Logging Devices (ELDs) mandate presents to Hours of Service (HOS) compliance for certain specialized industries and its willingness to consider changes to address these issues. NWRA calls upon FMCSA to recognize the unique nature of waste and recycling collection operations and create an industrywide exemption as it already has done for the ready-mix concrete and asphalt pavement industries.

Safety is the top concern for NWRA and our members. We want every single member of our industry to make it home each day safely, without a crash, and free from injury or fatality. While NWRA recognizes the safety benefits that ELDs present for other sectors, these devices are actually counterproductive for our industry and increase risks associated with distracted driving due to the frequency that waste and recycling industry drivers must interact with them.

## **BACKGROUND**

### **NWRA**

NWRA is the trade association representing the private sector waste and recycling industry that is essential to maintaining the quality of American life by protecting public health and the environment. The delivery of waste and recycling services impacts all residential, commercial, and industrial properties on a daily basis. Our members collect, process, and manage waste, recyclables, organics, and medical waste; operate and manage landfills in compliance with all federal and state laws; manage and service truck fleets and collection vehicles; design, manufacture, sell, and service equipment and supplies.

The association’s mission is to provide leadership, education, safety expertise, research, and advocacy to promote the waste and recycling industry. NWRA’s goal is to ensure a climate

where our members can continue to provide safe, economically sustainable, and environmentally responsible services and jobs that benefit communities throughout America.

NWRA's Safety Committee provides insights and best practices on how to prevent injuries to the industry's workers. The association convenes a number of institutes that provide leadership on landfills, recycling, and healthcare waste. The association also serves as Secretariat for the American National Standards Institute (ANSI). Along with our partner Informa, we collaborate on WasteExpo, North America's largest waste and recycling exposition and conference. Our educational offerings are known and respected around the world.

Our members operate in all 50 states and the District of Columbia. Waste and recycling facilities number nearly 18,000 scattered throughout the U.S., mirroring population centers. Our nearly 700 members are a mix of publicly-traded and privately-owned local, regional, and Fortune 500 national and international companies. NWRA represents approximately 70 percent of the private sector waste and recycling market.

The solid waste industry directly employs about 420,000 people as of early 2018. It is estimated that the private sector waste and recycling industry is responsible for sustaining more than one million jobs.

### **Waste and Recycling Industry Commercial Motor Vehicle Fleet**

The private sector of the waste and recycling industry has a commercial motor vehicle (CMV) fleet of more than 100,000 collection trucks and an even greater number of CMV Drivers. These trucks are primarily Heavy-Duty Vehicles as defined by the Federal Highway Administration (FHWA) with a GVWR of more than 26,000 pounds. The industry's fleet includes, but is not limited to, waste and recycling collection trucks, roll-off trucks, post collection tractor trailers, container delivery, and grapple trucks.

The waste and recycling industry's motor carriers referenced in these comments fall under FMCSA's MCS-150 MOTOR CARRIER IDENTIFICATION REPORT (Application for U.S. DOT Number) Line 24 CARGO CLASSIFICATIONS "S. GARBAGE, REFUSE, TRASH" and "DD. OTHER" with "Recyclables" written in. The Bureau of Labor Statistics (BLS) Occupational Profiles categorizes the industry's CMV drivers under 53-7081 "Refuse and Recyclable Material Collectors."

### **Waste and Recycling Industry Fleet Operations Overview**

According to FHWA's 2016 Freight Quick Facts Report, "Waste/Scrap" is the tenth largest commodity by tonnage shipped in the U.S. The industry's truck operations moved 92 percent of the 652.9 million tons transported by all modes in 2015.

The waste (garbage, trash, solid waste) and recycling (paper, plastic, aluminum, metal, compost) collection trucks that service nearly every American household and business are the most recognized part of the industry's fleet. Most Americans know these trucks when they see one as they are unique, highly-specialized vehicles.

Although waste and recycling collection trucks are virtually identical in most respects, they are significantly different in the means by which the material is emptied into the cargo area (e.g. rear-, front-, automated side-load, etc.). Depending on the line of business and the size of the

company, drivers may slip-seat trucks or drivers may operate several trucks per week and in many cases drive more than one truck in a single day.

Waste and recyclable materials collection drivers normally work a five-day work week, their daily work schedules are set in advance, and they are eligible to obtain a 34-hour restart each week. Since drivers live locally, their daily work schedules are managed directly by local supervisors. They return home daily, enjoy activities with their family and friends, and sleep at home. This benefits organizational safety culture, health, and quality of life for the industry's drivers.

Waste and recycling companies operate local route service trucks with drivers starting and ending their days at the same location, rarely traveling beyond a 40-mile radius. Drivers and companies use time and attendance processes to record their drivers' Hours of Service (HOS) and maintain compliance with federal and state regulations.

**Residential collection** route trucks repeatedly stop and start while on-route in order to collect a load of waste or recyclable materials. The national average of daily residential stops is between 400 and 600 customers per day for rear-load trucks with the average time spent making a collection estimated at approximately 22 seconds per customer. Drivers, depending upon the route and other factors, typically enter and exit their trucks to assist with the collection about one-third to one-half of the time before driving to the next residence which could be less than 100 feet away. Some automated collection routes, however, are capable of as many as 1,500 to 2,000 stops in a day, requiring the driver to perform an auxiliary function to operate the automated controls, but not necessarily requiring the driver to exit the truck. The driver is seated at the driving controls of the vehicle, but is unable to simultaneously perform the driving and auxiliary functions.

**Commercial collection** route trucks tend to have fewer stops than residential routes, but can average more than 80 stops per day. These stops often involve more vehicle backing and maneuvering to obtain access to the container and require the driver to perform an auxiliary function to operate the automated controls. These trucks travel on a wide variety of roadways including short distances on interstate highways, residential neighborhood streets, industrial complexes, and loading dock areas. The physical work required by these drivers can vary from staging containers prior to operating automated lift controls to connecting a chain or cable to a compactor or container and operating hoist controls to lift it onto the truck frame and secure it for transport.

## COMMENTS

### HOS Compliance (CSA SMS) in the Waste and Recycling Industry

As described above, waste and recyclable material collection companies operate local route service trucks. Drivers start and end their workday at the same location and rarely drive beyond a 40-mile radius from that point. Drivers and companies use time and attendance processes (timecard exemption) to record their drivers' HOS in order to maintain compliance with federal and state regulations. As stated in FMCSA's ELD FAQ, "Drivers who use the timecard exception are not required to keep records of duty status (RODS) or use ELDs."

Additionally, waste and recyclable material collections CMV drivers and companies fall within the scope of 49 C.F.R. 395.1(e)(1), the "Short-haul operations" (100 air-mile radius driver) rule,

which exempts them from the requirements to use an ELD or maintain a daily (paper) RODS as otherwise required by §395.8 “Driver’s record of duty status” and §395.11 “Supporting Documents.”

Drivers in the industry may exceed the 12 consecutive hour limitation of the short-haul exemption more than eight (8) times in any 30 consecutive day period due to operating restrictions placed upon the industry by states and localities, inclement weather, traffic congestion, and other circumstances beyond their control. These may include holiday week schedules (four-day work weeks, school / business closings, shopping traffic), commercial and municipal collection restrictions (landfill / transfer station operating hours, restrictions on collecting only during daylight or nighttime hours, mandates to collect only during off-peak business hours, bans on collecting when noise will disturb sleep), and severe weather events (blizzards, hurricanes, tornados, floods), etc. If a driver has exceeded or is close to exceeding the eight times in any 30 consecutive day period limitation, companies must employ use of an ELD in order to ensure compliance.

When drivers exceed the 12 consecutive hour period exemption criteria in §395.1(e), they recreate that day on a single RODS as required. The company then retains the drivers’ RODS, time and attendance records, and supporting documents for six (6) months, per §395.8(k).

To recreate the day, drivers follow FMCSA’s guidance:

**Question 6:** How should multiple short stops in a town or city be recorded on a record of duty status.

**Guidance:** All stops made in any one city, town, village or municipality may be computed as one. In such cases the sum of all stops should be shown on a continuous line as on-duty (not driving). The aggregate driving time between such stops should be entered on the record of duty status immediately following the on-duty (not driving) entry. The name of the city, town, village, or municipality, followed by the state abbreviation where all the stops took place, must appear in the “remarks” section of the record of duty status.

**Question 26:** Is time spent operating controls in a CMV to perform an auxiliary, non-driving function (e.g. operating the power take-off (PTO), lifting a loaded container, compacting waste, etc.) considered driving time? Does the location of the controls have a bearing on the answer?

**Guidance:** The location of the controls does have a bearing on the answer. Section 395.2 defines “driving time” as all time spent at the driving controls of a Commercial Motor Vehicle CMV in operation. If a driver, seated at the driving controls of the vehicle, is able to simultaneously perform the driving and auxiliary function (for example, one hand on the steering wheel and one hand on a control mechanism), the time spent performing the auxiliary function must be recorded as “driving time.” If a driver, seated at the driving controls of the vehicle, is unable to simultaneously perform the driving and auxiliary function, the time spent performing the auxiliary function may be recorded as “on-duty not driving time.”

NWRA randomly reviewed over 50 waste and recycling industry motor carriers’ Compliance, Safety, Accountability’s (CSA) Safety Measurement System (SMS) HOS records. It is evident that HOS violations are nearly nonexistent industry-wide and HOS compliance has no impact on a carrier’s CSA SMS Safety rating or HOS compliance in the waste and recycling industry.

To support the industry's HOS compliance excellence, NWRA researched and documented 20 randomly selected waste and recyclable material collection companies and their HOS violation record in CSA's SMS, which represents 10,732 power units and 10,789 drivers that operate on U.S. roadways daily. These 20 waste and recycling industry motor carriers were randomly selected to represent a cross section of the industry by size of carrier. In the 24-month record ending December 29, 2017, the 20 companies had 4,351 total roadside inspections (RSI) in all HOS Behavior Analysis & Safety Improvement Categories (BASIC) categories and only one company had two HOS violations.\*

[\* Both of these violations were improperly cited by the officer, since the drivers were 395.1(e) *short-haul operation* exempt. One was a Level II Walk-around Inspection for 395.8(a) *No drivers record of duty status when one is required* and the second was a Level I Full Inspection for 395.8(f)(1) *Driver's record of duty status not current*. In both cases, the RSI occurred shortly after the driver went on-duty for the day. Both of these could be successfully Data Quality (DataQ) challenged and removed from the carrier's CSA SMS.]

### **ELD Financial Impact to the Waste and Recycling Industry**

The investment in ELD equipment, installation, training, and extra manpower will not increase the waste and recycling industry's compliance with FMCSA regulations as is demonstrated by NWRA's research documented in the section above. Waste and recyclable material CMV drivers and companies have virtually no record of HOS violations in CSA's SMS HOS BASIC, nor is there a history of CSA Intervention Consequences for HOS non-compliance. For this reason, FMCSA should not require the waste and recycling industry to invest in ELDs, which essentially amounts to punishing someone for good behavior.

NWRA members have discussed the costs and operating impacts of ELDs at industry conferences and roundtable discussions on the subject. The financial impact to the industry based on the information stated above pertaining to the industry's CMV fleet would cost the industry \$116.7 million over 2 years, not including fines levied on drivers and carriers for exceeding the daily 11-hour driving limit due to ELD technology not being able to accurately record all the on-duty, but non-driving tasks drivers perform each day outlined in the section above on fleet operations.

Under the short-haul operation exemption a driver is exempt when, "The driver returns to the work reporting location and is released from work within 12-consecutive hours." Due to ELDs not being able to accurately document drivers' entrance and exit of the truck nor accurately record when the driver is performing an auxiliary function to operate automated controls, drivers will appear to reach the 11-hour driving limitation before the 12th consecutive hour on-duty. This was one of the factors that led FMCSA to grant exemptions to the ready-mix concrete and asphalt industries, both of which hold many parallels to the waste and recycling industry as their drivers engage in significant non-driving duties as well.

ELDs are not simply an operational burden, but could prove devastating financially to smaller fleets in the waste and recycling industry where owners may wear many hats including safety, recruiting, dispatcher, finance, HR, benefits, sales, customer service, maintenance, etc. Add to this all the time associated with ELD vendor and driver management related to making "back office" limited edits to an ELD record to correct mistakes or add missing information that must include an annotation to explain the reason for the edit and the burden upon these companies

becomes exponential. In addition, the driver must certify that any carrier edit is accurate and resubmit the records. If the driver chooses not to re-certify RODS, this is also reflected in the ELD record. The ELD must keep the original, unedited record along with the edits.

Since the ELD requirement applies to the individual driver and not to the trucks, an additional regulatory and financial limitation will impact the industry as it relates to driver utilization. As mentioned earlier, drivers may slip-seat their trucks or drivers may operate more than one truck per week and in many cases drive more than one truck in a single day. This will require companies to purchase mobile ELDs, one for each driver exceeding the “8-days in a 30-day period” limitation and purchase extra ELDs for drivers about to exceed the exemption or risk not working the driver until s/he is back in compliance.

There is a significant productivity and financial loss that is incurred related to the lost time and available HOS loss experienced at the beginning of these drivers’ days and each time they change trucks. A mobile ELD takes time to pair to the truck and have “integral synchronization” with the engine control module (ECM) to automatically record engine power status, vehicle motion status, and other data. The driver’s unique identification number and password must connect the truck to the driver. Upon logging in, a driver must then review any unassigned driving time. ELD events under the “Unidentified Driver” profile should be added to the driver’s record or the driver should add an annotation explaining that the unassigned hours are not his/hers.

To comply with the ELD requirements for change of duty status between on-duty driving and non-driving activities, drivers would have to utilize the Yard Moves, Special Driving Category, every time they enter a landfill, transfer station, material recycling facility or terminal location, due to the geographical size and activities that take place at these locations. Making these annotations and changes in the ELD would take additional time away from available HOS. An additional Special Driving Category may need to be created by FMCSA to reflect Residential Neighborhood and Commercial Complex locations where the industry’s drivers operate, which would allow those drivers who use ELDs to comply with the requirements.

### **ELD Distracted Driving Dangers**

Over the past several decades, there has been indisputable scientific research by the National Safety Council (NSC), Virginia Tech Transportation Institute (VTTI), and the American Automobile Association (AAA) Foundation for Traffic Safety that has identified the elements of Distracted Driving, which stratify into three source categories: Visual (eyes off the road), Manual (hands off the wheel), and Cognitive (mind off the task). ELDs will have a negative impact on waste and recyclable material collection drivers’ safety in each of these categories due to the frequency of their required interactions with the ELD that differ greatly from long-haul drivers and even most short-haul drivers.

NWRA asserts that ELDs will have an adverse effect on distracted driving in the waste and recycling industry. Research published by cognitive neuroscientist Dr. David Strayer, in partnership with the AAA Foundation for Traffic Safety (citation below), examines cognitive distractions as they relate to the impact on driver safety. This research looked at the impact of in-vehicle information system (IVIS) interactions on drivers’ cognitive workloads and found that there were long-lasting residual cognitive distraction costs to safety even after the IVIS interactions had terminated.

*“Despite the fact that the participants in the research study were not interacting with the system in any way, there were residual costs associated with the prior interaction. These residual costs are notable for their magnitude (in the seconds immediately following an interaction...). These costs (cognitive distraction) are also notable for their duration, lasting up to 27 seconds after an interaction had been completed. To put this in context, at 25 mph a vehicle would have traveled 988 feet before the residual costs had completely dissipated. These findings have implications for self-regulatory strategies, such as choosing to dial or send a text message at a stoplight, because the costs of these interactions are likely to persist when the light turns green. The residual costs are likely related to the driver reestablishing situational awareness of the driving environment that was lost during the IVIS interaction.” (Fisher & Strayer, 2014; Strayer & Fisher, 2016)*

Given that the primary task is to drive the vehicle, as the secondary cognitive task becomes more demanding (Strayer et al., 2013), drivers are less likely to execute a complete scan (i.e., right and left glances) of the road environment at intersections and, therefore, anticipate potential hazards. As suggested by the situation awareness model of Fisher and Strayer (2014), this finding may be accounted for as a consequence of the capacity-limited nature of our cognitive system (Kahneman, 1973).

As the amount of cognitive resources required by the execution of the secondary task increases, the amount left to be directed toward driving is reduced and, as a consequence, drivers become less capable of predicting the occurrence of potential hazards at road intersections. The importance of this finding is twofold – since intersections are highly experienced by and familiar to drivers, scanning the surrounding environment while at these locations may be considered an automated process (Schneider & Chein, 2003) for drivers. The fact that as the amount of resources required by the secondary task increased drivers made fewer anticipatory glances suggests that cognitive distraction impairs many aspects of driving, no matter the level of experience associated with them. In addition, since crossroads are considered to be among the most dangerous road sections (NHTSA, 2010a), failing to scan for potential hazards as a result of distraction may therefore increase the probability of accidents.

Based on Dr. Strayer’s findings, a direct correlation can be drawn between an IVIS and an ELD and a RODS, which are an even “*more demanding secondary cognitive task*,” which requires considerably more cognitive and physical interaction than a voice-operated IVIS. Being equal, the use of ELDs and RODS in the industry’s fleet operations would have a catastrophic impact on distracted driving and safety.

Waste and recyclable materials collection CMV drivers would be required to interact with and make duty status changes in the ELD or RODS when stopping at one-third to one-half of their 400 to 600 stops per day or every 22 seconds (the average time to service a customer) before then driving to the next residence, which could be less than 100 feet away. Given that Strayer’s research identifies a 27 seconds cognitive distraction residual switch in transitioning from on-task to off-task performance, the distraction would last longer than the amount of time servicing an individual residence.

To put this in context and quantify the hazard potential when the collection driver stops to service a customer, the primary cognitive tasks switch from driving to loading waste / recyclables into the truck and switches back to driving. Once the loading task is completed, the driver’s primary cognitive task switches back to driving 100 feet to the next customer. As a

responsibility of this primary cognitive task, the driver must be satisfied that the truck is in safe operating condition (§396.13 Driver inspection), so the driver walks back to the driver's seat inspecting the truck's safe mechanical condition and cognitively assessing the potential driving hazards around the truck and in the path to the next stop, establishing situational awareness.

This is where the off-task secondary cognitive task of the driver interacting with the ELD / RODS becomes a visual, manual, and cognitive distraction to the performance of the primary task of driving the truck. The residual costs of cognitive distraction associated with the interaction with the ELD or RODS persist for 27 seconds into the primary task of driving to the next stop and in the time it takes to reestablish situational awareness the driver will have arrived at the next customer, 100 feet away. If the truck travels an average of 5 mph (7.33 fps) in the 100 feet distance, the driver will arrive at the next stop in 13.7 seconds.

## **CONCLUSION AND RECOMMENDATIONS**

The waste and recycling industry recognizes and agrees with the need for ELDs for drivers and carriers in long-haul, over-the-road, and regional operations, as well as for those carriers with unsatisfactory safety ratings and that are over the threshold in their CSA HOS BASIC. It is logical that these carriers need ELDs to improve safety and compliance due to the fatigue associated with long hours driving, time away from home and family, as well as compliance and safety culture issues related to lack of face-to-face communication and direct supervision from the carrier. These drivers will not be as impacted by the cognitive distraction of interacting with the ELD since they do not change duty status several hundred times a day like short-haul drivers in the waste and recycling industry.

There is no equivalent or greater level of safety that ELDs would bring to the waste and recycling industry. Waste and recyclable material CMV drivers and companies have virtually no record of HOS violations in CSA's SMS HOS BASIC, nor is there a history of CSA Intervention Consequences for HOS non-compliance. For this reason, FMCSA should not require waste and recyclable material CMV drivers and companies to invest in ELDs.

The industry's CMV drivers and companies meet the scope of 49 C.F.R. 395.1(e)(1) short-haul operations (100 air-mile radius driver) rule, which exempts them from the requirements to use an ELD or maintain a daily (paper) RODS §395.8 and supporting documents §395.11.

The adverse impact ELDS and RODS have on safety as it relates to driver distraction is particularly troublesome. NWRA believes that Dr. Strayer's research supports exempting waste and recyclable material CMV drivers and companies from complying with the ELD mandate and the use of RODS.

NWRA supports increasing the short-haul exemption from 12 hours to 14 hours as has already been done for the ready-mix concrete and asphalt industries. This would allow the industry's CMV drivers and companies to continue to comply with HOS regulations as was required and enforced prior to the ELD mandate date of December 18, 2017.



Respectfully submitted,



Dr. Darrell K. Smith, PhD  
President & CEO



1550 Crystal Drive, Suite 804, Arlington, VA 22202

### **DISTRACTED DRIVING RESEARCH REFERENCES:**

AAA Foundation for Traffic Safety

Dr. David L. Strayer, Ph.D., University of Utah

Keynote Speaker: Network of Employers for Traffic Safety (NETS)

*Cognitive Research: Principles and Implications* (2016)

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2017 Strength In Numbers® Annual Conference (Oct 2017)

<http://trafficsafety.org/conference-2/>

<http://cognitiveresearchjournal.springeropen.com/articles/10.1186/s41235-016-0018-3>

Visual and Cognitive Demands of Using In-Vehicle Information Systems (Sept 2017)

<https://aaafoundation.org/visual-cognitive-demands-using-vehicle-information-systems/>

Fisher, D. L., & Strayer, D. L. (2014).

Modeling Situation Awareness and Crash Risk.

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Measuring Cognitive Distraction in the Automobile (June 2013)

<https://aaafoundation.org/wp-content/uploads/2018/01/MeasuringCognitiveDistractionFS.pdf>

National Safety Council (NSC)

Understanding the distracted brain: WHY DRIVING WHILE USING HANDS-FREE CELL PHONES IS RISKY BEHAVIOR (April 2012)

<http://www.nsc.org/DistractedDrivingDocuments/Cognitive-Distraction-White-Paper.pdf>