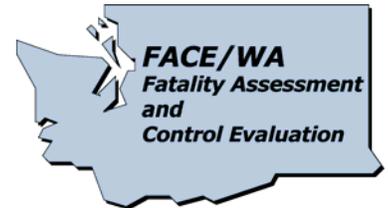


# ***FATAL FACTS***

**Fatal Work-Related Motor Vehicle  
Traffic Crashes in Washington State,  
1998 - 2007**



**January 20, 2009  
Report #47-16-2009**

# ***FATAL FACTS***

## **Fatal Work-Related Motor Vehicle Traffic Crashes in Washington State, 1998 –2007**

January 20, 2009  
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In Washington State, motor vehicle traffic crashes are the leading cause of work-related injury fatalities. Workers from many industries operate different types of motor vehicles to make deliveries, visit job sites, serve clients, make repair and sales calls, travel to meetings, and numerous other purposes. From 1998-2007, 190 motor vehicle drivers and passengers lost their lives in work-related roadway crashes, accounting for 22% of all occupational injury deaths in the state.

### **Summary of Key Facts**

- The fatalities were distributed among industries. The highest numbers were in:
  - transportation (52).
  - agriculture and forestry (29).
  - construction (26).
  - and public administration (15).
- The most prevalent types of vehicles involved were:
  - truck (113).
  - automobile (52).
  - and van (19).
- Steps can be taken to prevent and minimize the consequences of work-related motor vehicle crashes.

**190 people died in work-related motor vehicle crashes in Washington State, 1998-2007.**

## Case examples: What is happening in Washington State?

The National Institute for Occupational Health and Safety in their publication “*Work-Related Roadway Crashes: Challenges and Opportunities for Prevention*” identified three types of occupational motor vehicle operating environments that employers and policy makers need to consider when developing motor vehicle crash prevention safety policies and programs. The three types of occupational motor vehicle operating environments are:

- The motor carrier industry.
- Other industry and business vehicle fleets.
- Personal vehicles used for work purposes.

The following are recent cases from Washington State:

### *Motor carrier industry*

- On August 24, 2006 the driver of a propane delivery truck was killed when his vehicle veered off the road and rolled over.
- On December 2, 2007, the driver of a semi-truck was killed when he came upon an accident on a state highway and attempted to avoid it by swerving onto the icy shoulder of the road, where his truck overturned.

### *Other industry and business vehicle fleets*

- On July 8, 2004, a field case manager employed by an insurance company was driving on a state highway when she attempted to pass a vehicle and was struck head-on by an oncoming vehicle.
- On May 25, 2007, a home health care aide traveling between clients was killed when her car was struck broadside by a pickup as she was leaving the driveway of an apartment complex.

### *Personal vehicles used for work purposes*

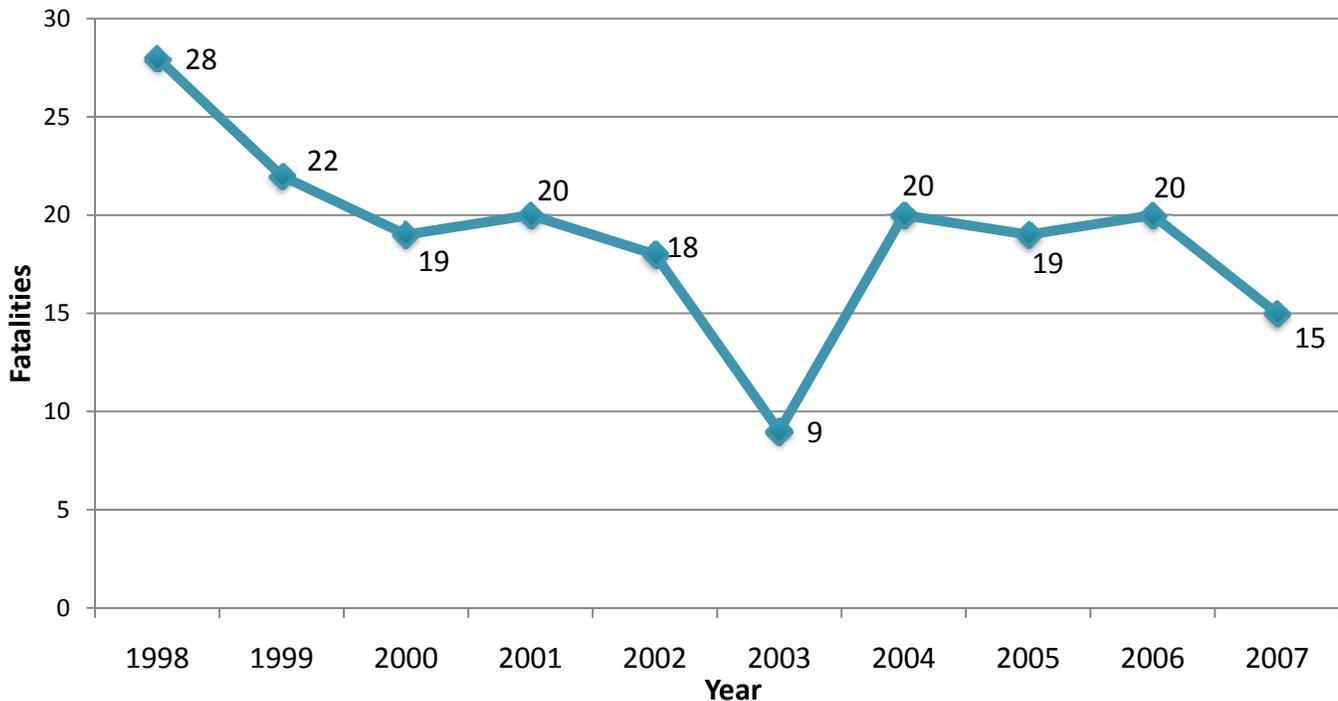
- On January 22, 2004, an employee was driving his own automobile returning from a work-related class when his vehicle crossed the center line of a state highway and struck another vehicle head-on.
- On July 15, 2004, a county employee who worked as a maintenance worker and traffic flagger was driving his pickup between job sites when his vehicle left the road and hit a tree.

**On average, 19 people per year died in work-related motor vehicle traffic crashes from 1998-2007.**

## What has happened over the last ten years?

### Annual Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

Work-related motor vehicle crash fatalities decreased by nearly fifty percent from 1998 to 2007. The lowest number of crash fatalities was in 2003 and the most recent data shows a decline from 2006 to 2007.



### Common Causes of Motor Vehicle Crashes

In order to develop prevention strategies, it is necessary to understand causes of motor vehicle crashes.

- Excessive speed.
- Following too close to vehicle in front.
- Failure to adjust to weather/road conditions.
- Drug and alcohol use.
- Inexperienced or young drivers.
- Older drivers with delayed reactions.
- Vehicle mechanical failure.
- Unsafe lane changes.
- Tiredness.
- Distractions (cell phone, text messages, looking at map, reaching for items, etc.).
- Lack of knowledge about vehicle (rental car or fleet vehicle).

### The top three types of work-related fatalities in Washington State are:

- **Motor vehicle traffic crashes (22%).**
- **Machine-related (15%).**
- **Struck by a falling object (8%).**

## What types of vehicles were involved?

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### Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

More than half (58%) of all motor vehicle fatalities involved trucks. Of these, 30% were semi-trucks. Automobile crashes accounted for 28% of all fatalities while 10% occurred in passenger or light delivery vans.

Vehicle Type	Number
Truck	113
• Semi-truck	33
• Pickup truck	20
• Log truck	14
• Tanker truck	11
• Truck, other	10
• Dump truck	6
• Flatbed	6
• Delivery truck	5
• Truck, unknown	3
• Waste hauling and recycling truck	3
• Cement truck	2
Automobile	52
Van – passenger or light delivery	19
Machinery, tractor	4
Bus	1
Unknown	1
<b>Total</b>	<b>190</b>

## What types of crashes were involved?

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The main types of fatal crashes were vehicle to vehicle (47%) and vehicles leaving the road and overturning or colliding with other objects (42%).

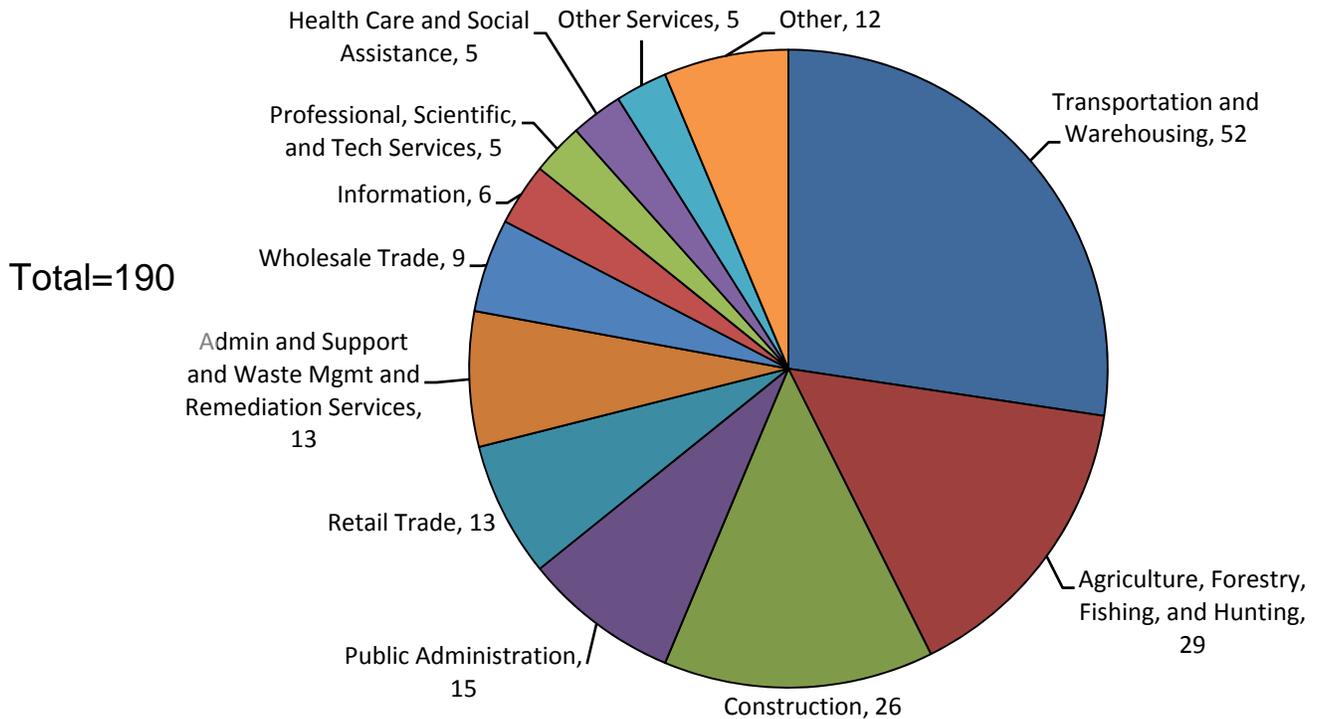
Event Type	Number	Percent
Vehicle to vehicle collision	90	47%
Vehicle loss of control and collision with off-road object or overturning	80	42%
Vehicle collision with object in or along roadway	14	7%
Other	6	3%

## What industries were affected?

### Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

This chart shows that the industries with the highest work-related motor vehicle crashes were:

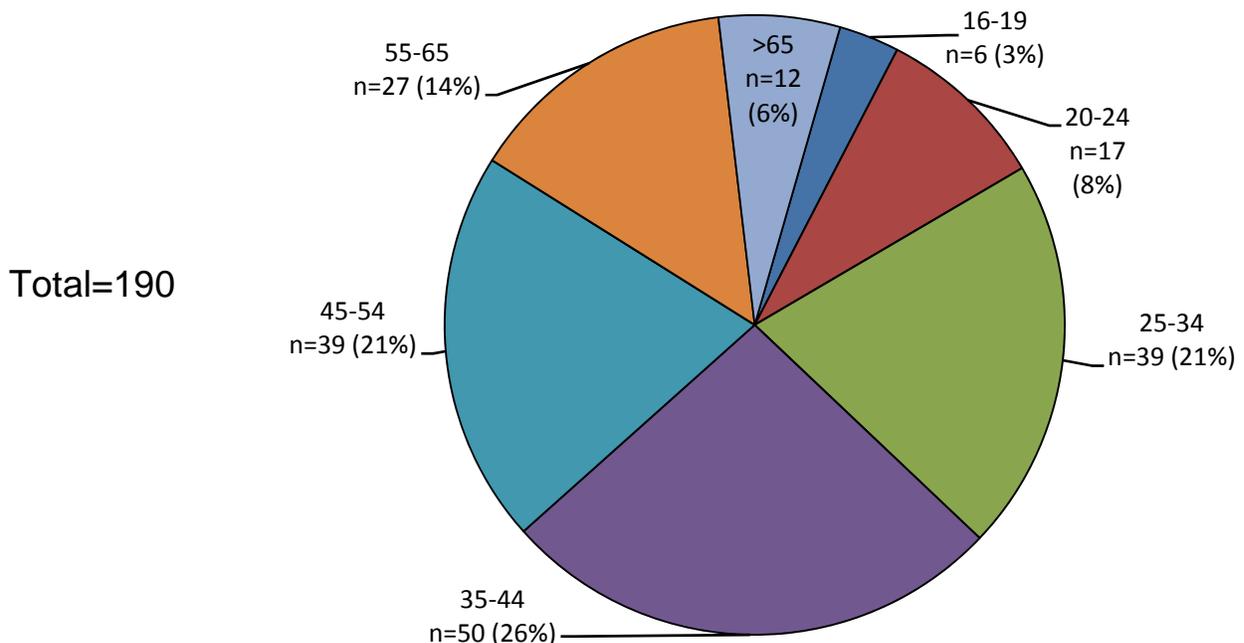
- transportation
- agriculture and forestry
- construction



## What age groups were affected?

This chart shows that the age groups with the highest work-related motor vehicle crashes were:

- 35-44
- 25-34 and 45-54 (tied)



## What was the breakdown within age groups and major industries?

### Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

The percentage of fatalities within each industry changed with age. In the transportation and warehousing industry, the percent of fatalities increased with increasing age. In construction, the percentage of fatalities doubled from 16-19 to the 20-24 age group, then stabilized and finally declined after 55 years of age. The percentage of fatalities in agriculture, forestry, fishing, and hunting was highest for age groups 16-19 and 20-24.

Age	Transportation and Warehousing	Construction	Agriculture, Forestry, Fishing, and Hunting
16-19	17%	17%	33%
20-24	6%	35%	35%
25-34	28%	15%	10%
35-44	24%	10%	20%
45-55	31%	15%	10%
54-65	39%	6%	6%
>65	36%	0	18%

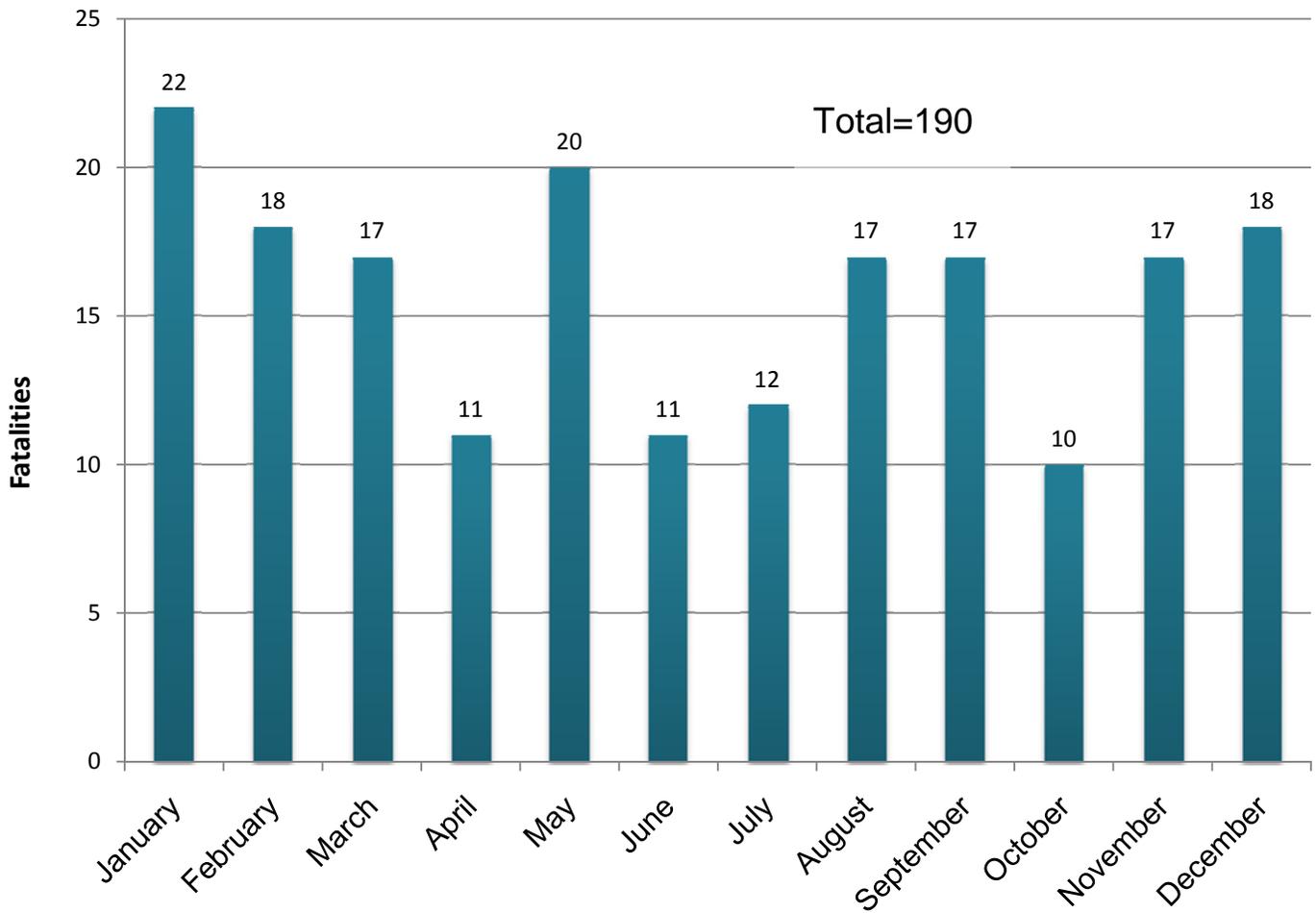
A large logging truck is shown from a low angle, driving on a dirt road. The truck is heavily loaded with massive logs, some of which are secured with chains. The logs are cut, showing their light-colored wood. The truck is kicking up a cloud of dust behind it. In the foreground, there are stacks of logs and a tree stump. The background shows a forest of tall trees.

Approximately a third of motor vehicle fatalities for ages 16-24 years old have been in the agriculture, forestry, fishing, and hunting industry in the last ten years.

## What time of year did they occur?

### Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

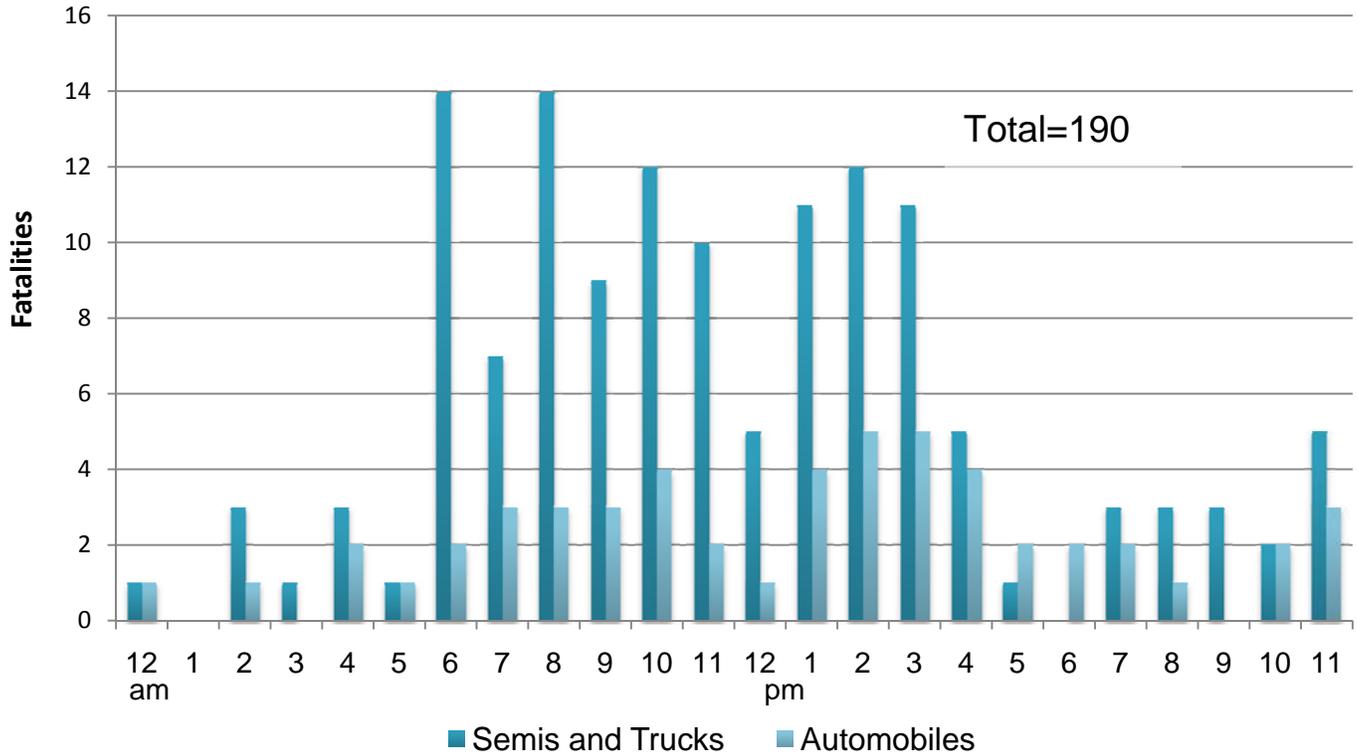
The highest number of crash fatalities occurred in January and the lowest number in October.



## What time of day did they occur?

### Work-Related Motor Vehicle Traffic Fatalities, WA State 1998-2007

Fatal crashes followed a general “workday” pattern with end of day (~11pm) spike for cars and trucks. There were more fatal semi and truck crashes per hour in the morning while there are more automobile fatalities per hour in the afternoon. At noon there is a decline in fatal crashes per hour for all vehicles.



## What can be done to prevent motor vehicle crashes?

There are a number of things that can be done to prevent or minimize the consequences of motor vehicle crashes. Motor vehicle incidents involve many vehicle types, driving conditions, and levels of driver experience and operating capability. Because of this, there is a need for more expansive and comprehensive prevention strategies that combine traffic safety principles and sound safety management practices. Prevention efforts should include a combination of education, enforcement, and engineering controls.

Listed below are some prevention strategies that can be taken by employers and employees to help prevent serious injuries resulting from motor vehicle crashes.

### Preventing Motor Vehicle Crashes

#### *Employers*

- Implement company safe driving policies and procedures.
- Institute a safe driving training program for your employees.
- Conduct driver's license background checks before hiring drivers.
- Require all employees to use seatbelts.
- Establish procedures to ensure proper maintenance of vehicles and all vehicle systems.
- Purchase vehicles that are equipped with appropriate occupant protection and other safety features.
- Schedule to allow time for drivers to complete their tasks.
- Limit drivers' hours of service according to regulations.
- Commercial motor carriers abide by required U.S. Department of Transportation's regulations.
- Adopt American Society of Safety Engineers' ["Safe Practices for Motor Vehicle Operations" \(ASSE 215.1-2006\)](#). [American Society of Safety Engineers](#)

#### *Employees*

- Always use a seatbelt.
- Drive within the speed limit.
- Don't drive when excessively tired.
- Don't drive if prescription or over-the-counter medication makes you drowsy.
- Never drink and drive.
- Plan your route before you go.
- Avoid distractions such as cell phones and other activities that take your mind and eyes off the road.



## Getting Help

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DOSH Consultation Program

[Washington State Department of Labor and Industries](http://www.Lni.wa.gov/Safety/KeepSafe/Assistance/Consultation)

<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.**

### DOSH Technical Services

Tumwater Central Office – Safety: 360-902-5460.

## Resources on the Web

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[NIOSH—Motor Vehicles:](http://www.cdc.gov/niosh/topics/motorvehicle/)

[www.cdc.gov/niosh/topics/motorvehicle/](http://www.cdc.gov/niosh/topics/motorvehicle/)

[Federal Highway Administration:](http://www.fhwa.dot.gov)

[www.fhwa.dot.gov](http://www.fhwa.dot.gov)

[National Highway Traffic Safety Administration:](http://www.nhtsa.dot.gov)

[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)

[Federal Motor Carrier Safety Administration:](http://www.fmcsa.dot.gov)

[www.fmcsa.dot.gov](http://www.fmcsa.dot.gov)

[Federal Motor Carrier Safety Regulations:](http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfrv4_02.html#301/)

[www.access.gpo.gov/nara/cfr/waisidx\\_02/49cfrv4\\_02.html#301/](http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfrv4_02.html#301/)

[Federal Motor Vehicle Safety Standards:](http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfrv5_02.html#501/)

[www.access.gpo.gov/nara/cfr/waisidx\\_02/49cfrv5\\_02.html#501](http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfrv5_02.html#501/)

[Network of Employers for Traffic Safety:](http://www.trafficsafety.org)

[www.trafficsafety.org](http://www.trafficsafety.org)

[Insurance Institute for Highway Safety:](http://www.hwysafety.org)

[www.hwysafety.org](http://www.hwysafety.org)

[AAA Foundation for Traffic Safety:](http://www.aaafoundation.org/home/)

[www.aaafoundation.org/home/](http://www.aaafoundation.org/home/)

[Washington Traffic Safety Commission:](http://www.wtsc.wa.gov/)

<http://www.wtsc.wa.gov/>

[National Safety Council:](http://www.nsc.org/index.aspx)

<http://www.nsc.org/index.aspx>

## FACE Fatal Facts

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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.

### [SHARP Program](#)

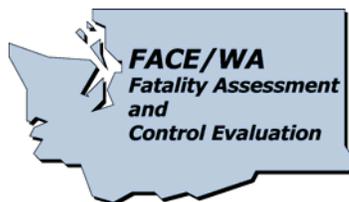
Washington Department of Labor & Industries

PO Box 44330

Olympia, WA 98504-4330

360-902-5669 or 1-888-667-4277 (toll-free).

<http://www.Lni.wa.gov/Main/ContactInfo/Safety/Sharp.asp>



The Safety and Health Assessment and Research for Prevention (SHARP) Program at the Washington State Department of Labor and Industries is funded in part by the National Institute for Occupational Safety and Health (NIOSH) to run the Fatality Assessment and Control Evaluation (FACE) Program in Washington State (Cooperative Agreement No.: 3 U60 OH008487-02S1). The FACE Program collects information on all work-related fatalities in Washington State, investigates select incidents using a safety systems/root-cause approach, and develops reports and other outreach activities. The FACE Program is not compliance-oriented. Its goal is to reduce the number of work-related acute trauma injuries and deaths.