



# FACE Fatal Facts



**December 3, 2003**  
**Report # 47-4-2003**



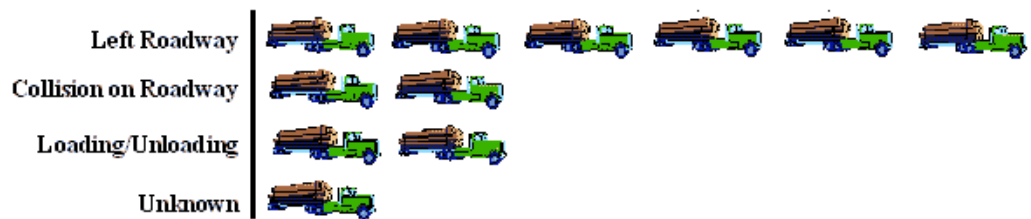
## Hazards on the Road for Log Truck Drivers

The wood that built the building you're in, the paper that you are reading these words from, and many more wood products come to you from the forest via a hazardous and costly road.

While bringing their harvest to the sawmill, pulp mill, or plywood mill, 11 log truck drivers lost their lives between 1998 and 2002 in Washington State. They left behind eight wives, eight children, and an untold number of grandchildren who will never again see, hear, or hold their loved ones. The monetary cost of those lost lives can't compare to the cost to the families and society.

The purpose of this FACE Fatal Facts is to help prevent future log-hauling deaths. Of the 11 fatal incidents, six involved the truck leaving the roadway for various reasons, two were roadway collisions, and two were during the loading or unloading process.

### Types of Fatal Incidents



The following true stories highlight the most frequent types of incidents: leaving the roadway, collision, load failure, and equipment failure.

#### Case 1

On November 12, 1998, a 29-year-old driver of a log truck was killed when his loaded vehicle left the road and rolled down an embankment. The truck was being driven too fast as it went into a sharp curve. The driver attempted to slow the truck, leaving 250 feet of skid marks on the road. The incident happened on a two-lane paved county road at about 7:45 a.m. in Klickitat County. The victim was not wearing a seatbelt.

#### Case 2

On February 24, 1999, a 33-year-old driver of a log truck died when his truck rear-ended another log truck that had stopped on the highway due to a mudslide. The driver of the truck with a loaded pole and pup trailer was driving on a state highway in a line of five log trucks. The trucks were following each other closely and exceeding the speed limit. The first three trucks stopped because of a mudslide on the roadway. The fourth truck, driven by the victim, hit the rear of the third truck causing the victim's load of logs on his pole trailer to shift forward, crushing the cab and fatally injuring him. The incident happened on a state highway at about 8:55 a.m. in Jefferson County. The driver may have been using a cell phone at the time of the incident.

### Case 3

On July 15, 1999, a 31-year-old log truck driver was killed when two logs fell on him from his truck as he was releasing a wrapper. The truck driver had driven his half loaded log truck about one-quarter of a mile from one landing to another landing to complete his load. At the second landing, the driver intended to remove some of the half load of mixed size logs and replace them with logs from the landing. The driver was found underneath two logs by the side of the truck at the second landing. He had apparently been taking off the wrapper from his load, which he had placed on the load between the two landings. The incident happened at about 11:20 a.m. in Thurston County.

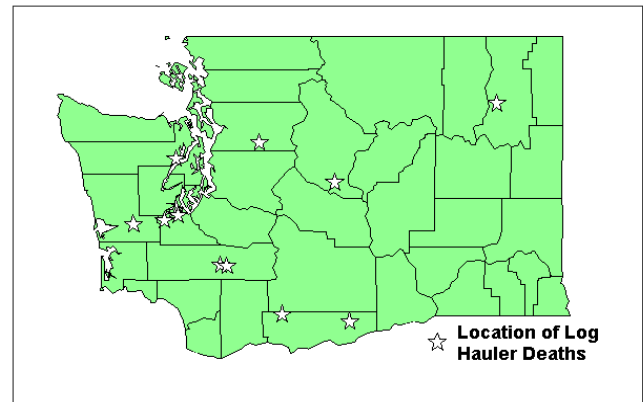
### Case 4

On the afternoon of August 2, 1999, a 60-year-old owner-operator died when the steering axle of his log truck broke, causing the truck to lose its left front wheel, go out of control, and hit a tree. The victim was driving the fully loaded log truck on a road in Grays Harbor county when the incident occurred. The rig's cab was crushed when the logs shifted forward after the truck struck the tree. Despite the efforts of a timber company crew and emergency aide workers, the driver died at the scene.

#### **How can these deaths be prevented?**

Eleven fatalities involving log truck drivers happened during a five-year period (1998-2002) in Washington State. It is not possible to draw definite conclusions about all of the causes and conditions that cause log truck drivers to die on the job. To do this would require many more years of data and in-depth investigations. Based on these eleven fatal incidents, it is possible to highlight hazards that if addressed could prevent future fatalities of Washington State log truck drivers.

Log Hauling Deaths in WA State, 1998-2002



#### **Primary Hazards**

- 1.) Excessive speed
- 2.) Tailgating
- 3.) Driver inattention
- 4.) Load stability
- 5.) Equipment failure
- 6.) Bulkhead guard
- 7.) Loading and unloading
- 8.) Driver fatigue
- 9.) Not wearing seatbelts

#### ***Excessive Speed***

Everyone knows that “speed kills,” but the pressures of work sometimes make us think we can push it just a little harder, a little faster. This way of thinking and driving can end in disaster. Despite the economic pressure in the industry to keep the trucks moving, both companies and owner/operators know a truck crash endangers life and property. Therefore, it is important to set schedules and expectations that are reasonable for the distances covered, types of roads, road conditions, and weather – and allow for traveling within the designated speed limits. Another factor to consider is driver overconfidence on unfamiliar or frequently traveled roads.

#### ***Tailgating***

Keep a proper distance from vehicles in front of you. Allow enough room to brake or come to a stop. The weight of a fully loaded log truck makes slowing or stopping more difficult. For example, a fully loaded truck traveling at 55 mph can

take more than 400 ft to stop. (See Figure 1 for comparison.) Also, having to brake too quickly can cause a load of logs to shift, and increase the possibility of a crushed cab or rollover.

### **Three Second Rule**

You should keep a 3 second gap between your vehicle and the one in front of you. Extra seconds should be added for driving at night, in fog, rain, or snow.

### **Driver Inattention**

The AAA Foundation for Traffic Safety<sup>1</sup> states that driver inattention is a major contributor to highway crashes. The National Highway Traffic Safety Administration<sup>2</sup> estimates that at least 25% of all vehicle crashes involve some form of driver inattention.

A variety of issues were identified that could cause and/or contribute to driver distractions and inattention.<sup>1,2</sup> These issues include:

- Eating and/or drinking
- Using a cell phone or CB radio
- Adjusting a radio
- Smoking-related activity
- Adjusting vehicle controls
- Loose objects in the cab
- Looking at paperwork or maps
- Weather conditions
- Driver fatigue

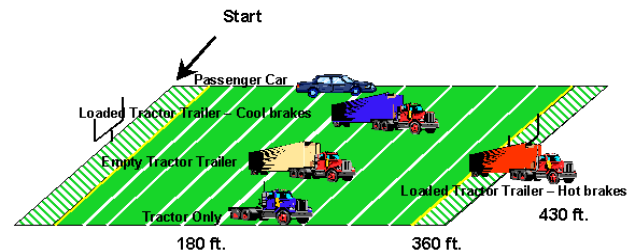
In several of the cases noted in this report, the investigating agencies suggested that driver distraction or inattention could have been a contributory factor in the incident.

### **Load Stability**

Keep the height of log loads within legal limits. Exceeding the load height restrictions makes it more likely that the driver could lose control and that the vehicle could rollover. Once again, even if your load height is okay, slow down before entering a curve, because a loaded vehicle is more likely to rollover. Also, the weight of the load is very important.

Do not overload, as this makes it more likely the truck could rollover or be involved in a fatal crash.

Figure 1. Average total stopping distance at 55 mph.



#### **Actual Distances:**

Passenger car – 193 ft.  
Loaded tractor trailer with cool brakes – 256 ft.  
Loaded tractor trailer with hot brakes – 430 ft.  
Empty tractor trailer – 249 ft.  
Tractor only ("Bobtail") – 243 ft.

**Source:** Reference #3 with estimates of reaction time and hot brake stopping distance from reference #4.

### **Equipment Failure**

Before use, the driver must make a daily pre-trip walk-around inspection of the vehicle to ensure its safe operation and comply with Washington State law. Brakes must be tested before and after movement of the vehicle. Other things to check include:

- Steering apparatus
- Lights and reflectors
- Brake boosters
- Brake hoses and connections
- Reaches
- Hitches (couplings)
- Bunks
- Stakes
- Bunk blocks

Use your senses and experience to see, hear, feel, and smell the operation of your truck. Follow the requirements of WAC 296-54-589 through 58970 regarding log truck safety. Good maintenance practices should be observed, especially for older vehicles.

### **Bulkhead Guard**

All trucks must be equipped with bulkhead guards (cab guard or headache racks). The manufacturer should have installed bulkheads in new trucks. Older trucks can

have bulkheads retrofitted. All retrofit bulkhead guards should be installed by authorized dealer/installers. Bulkhead guards must be securely attached to the truck frame.

***Expect the unexpected!*** *It's especially important to slow down before going into a curve!*

### **Loading and Unloading**

Many serious injuries and fatalities occur while loading or unloading logs. A nationwide study<sup>5</sup> of logging-related fatalities indicated that about 16% of the logging fatalities were related to falling logs and half of those occurred during loading and unloading logs onto and from log trucks. In Kentucky, they found that 15% of their logging fatalities were due to logs falling from trucks at the sawmill.<sup>6</sup>

Even properly loaded log trucks can pose a hazard after transport. Loads can shift during transport and can roll or fall during the unloading process.

Log truck drivers and employers can use many approaches to reduce or eliminate hazards during loading and unloading. For example:

- Avoid overloading trucks.
- Use a front-end loader or grapples to stabilize the load when securing or loosening binders.
- Use unloading cages.
- Use adjustable height stakes (extensions).
- Loads must be built up or loaded in a stable manner and kept within the stakes.

Other important considerations:

- Logs that are not contained within the stakes must be secured by at least two wrappers.
- All logs should be balanced and centered.

- All binders and wrappers must remain on the load until an approved safeguard (e.g., log stacker, log loader, forklift) has been provided to prevent logs from rolling off the side of the truck or trailer when the binders are released.

### **Driver Fatigue**

Driving while tired is an acknowledged problem in the trucking industry. Research has shown that long hours behind the wheel and driver fatigue are significant contributing factors to crashes involving large trucks.<sup>2</sup> Accident investigators speculated that fatigue may have been a factor in two of the fatal Washington State log truck crashes.

### **Seatbelts**

Law in Washington State requires wearing seatbelts. Seatbelts were not worn by at least seven of these log truck drivers. Seatbelts, shoulder harnesses, and airbags can save lives.

### **Tips for Employers**

Employers of log truck drivers have a responsibility to ensure the safety of their trucks and drivers. Here are some suggestions for establishing safe work procedures.

1. Analyze company injury data to determine where and how injuries and collisions are happening. Target your safety program to address these problems.
2. Develop a new driver training program or send drivers to a commercial truck driving school.
3. Develop driving schedules that allow drivers to complete their work without having to speed or drive excessively long hours. Make it clear to drivers that they should only deliver as many loads as is safely possible. Do not hold drivers to mandatory quotas.

4. Supervise drivers to ensure the safe operation of vehicles.
5. Ensure maintenance of vehicles. Bad driving habits can be detected through inappropriate wear on tires, clutches, and brakes. Communication from maintenance to management should happen.
6. Conduct regular driver safety meetings.
7. All truck drivers, including contract drivers, should be included in the logging contractor's safety program.
8. Address "macho attitudes" that lead to the unsafe operation of log trucks.
9. Conduct background checks of driving safety records before hiring drivers.

## Getting Help

### **WISHA Consultation Program**

Washington State  
 Department of Labor and Industries  
<http://www.LNI.wa.gov/Safety/KeepSafe/Assistance/Consultation>

**Everett (Region 1, Northwest Washington)**  
 425-290-1300

**Seattle (Region 2, King County)**  
 206-515-2800

**Tacoma (Region 3, Pierce, Kitsap, Clallam, and Jefferson Counties)**  
 253-596-3800

**Olympia (Region 4, Southwest Washington)**  
 360-902-5799

**East Wenatchee (Region 5, Central and Southeastern Washington)**  
 509-886-6500

**Spokane (Region 6, Eastern Washington)**  
 509-324-2600

## **WISHA Policy & Technical Services**

Tumwater Central Office – Logging Safety  
 360-902-5428

### **Other Resources**

- Safety Standards – Logging Operations: WAC 296-54.  
<http://www.LNI.wa.gov/Safety/Rules/>
- AAA Foundation for Traffic Safety web page. Online information about drowsy and distracted driving.  
<http://www.aaafoundation.org/home/>
- Washington State Department of Transportation. Washington State Commercial Vehicle Guide.  
<http://www.wsdot.wa.gov/freight/mcs/CommercialVehicleGuide2002-03.pdf>
- Log Truckers Conference/WTA  
<http://www.wtatrucking.com>
- Washington Contract Loggers Assoc.  
<http://www.loggers.com/>
- Forest Resources Assoc.  
<http://www.apulpa.org/>
- Logging Safety and Transportation Safety web page created by the National Timber Harvesting and Transportation Safety Foundation  
<http://www.loggingsafety.com/>

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  6. Struttmann, T.W. and Scheerer A.L., *Fatal Injuries Caused by Logs Rolling Off Trucks: Kentucky 1994-1998*. *AJIM* 39:203-208, 2001.
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## FACE Fatal Facts

Produced by the **Washington State Fatality Assessment & Control Evaluation (FACE) Program**, which is managed by the Safety and Health Assessment and Research for Prevention (SHARP) Program.

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