#### **Rules Created to Reduce Tired Truck Drivers**





## **Working Hours Limit of a Truck Driver**



Drivers permitted to drive up to 11 hours with every 10 consecutive hours of rest

Drivers not permitted to drive more than 14 hours after 10-hour rest

Drivers required to take a break of 30 minutes or more for 8 hours of consecutive driving

Drivers not permitted to drive after 60/70 hours on duty in 7/8 consecutive days

FMCSA Regulation 395.3

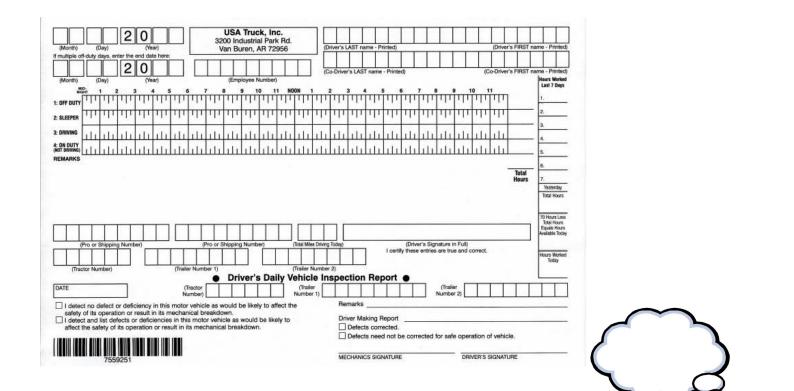


Working (Not Driving)

Off Duty



# **Working Log Recorded in Pen and Paper**





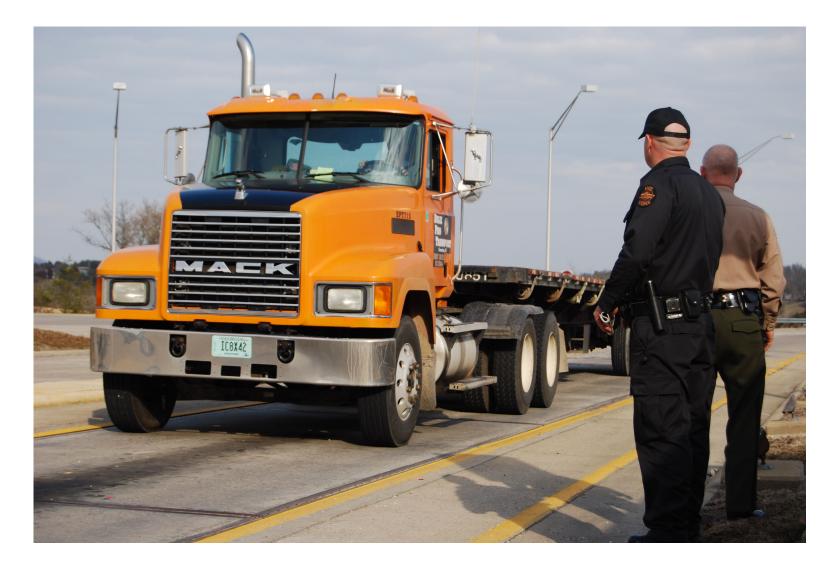
#### **DoT Introducing ELD Mandate**

Home » eDriver Logs » Review HOS   Summary   1 Day   7 Day   8 Day   15 Day   Day Graph For:   Day Company   Day Company	

- Implement by December 2017.
- Focus on tracking Work Hours.



## **Truck Drivers Signaled for Inspection**





# **FMCSA Previously Failed to Implement ELD**



# Appeals court vacates onboard recorder reg

NEWS Max Heine | August 27, 2011

#### of reddit this

A federal appeals court on Aug. 26 vacated the Federal Motor Carrier Safety Administration's electronic onboard recorder regulation for not addressing how the rule could prevent the devices from being used to harass drivers.

A three-judge panel for the U.S. Court of Appeals for the Seventh Circuit concluded that "the rule cannot stand because the agency failed to consider an issue that it was statutorily required to address." The Truck and Bus Safety and Regulatory Reform Act of 1988 "requires the agency to ensure that any such device is not used to 'harass vehicle operators.' "

Rejected in 2011 due to lack of addressing privacy issues. Attempting to sue again.



# **DoT's Regulatory Impact Analysis**



U.S. Department Of Transportation Federal Motor Carrier Safety Administration

#### NOTICE OF PROPOSED RULEMAKING

Electronic On-Board Recorders and Hours-of-Service Supporting Documents

Preliminary Regulatory Evaluation Regulatory Impact Analysis Initial Regulatory Flexibility Analysis Unfunded Mandates Analysis January 24, 2011 Research focuses on safety improvement and administrative cost saved.

Expected to bring down violation by 40%.

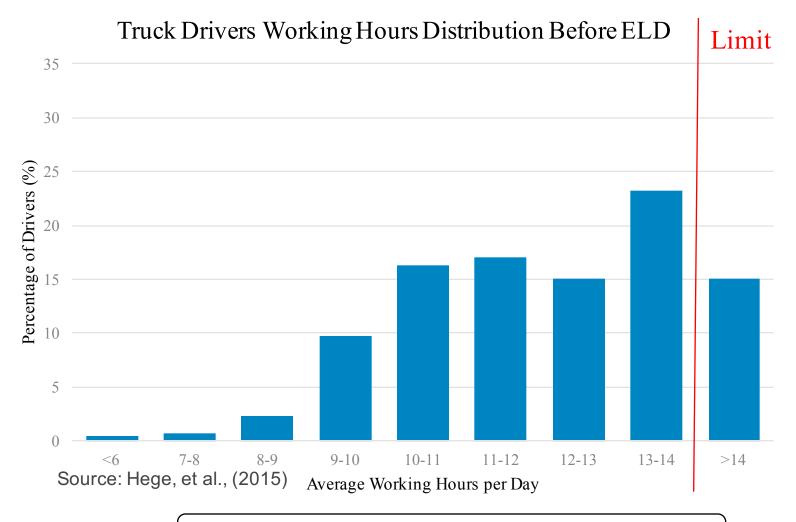


#### **Existing Research Focuses on Safety**

- Current Research Focuses on Expected Safety Improvements.
- Lack of research on economic impact of ELD mandate.
- This thesis is not to question the usefulness of mandate, but the economic impact of ELD mandate.



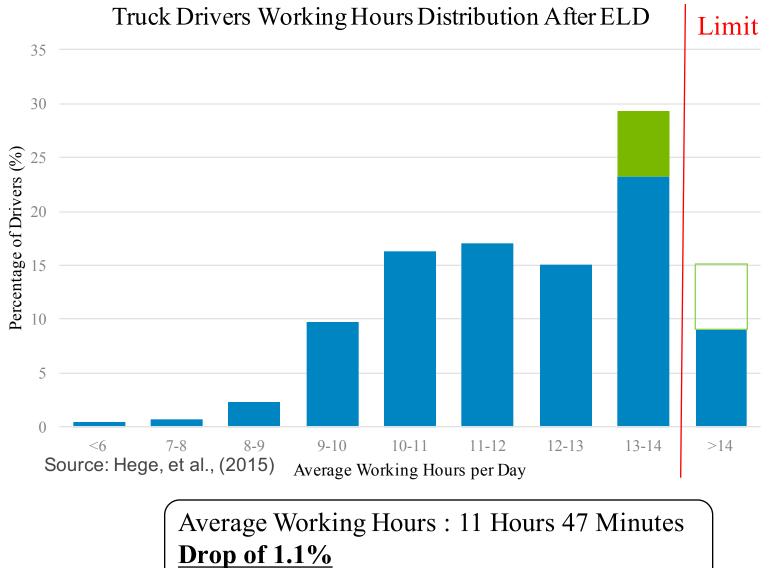
#### **Shift in Average Working Hours**



Average Working Hours : 11 Hours 55 Minutes



#### **Shift in Average Working Hours**





### **Identify ELD Cost Per-Mile**



Motor Carrier Costs	2008	2009	2010	2011	2012	2013	2014	
Vehicle-based								
Fuel Costs	\$0.633	\$0.405	\$0.486	\$0.590	\$0.641	\$0.645	\$0.583	
Truck/Trailer Lease or Purchase Payments	\$0.213	\$0.257	\$0.184	\$0.189	\$0.174	\$0.163	\$0.215	
Repair & Maintenance	\$0.103	\$0.123	\$0.124	\$0.152	\$0.138	\$0.148	\$0.158	
Truck Insurance Premiums	\$0.055	\$0.054	\$0.059	\$0.067	\$0.063	\$0.064	\$0.071	
Permits and Licenses	\$0.016	\$0.029	\$0.040	\$0.038	\$0.022	\$0.026	\$0.019	
Tires	\$0.030	\$0.029	\$0.035	\$0.042	\$0.044	\$0.041	\$0.044	
Tolls	\$0.024	\$0.024	\$0.012	\$0.017	\$0.019	\$0.019	\$0.023	
Driver-based								
Driver Wages	\$0.435	\$0.403	\$0.446	\$0.460	\$0.417	\$0.440	\$0.462	
Driver Benefits	\$0.144	\$0.128	\$0.162	\$0.151	\$0.116	\$0.129	\$0.129	
TOTAL	\$1.653	\$1.451	\$1.548	\$1.706	\$1.633	\$1.676	\$1.703	

#### Table 8: Average Marginal Costs per Mile, 2008-2014

More objective to compare cost impact.



## **Translating ELD Cost to Per-Mile**

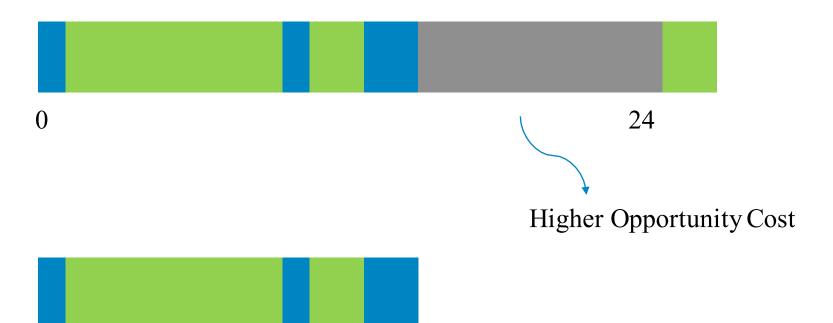


- ~ \$700**-**\$800.
- Last around 3 years.
- $\sim 100,000$  miles a year.
- Increase \$0.0026 permile.
- Increase 0.17%



# Journeys with Overnight Stay

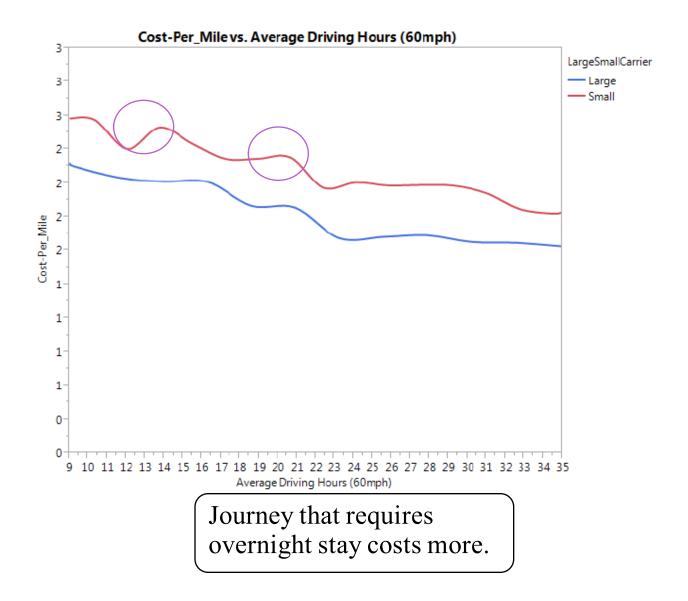
• Opportunity Cost of a load



Working (Driving) Working (Not Driving) Off Duty



# **Price Bump More Apparent in Small Fleets**





# So, what will happen?

- Do not find evidence that ELD mandate will cause trucking prices to increase.
- Further Research Required:
  - Will truck drivers really quit?
  - Will truck drivers speed up?
  - Data from companies who adopted ELD.



# **Questions?**

