

A black and white photograph of the operator's seat and control panel of a piece of heavy machinery, likely a backhoe loader. Two large joysticks with rubber grips are visible, mounted on a metal frame. The background shows a window with a metal railing. The text is overlaid on the lower half of the image.

***Oregon Fatality Assessment
and Control Evaluation
(OR-FACE)***

Annual Report 2008

Occupational Fatalities

Oregon

Fatality Assessment and Control Evaluation

Annual Report 2008

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Website:

www.ohsu.edu/croet/face

This report is dedicated to the men and women in Oregon who have lost their lives as the result of traumatic workplace injuries, in the hope that better understanding of these fatal incidents may help to save the lives of other workers in similar situations.

Oregon FACE Program

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FACE Definitions

The Oregon Fatality Assessment and Control Evaluation program investigates work-related fatalities that are caused by a traumatic injury when the injury occurs within Oregon.

A location *within Oregon* means the incident, or some portion of the incident, occurs within the geographical boundaries of the state of Oregon, including the coastal waters, airspace, and subterranean portions of the state.

A *work relationship* exists if an incident occurs (a) on the employer's premises and the person was there to work, or (b) off the employer's premises and the person was there to work, or the event or exposure was related to the person's work or status as an employee.

Work is defined as duties, activities, or tasks that produce a product or result, are done in exchange for money, goods, services, profit, or benefit, and are legal activities.

In Scope

- Self-employed, family, or volunteer workers, exposed to the same work hazards and perform the same duties or functions as paid employees and that meet the work-relationship criteria.
- Suicides and homicides that meet the work-relationship criteria.
- Fatal events or exposures that occur when a person is in travel status, if the travel is for work purposes or is a condition of employment (excluding commute).

Out of Scope

- Institutionalized persons, including inmates of penal and mental institutions, sanitariums, and homes for the aged, infirm and needy, unless employed off the premises of their institutions.
- Fatal heart attacks and strokes, unless causally related to a traumatic injury or exposure.
- Fatal events or exposures that occur during a person's recreational activities that are not required by the employer.
- Fatal events or exposures that occur during a person's commute to or from work.

Adapted from Bureau of Labor Statistics (2001), *Census of Fatal Occupational Injuries: Definitions*.
U.S. Department of Labor. Available online (March 11, 2004): <http://stats.bls.gov/iif/oshcdef.htm>

Acronyms

CDC	Centers for Disease Control and Prevention
CFOI	U.S. Census of Fatal Occupational Injuries
NVDRS	National Violent Death Reporting System
OIICS	Occupational Injury and Illness Classification System
Oregon OSHA	Oregon Occupational Safety and Health Division
PNASH	Pacific Northwest Agricultural Safety and Health Center

Population Data Sources

U.S. CENSUS: www.census.gov (American Factfinder, Data Sets, Summary File 3)

BUREAU OF LABOR STATISTICS: <http://stats.bls.gov/ces>

LAUS – LOCAL AREA UNEMPLOYMENT STATISTICS: www.bls.gov/lau

OLMIS – OREGON LABOR MARKET INFORMATION SYSTEM:
http://olmis.emp.state.or.us/olmisj/CES?x=1&y=1&p_action=

Summary

- OR-FACE conducts surveillance, investigation, assessment, and outreach related to traumatic occupational fatalities in Oregon (see p. 6).
- OR-FACE produced a safety brochure related to agricultural activities in both English and Spanish, which reached a broad audience in rural counties (see p. 7).
- Recent publications include two logging safety books related to yarding operations, both produced through grants from Oregon OSHA (see p. 8).
- Hazard alerts in 2008 highlight incidents involving suicide, hydraulics, and tree falling (see p. 9-11).
- Basic characteristics of fatal events and the workers involved are quantified in charts (see p. 12-16).
- An abstract for each incident provides a brief description of each event and contributing factors (see p. 17-30).
- In 2008, cases of delayed death (over 2 days following the date of injury) spanned from 7 days to nearly 5 years (see p. 26).
- Contact OR-FACE for more information; or to offer feedback at the OR-FACE web survey online (see p. 30).

INTRODUCTION

In 2008, Oregon Fatality Assessment and Control Evaluation recorded 57 fatal occupational incidents, with 60 worker deaths. The number represents a rate of 3.7 fatalities per 100,000 employed workers in the civilian labor force in Oregon. The national worker fatality rate in 2008 was 3.7 per 100,000 full-time equivalent workers (CFOI).

The following notable trends occurred in 2008.

- Violence was the second most common category of events in 2008, with 9 involving suicide, mostly related to financial crisis and family problems.
- A higher proportion of incidents than usual involved middle-aged workers, aged 45-64. Violence accounted for one-fourth of the incidents. All suicide victims were aged 48-58. Only one incident involved an older worker, aged 77.
- Transportation and contact events involving mobile machinery and heavy trucks were a principal source of fatal injury, including tractors and farm machinery, dump trucks, construction equipment, trailer rigs, a skidder, and an all-terrain vehicle.

Core Activities

SURVEILLANCE

The OR-FACE record of traumatic occupational fatalities is about double the “program-related” incidents recorded by Workers’ Compensation and Oregon OSHA. Earliest first notification originated mostly from news reports and Oregon OSHA. In 2008, OR-FACE began using keywords in an internet search engine to create daily lists of items of interest. Death certificates are now queried and obtained directly from State of Oregon Vital Records.

INVESTIGATION

OR-FACE investigation reports in 2008 focused mainly on incidents in logging and working near mobile machinery. An expanded investigation of logging safety was initiated with funding obtained through the Pacific Northwest Agriculture Safety and Health Center to study fallers at work, using miniature video cameras mounted on hardhats. The Fallers Video Observation Study aimed to observe the use of five critical action steps in safe falling outlined in the OR-FACE *Fallers Logging Safety* booklet.

ASSESSMENT

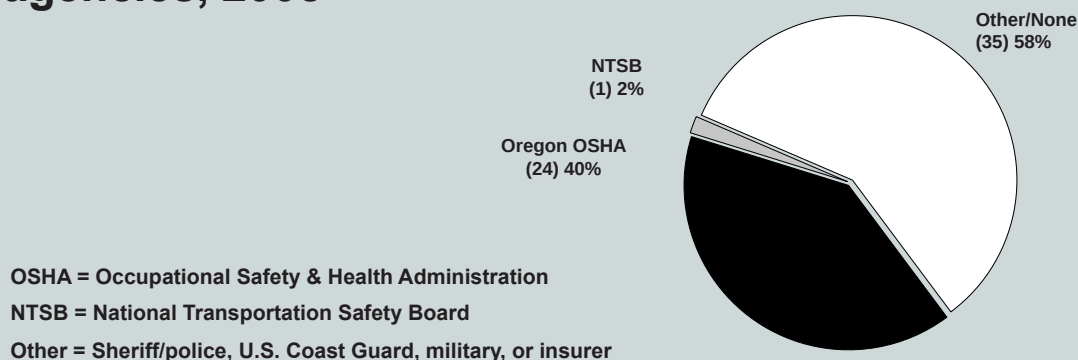
In 2008, OR-FACE began an intensive review of all cases in the 5-year period, 2003-2007 (321 incidents), to confirm coding and prepare summary data. A cumulation of cases drew attention to communication problems as an apparent risk factor, particularly among coworkers from different firms working together, or with new workers, or workers so senior no one dared contradict them.

OUTREACH

OR-FACE continued to work with the Oregon Young Worker Safety and Health Coalition in 2008, and produced an event poster for young worker safety. OR-FACE also hosted the national FACE conference (Oregon is one of nine FACE states funded by NIOSH).

The OR-FACE hazard alert, *Can you identify fatal hazards on your farm or ranch?*, was published as a one-page brochure to address safety in agriculture. Samples of the alert were mailed to target audiences with a postage-paid

OR-FACE fatalities investigated by other safety agencies, 2008



Core Activities



Camiones de Granja

Camión de granja en el canal

Un chofer de 32 años falleció cuando su camión cargado con trigo se deslizó hacia la tierra tras ir sobre un canal de riego y se volcó. La cabina del camión quedó sumergida en agua de canal. El camión se combió con lesiones de seguridad y se volcó inmediatamente al ser golpeado. El incidente ocurrió como a las 9:30 p.m., tras una hora de un día muy caluroso. El camión se volcó en la zona de cultivo de trigo. El camión era nuevo y tenía viento. El motor tenía 1000 horas de uso. El camión era nuevo y tenía viento. El motor tenía 1000 horas de uso. El camión era nuevo y tenía viento. El motor tenía 1000 horas de uso.

RECOMENDACIONES DE SEGURIDAD:

- No tome alcohol durante el día de trabajo, especialmente cuando maneje. Aun cantidades pequeñas de alcohol pueden afectar el juicio y el reflejo.
- No beba alcohol cuando se esté conduciendo.
- Cuando maneje cerca de una cuneta, mantenga la vista en el camino. Si se desvía, hágalo con un movimiento suave.
- Evite la fatiga. Si necesita dormir, no maneje. Si necesita dormir, no maneje. Si necesita dormir, no maneje.

Tractores

Tractor volcado

Un operador de tractor de 17 años de edad falleció cuando su tractor se volcó. El operador estaba trabajando en un campo de trigo. El tractor se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El tractor se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El tractor se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El tractor se volcó cuando el operador se inclinó para sacar el cultivo de trigo.

RECOMENDACIONES DE SEGURIDAD:

- Siempre que el tractor esté en marcha, asegure el freno de mano y asegure el freno de estacionamiento.
- Conduzca lentamente en terreno desigual o cuando la superficie del terreno cambia. La fuerza lateral puede volcar el tractor si la velocidad es demasiado alta. Mantenga una velocidad segura.
- Siempre que opere en las laderas, asegure el freno de mano y asegure el freno de estacionamiento.

Perforadores y Líneas de Impulsión

Enredado en una siembra perforadora

Un operador de 34 años de edad falleció mientras operaba una siembra perforadora. El operador estaba trabajando en un campo de trigo. El operador se enredó en la siembra perforadora y se volcó. El operador se enredó en la siembra perforadora y se volcó. El operador se enredó en la siembra perforadora y se volcó. El operador se enredó en la siembra perforadora y se volcó.

RECOMENDACIONES DE SEGURIDAD:

- Antes de dar mantenimiento a cualquier máquina, asegure de estar en un área segura y asegure de estar en un área segura.
- Antes de dar mantenimiento a cualquier máquina, asegure de estar en un área segura y asegure de estar en un área segura.
- Antes de dar mantenimiento a cualquier máquina, asegure de estar en un área segura y asegure de estar en un área segura.

Vehículo de Todo Terreno

ATV en el canal

Un hombre de 52 años de edad falleció cuando su vehículo de todo terreno se volcó en un canal de riego. El vehículo se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El vehículo se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El vehículo se volcó cuando el operador se inclinó para sacar el cultivo de trigo. El vehículo se volcó cuando el operador se inclinó para sacar el cultivo de trigo.

RECOMENDACIONES DE SEGURIDAD:

- Use el cinturón de seguridad cuando maneje un ATV. El cinturón de seguridad puede salvar su vida.
- Conduzca lentamente. Mantenga lentamente en áreas desiguales y evite las curvas a alta velocidad. Mantenga lentamente en áreas desiguales y evite las curvas a alta velocidad.
- Antes de dar mantenimiento a cualquier máquina, asegure de estar en un área segura y asegure de estar en un área segura.

The OR-FACE agriculture hazard alert contains narratives of 10 fatal incidents on farms and ranches, mostly involving vehicles. The Spanish translation of the alert required more space for text and was expanded to a larger sheet with a double fold and artwork.

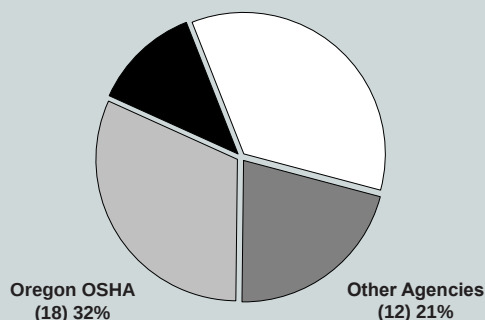
card to order additional copies. The reply cards were effective. Over 3,300 alerts were sent out, in addition to copies individuals printed from the document published online. The one-page format enabled on-demand printing and wide distribution. Emphasis in the agriculture alert on transportation and contact events with vehicles – tractors and other mobile machinery, all-terrain vehicles, and farm trucks – made it a popular handout with safety trainers at SAIF, the state’s principal Workers’ Compensation insurer. Other

highlighted events involved fall hazards, augers and drivelines, and water pressure. The brochure was later translated into Spanish by request. Also during 2008, 770 faller safety booklets were sent through reply cards.

Source of notification for OR-FACE incidents, 2008

Death Certificates
(7) 12%

News media
(20) 35%



Timing of notification following incident

	Total	Oregon OSHA	Death Certificate	News Media	Other
0-2 days	21	15	-	5	1
3-30 days	13	3	-	8	2
1-3 months	14	-	7	5	2
3-6 months	3	-	-	2	1
6-12 months	4	-	-	-	4
12+ months	2	-	-	-	2

Recent OR-FACE Publications

Investigation Reports

- Temporary mill worker killed in fall down manlift shaft
- Salesman killed when forklift falls off truck loading ramp
- Young logger killed when yarder topples during setup

Annual Report

- Annual Report 2007

Posters

- Commercial Crab Fishing in Oregon

Find published safety booklets, reports, and other information at the OR-FACE website (www.ohsu.edu/croet/face). New reports are published regularly.

Oregon Fatality Assessment and Control Evaluation reports are for information, research, or occupational injury control only. OR-FACE is a research program, and has no legal authority to enforce state or federal occupational safety and health standards. The identity of the decedent, employer, and witnesses are not included in reports or alerts. FACE data are protected from disclosure under Oregon law (ORS 432.060).

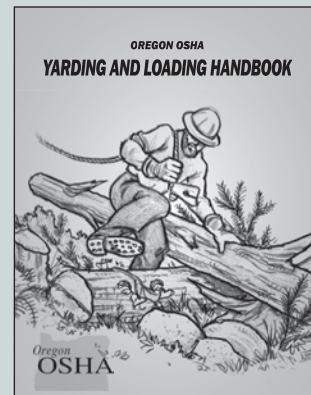
Logging Safety in Yarding Operations

An OR-FACE team produced the Oregon OSHA *Yarding and Loading Handbook* (www.orosha.org/pdf/pubs/1935) through an Oregon OSHA small grant. The handbook provides an updated and much-improved field guide for Oregon loggers. The previous edition was published in 1993. The new handbook intends to be engaging and easy to use.

Yarding systems are the most common type of logging in Oregon, using towers and cables to haul logs over steep hillsides.

Another Oregon OSHA small grant funded the publication of an OR-FACE *Yarding Logging Safety* booklet as a companion volume to the earlier OR-FACE *Fallers Logging Safety* booklet, all produced by the same team.

Narratives of fatal incidents and general safety principles distinguish the booklet from the more technical Oregon OSHA handbook, though key issues appear in both. Find the booklet online at the OR-FACE website: (www.ohsu.edu/croet/face).

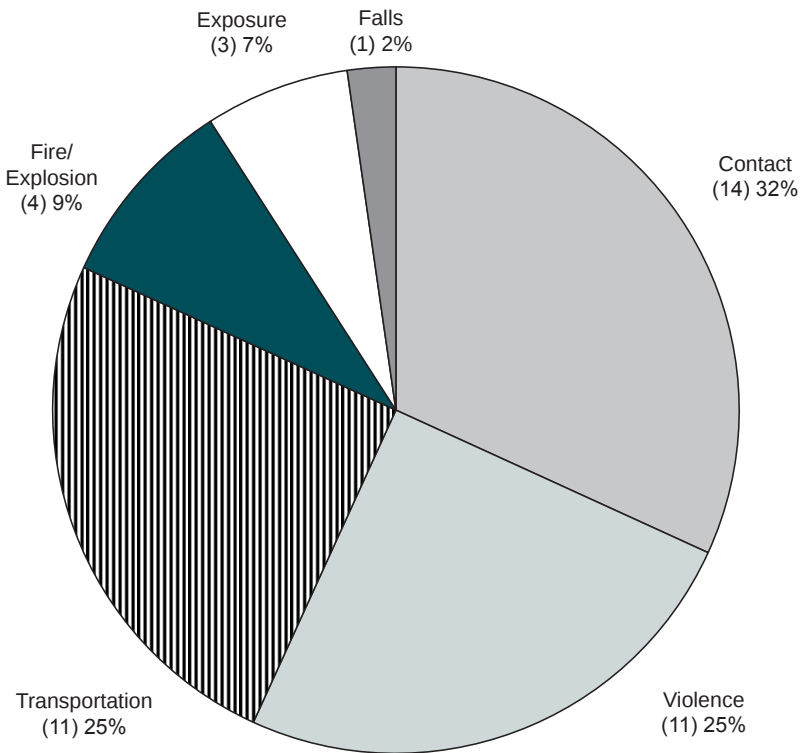


Hazard Alert – Suicide

The most remarkable series of occupational fatalities in 2008 involved suicide, mostly related to financial crisis and family problems. Violence was the second most common category of events in 2008, with 9 involving suicide, and 3 homicides. Four suicide incidents occurred in Deschutes County. Homicide events involved two retail robberies, and one event of intimate partner violence. This latter scenario has been observed in similar incidents in other years.

Another remarkable trend in 2008 was a high proportion of incidents involving workers aged 45-64 (see chart, p. 12). All suicide victims were aged 48-58, mostly male, one female. Violence accounted for one-fourth of all incidents for middle-aged workers. Events for workers aged 45 and under mostly involved transportation events (motor vehicle, mobile machinery, air, and water).

**Worker Fatalities by Event,
Aged 45-64, 2008**



Violence by Type and Setting, 2008

Suicide

Real-estate development and sales	4
Healthcare practice.....	2
Protective services	1
Auto dealership.....	1
Sports and recreation	1

Homicide

Retail Trade	2
Manufacturing.....	1

Hazard Alert – Hydraulics

A number of incidents in 2008, in a variety of circumstances, involved equipment powered by hydraulics. In addition to several incidents involving active machinery operated by hydraulics, 3 incidents involved stationary machinery with a heavy component held in place by hydraulics, which fell and crushed the worker. One incident repeated a 2004 incident with a debarker at a wood products manufacturing firm (2008-12, p. 22). Other incidents involved a raised trailer door (2008-13, p. 23), and the raised bed of a dump trunk (2008-15, p. 23). All incidents occurred during maintenance.

In the debarker incident, electric energy was properly locked out, but no attention was given to the hydraulics system that held up the press roll over the machine opening. Safety pins in the metal frame to block the press roll in an up position were not used.



An incident with a debarker in 2008 involved maintenance on a debarker machine. The worker was crushed under the heavy press roll (at top) when hydraulic pressure was released.

IMPORTANT: During machine maintenance, pay attention to heavy components operated and held in place by hydraulics. Do not rely on hydraulics alone to lock out the hazardous energy of gravity in case hydraulic or pneumatic pressure is unexpectedly released. Physically block the component.

Hazard Alert – Logging

Several incidents in logging involved a worker crushed by a heavy object – 3 while falling a tree, and 2 while bucking the downed tree into log lengths. In at least one instance, the faller was discovered at the base of the stump of the tree he had just felled, indicating he did not quickly move to get in the clear once the tree began to fall. In both bucking incidents – involving an experienced logger, and an inexperienced worker on farmland – the workers were on the downhill side of a log that slid or rolled.

An additional incident in logging involved a rigging slinger too close to a moving turn (2006-07, p. 22). The rigging slinger was an experienced lead worker.



Illustration by Phil Fehrenbacher, courtesy Oregon OSHA

Always work on the uphill side of a log while bucking.

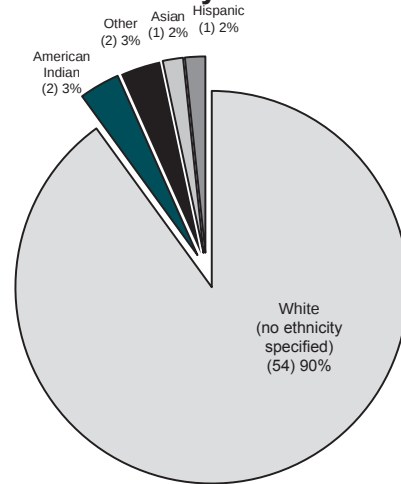
LOGGING SAFETY

- Fallers should always get in the clear at once as a tree begins to fall.
- When bucking a downed tree, first assess any forces on the tree, including binds, hangups, and gravity. Never work on the downhill side of a tree.
- For rigging crews, never work under suspended rigging. Clear hangups immediately. If it is necessary to move under the carriage to pick up a choker, get in and get out immediately, and stay alert to the carriage overhead.
- Always get in the clear before any line begins to move.

Charts

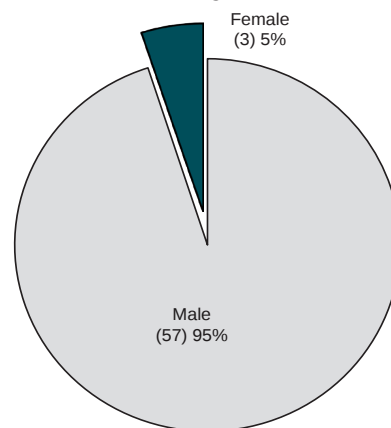
Tracking incidents by race/ethnicity and gender showed a usual distribution in 2008, though fewer incidents involved Hispanic workers. A pronounced spike in incidents occurred for workers aged 45-64. By industry, the highest number of incidents occurred in logging. By event, violence rose to the second most frequent category. Only one fall incident occurred during the year, the lowest incidence yet recorded – possibly due to a downturn in construction activities.

Worker Fatalities by Race/Ethnicity, 2008

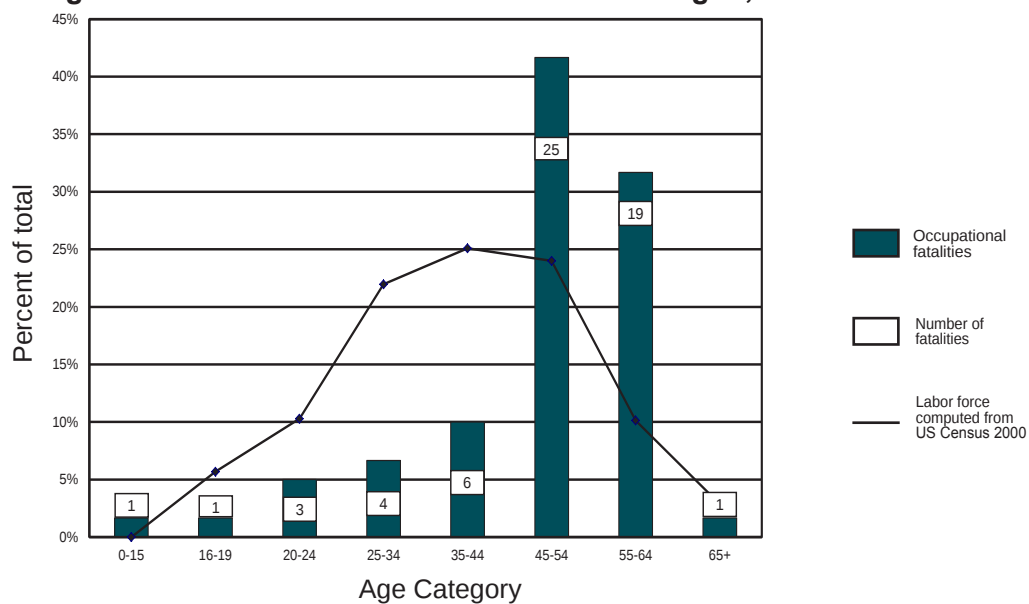


NOTE: In charts and abstracts, OR-FACE highlights independent risk factors by splitting combinations in a few of the original two-digit occupational codes: for industry (NAICS), Agriculture/Fishing/Forestry/Hunting; for occupation (SOC), Farming/Fishing/Forestry, Construction/Extraction, and Transportation/Material Moving. For event (OICS), Transportation is divided into types: Motor Vehicles, Mobile Machinery, Air, and Water.

Worker Fatalities by Gender, 2008

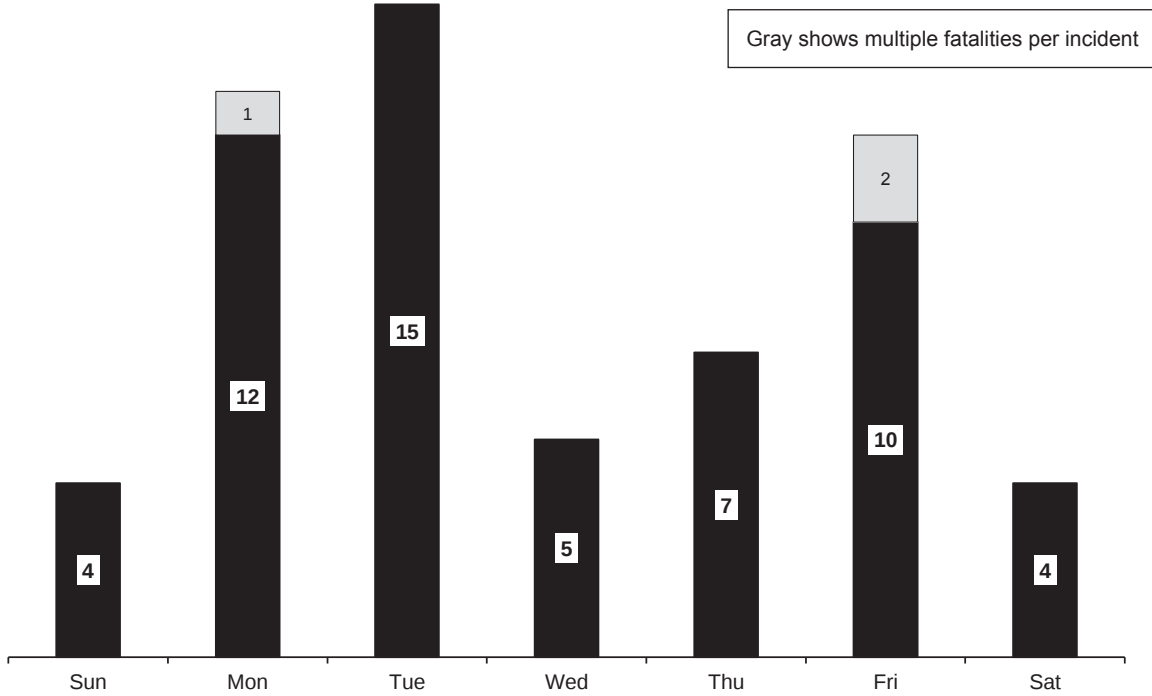


Occupational Fatalities in Oregon by Age, Compared to Age Distribution of Civilian Labor Force in Oregon, 2008

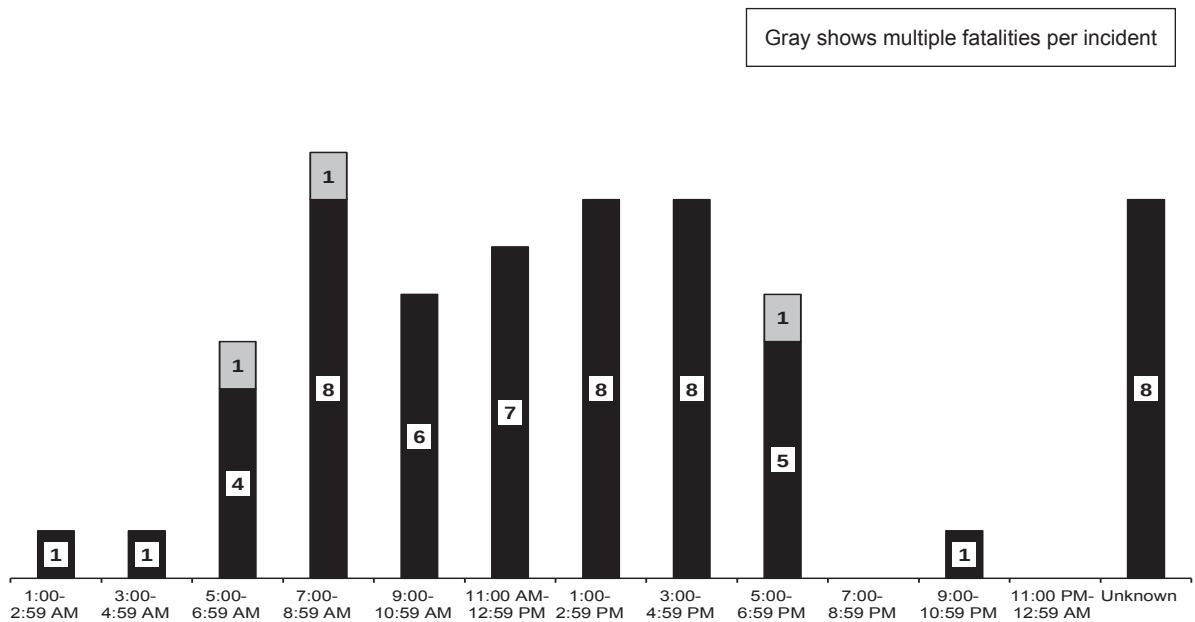


Charts

Worker Fatal Incidents and Total Fatalities by Day, 2008

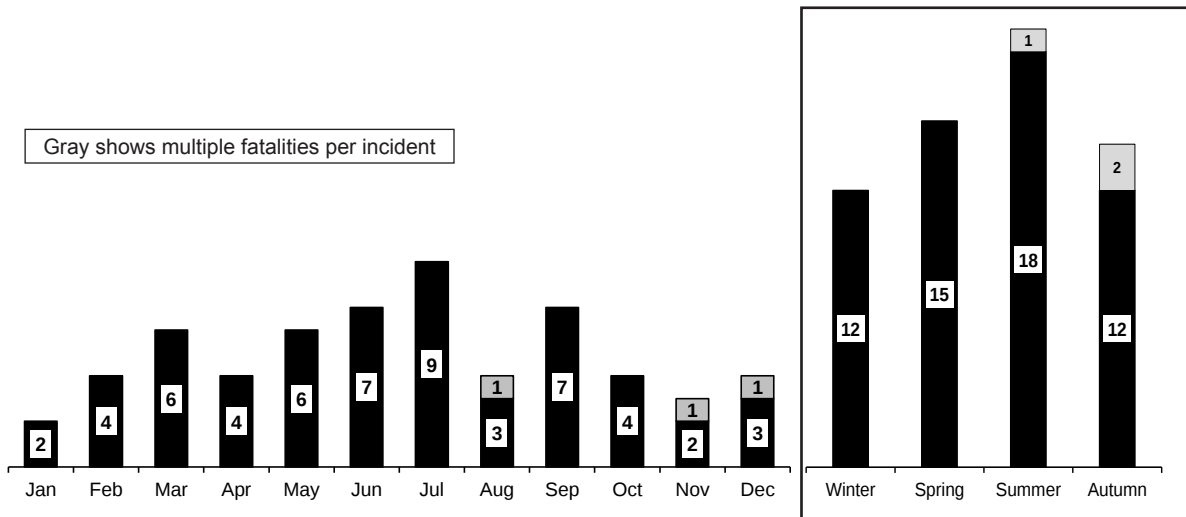


Worker Fatal Incidents and Total Fatalities by Time of Incident, 2008

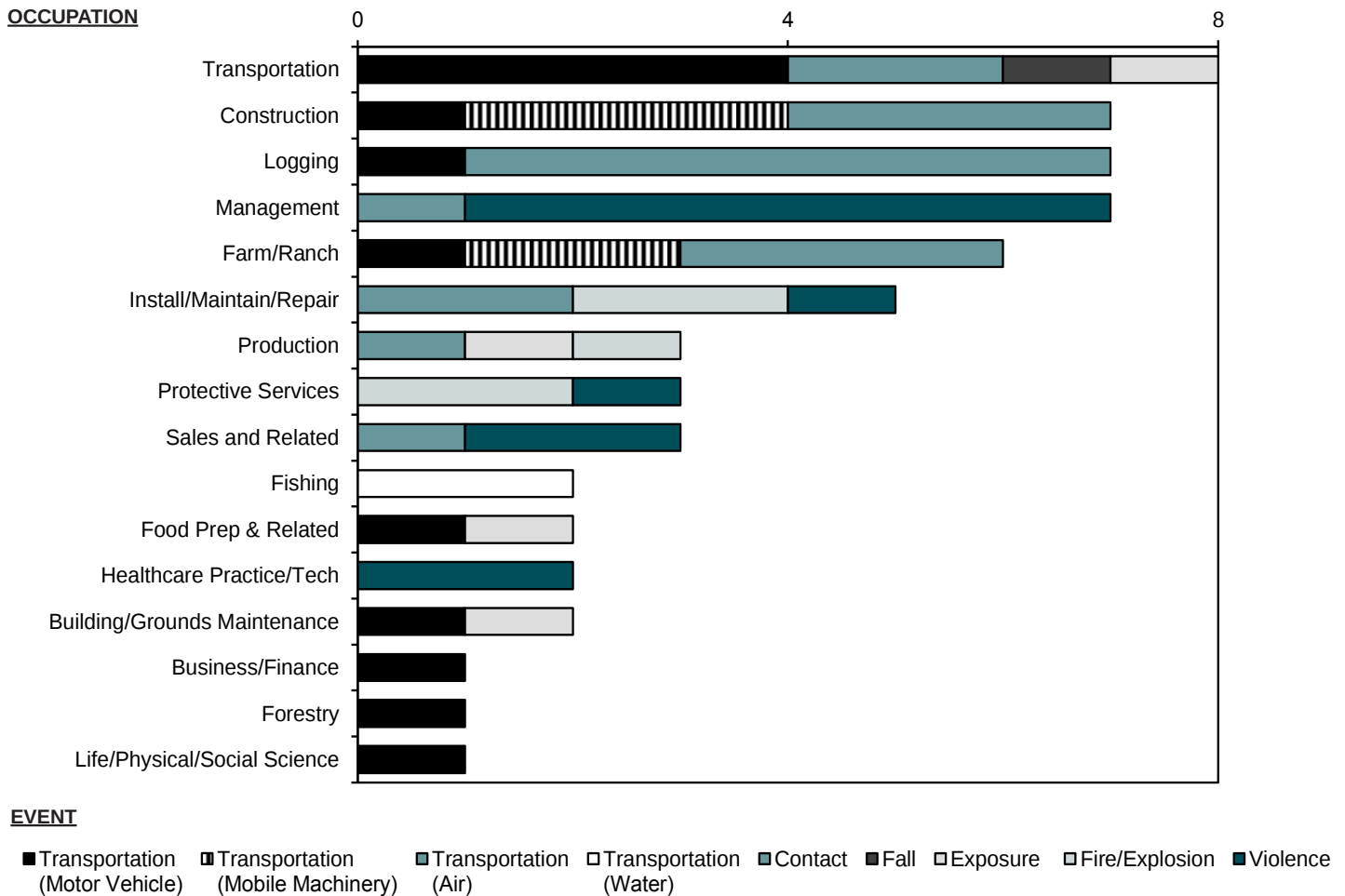


Charts

Worker Fatal Incidents and Total Fatalities by Month and Season, 2008



Worker Fatalities in Oregon by Occupation and Event, 2008

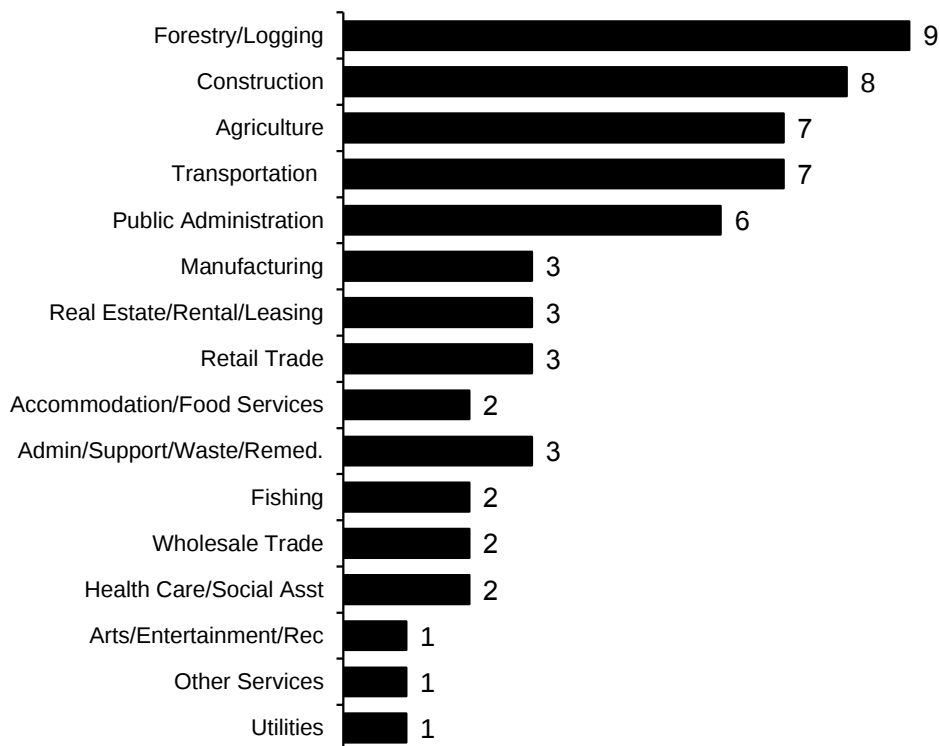


Charts

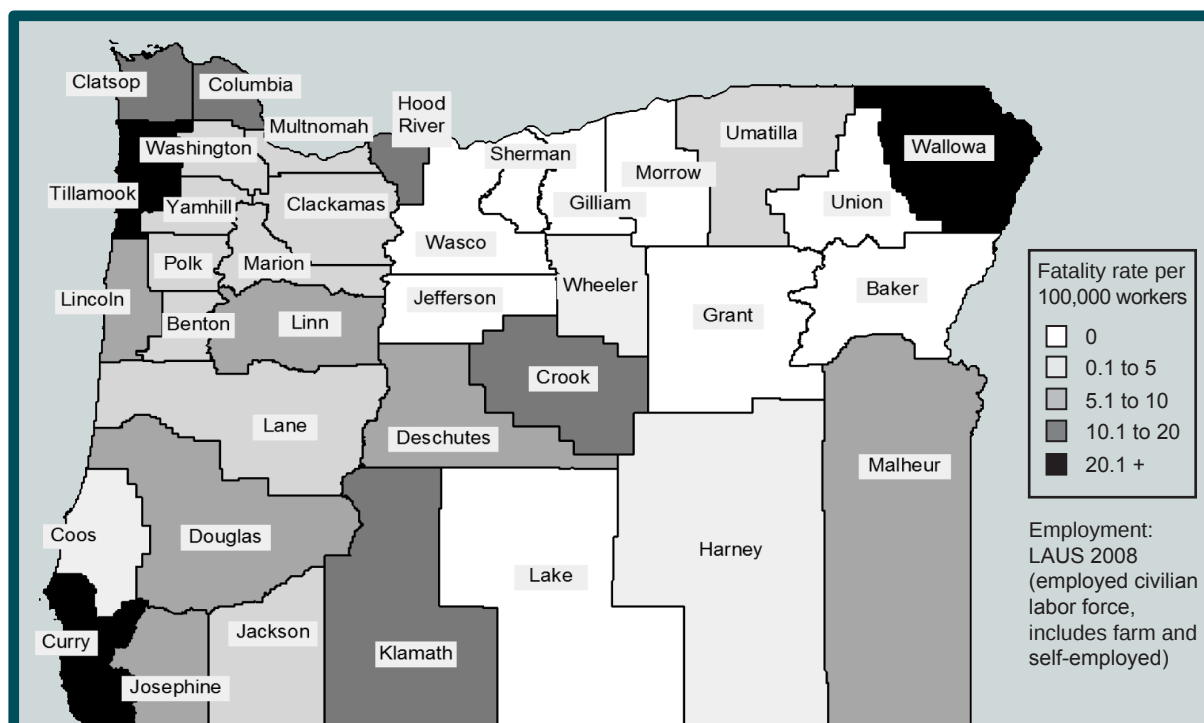
Worker Fatal Incidents and Total Fatalities by Type of Event, 2008



Worker Fatalities in Oregon by Industry, 2008



Oregon Counties



Oregon Population, Employed Labor Force, and Fatalities by County, 2008

County	Total population	Employed labor force	Worker fatalities
STATE	3,791,075	1,828,477	60
BAKER	16,455	6,914	0
BENTON	86,120	41,102	1
CLACKAMAS	376,660	188,867	6
CLATSOP	37,695	19,314	3
COLUMBIA	48,095	22,494	3
COOS	63,210	25,787	0
CROOK	26,845	8,831	1
CURRY	21,510	8,751	3
DESCHUTES	167,015	75,106	5
DOUGLAS	105,240	41,961	4
GILLIAM	1,885	1,148	0
GRANT	7,530	3,023	0
HARNEY	7,705	3,033	0
HOOD RIVER	21,625	12,642	2
JACKSON	205,305	93,882	1
JEFFERSON	22,450	8,417	0
JOSEPHINE	83,290	31,788	3
KLAMATH	66,180	28,052	3
LAKE	7,585	3,277	0
LANE	345,880	171,604	2
LINCOLN	44,715	21,352	2
LINN	110,185	50,968	3
MALHEUR	31,675	11,807	1
MARION	314,865	145,159	3
MORROW	12,485	5,103	0
MULTNOMAH	717,880	365,748	3
POLK	68,235	37,488	1
SHERMAN	1,845	917	0
TILLAMOOK	26,060	11,917	3
UMATILLA	72,380	35,185	1
UNION	25,360	11,329	0
WALLOWA	7,115	3,395	1
WASCO	24,170	12,534	0
WASHINGTON	519,925	274,188	3
WHEELER	1,575	580	0
YAMHILL	94,325	44,814	2

Source: Portland State University Population Research Center and LAUS employment data

Retrieved: May 20, 2011

INFORMATION KEY

Description

Industry
Occupation

Date of Incident
County of Incident
OR-FACE Number

Abstracts

of fatal occupational incidents in Oregon
by type of event

2008

Transportation – Contact – Exposure – Falls
Fire/Explosion – Violence

Transportation (Motor Vehicle)

Jump on running board A 33-year-old road construction worker was killed when he jumped on the running board of a moving dump truck, slipped off, and was crushed beneath the rear dual wheels. The fully loaded truck was moving uphill at 6-7 mph. The worker on the ground was directing trucks where to dump loads of gravel, and waved the truck through. The truck driver did not stop, due to the muddy condition of the road. As the truck passed, the victim unexpectedly jumped onto the running board on the driver's side, then disappeared from view.

Construction
Construction

February 19
Curry
OR 2008-04-1

Logs crush cab A 58-year-old log truck driver was killed when he drove off a two-lane highway and crashed into an embankment at about 30 mph. His load of logs pushed forward and crushed the cab. The driver was not feeling well the past couple days, with flu-like symptoms. A witness observed he was driving erratically prior to the crash. The driver then stopped at a shoulder pull-off, but quickly started again and weaved across the highway. The truck then crashed into an embankment at another pull-off, where the driver may have been trying to stop.

Forestry/Logging
Transportation

March 11
Tillamook
OR 2008-14-1

Rain-slick road A 20-year-old seasonal forestry worker was killed when he lost control of the state vehicle he was driving and crashed into a tree. The incident occurred just before 8 a.m. Road conditions were slick from rain the night before. The summer worker was assigned to set gypsy moth traps.

Public Administration
Forestry

May 20
Washington
OR 2008-24-1

Worker Fatalities – Transportation

<i>Pickup brake failure</i> Forestry/Logging Logging June 3 Douglas OR 2008-16-1	A 59-year-old logger, working as supervisor and machine operator, was killed when the brakes failed on his pickup while leaving the logging site after work. The logger and a coworker traveled in the pickup down a logging road with a 12% grade when the brakes failed. The logger tried to downshift, but could not get the transmission into lower gear. The coworker jumped safely ahead of a 90-degree left turn in the road. The pickup went over the edge and rolled down an embankment, coming to rest in trees 265 feet below. The logger apparently jumped from the pickup after it went over the edge. He sat up about 150 feet below the roadway, but the pickup had rolled over him. Crew members in another vehicle coming down the road called for emergency assistance. The victim complained of pain, but talked normally for about 45 minutes.
<i>Semi-truck collision</i> Transportation Transportation July 16 Hood River OR 2008-22-1	A 47-year-old truck driver trainee was killed in the sleeping compartment of a semi-truck when the truck crashed while his partner was driving. Freeway traffic was stopped, due to a brush fire, and the driver of the truck failed to stop in time and crashed into the trailer of another semi-truck. The collision sheared off the left side of the cab, including the sleeping compartment. The driver trainee was ejected. The victim was declared dead at the scene.
<i>Farm truck left turn</i> Agriculture Farm/Ranch July 28 Linn OR 2008-25-1	A 16-year-old farm worker was killed in a collision while operating a large hay stacker machine on the highway. The loaded hay machine was traveling slowly on a posted 55 mph two-lane highway. A car passed the machine and an unloaded log truck followed. The farmer put out a hand to signal a left turn, and suddenly turned directly into the path of the oncoming log truck. No flashers or turn signals were visible on the machine. The crash sent both vehicles off the road into a field, and both driver and operator were ejected. The log truck burst into flames, but the driver was uninjured.
<i>Landscaper truck</i> Admin/Support/ Waste/Remed. Building/Grounds Mtc. August 25 Columbia OR 2008-58-1	A 28-year-old landscaper, riding as a passenger in a work pickup, was killed after a collision with a log truck. The log truck was in the process of making a right turn off the highway, when the rear ends of the logs crossed into the adjacent lane of traffic. The pickup driver did not have enough time to brake and the vehicle crashed into the load of logs. The logs tore through the right-side compartment of the pickup and struck the head of the passenger. He died immediately from the impact.
<i>Pickup off road</i> Public Administration Life/Physical/ Social Science September 15 Washington OR 2008-33-1	A 46-year-old research biologist working for the state was killed when his pickup crashed while returning from a field assignment. The driver apparently failed to negotiate a slight right turn, went into the dirt shoulder, and straight into an embankment, a tree, and a power pole. The vehicle was owned by the state, and was in good condition. No other contributing factors were apparent: conditions were daylight, dry and clear, and no medical condition or fatigue.

Worker Fatalities – Transportation

<i>Semi-truck on shoulder</i> Transportation Transportation September 25 Jackson OR 2008-36-1	A 52-year-old truck driver was killed as a pedestrian, standing in front of his semi-truck and trailer on the shoulder of the freeway for a brake inspection. A passing semi-truck veered onto the shoulder and struck the left rear of his truck. The driver jumped from the front of his parked truck as it lurched toward him, and he was struck by the other truck as it sheared along the left side of his vehicle. The driver of the second truck was extremely fatigued. Police found evidence of methamphetamine use, which the driver claimed he had smoked 2 days before.
<i>Bad weather crash</i> Public Administration Business/Finance November 21 Deschutes OR 2008-49-1	A 59-year-old accountant was killed in a motor-vehicle collision on her way to a state commission meeting. She contributed her professional knowledge to the commission's work. The accountant lost control of her small car coming out of a slight right turn. The car swerved into the opposite lane of the highway and collided head on with an unloaded log truck. Weather was a factor. The morning temperature was 30 degrees, and patches of ice remained on the road in shady spots. The truck driver received minor injuries.
<i>Trucks at left turn</i> Accommodation/ Food Services Food Prep & Related December 2 Yamhill OR 2008-56-1	A 40-year-old food vendor was killed when he was involved in a highway collision in his modified motor-home mobile restaurant. The vendor was stopped to turn left on a highway. A semi-truck approaching from the rear was unable to stop in time and swerved to the right to pass. The truck's dual wheels caught the back end of the vendor's vehicle and pushed it into the opposite lane. An oncoming truck struck the vendor's vehicle. The victim was killed instantly. The two truck drivers were uninjured.
<i>Fuel truck crash</i> Transportation Transportation December 28 Clackamas OR 2008-52-1	A 56-year-old truck driver was killed when his fuel transport truck drifted off the freeway for an unknown reason onto a berm of packed snow, then overturned and exploded. The tanker was carrying 10,000 gallons of gasoline. The medical examiner reported the driver's blood alcohol content was .01, and noted the presence of oxycodone and other prescription drugs used to control depression and anxiety. An hour prior to the crash, the driver was witnessed tripping and falling head first onto a fitting on his trailer. A head injury may have contributed to the crash.

Worker Fatalities – Transportation

Transportation (Mobile Machinery)

<i>Tractor on snowy road</i>	A 24-year-old tractor operator was killed while clearing snow on a narrow service road to a hydroelectric plant. The tractor evidently slid from the center of the road over an embankment on one side, and tumbled about 30 yards, crushing the operator beneath the bucket and frame. The operator rented the small tractor that morning, and demonstrated competence as an experienced operator. The tractor was equipped with ROPS and a seatbelt. The victim may not have been wearing the seatbelt or possibly unbuckled it to escape the cab when he lost control.
Utilities Construction	
February 5 Linn OR 2008-03-1	
<i>Road collapse</i>	A 28-year-old heavy-equipment operator was killed when the road he was working on collapsed and the machine tumbled down a steep hill. The road crew was resurfacing a stretch of highway in a mountain pass, with a 45-degree embankment. The shoulder had collapsed after heavy rains. The operator was working on the platform of an asphalt grinder, weighing over 28 tons. After a first pass near the embankment, a crack appeared in the asphalt as the operator began to back up. The machine tilted as the road collapsed, and the operator first went to the downside, then prepared to jump from the up side, but was too late, and held on as the machine rolled over. The victim was thrown and crushed.
Construction Construction	
March 5 Benton OR 2008-06-1	
<i>ATV in ditch</i>	A 61-year-old farmer was killed when the all-terrain vehicle he was driving through a field ran into an irrigation ditch and flipped over on top of him, resulting in severe head and chest trauma. The farmer was observing a hay-loading operation and was requested to go get a rope from the barn to secure bales on a trailer. The event occurred while he was headed for the barn. The medical examiner reported the victim's blood alcohol content at .03.
Agriculture Farm/Ranch	
June 30 Linn OR 2008-20-1	
<i>Ejected from combine</i>	A 12-year-old farm worker was killed while riding in a large combine with his father. The boy stood in the cab alongside the operator's seat and leaned against the front window looking out. The combine was traveling down a gravel driveway on a moderate incline, about 5 mph, when it hit a hole in the road that rocked the machine. The front window popped out and the boy fell forward through the uncovered window. The combine ran over him. The victim was declared dead at the scene.
Agriculture Farm/Ranch	
July 3 Polk OR 2008-28-1	
<i>Skidder on steep bank</i>	A 54-year-old logger, working as a skidder operator, was killed when the skidder went over a steep embankment. The operator was working alone on a narrow, unimproved road at a logging site. The skidder toppled about 60 feet down the embankment. The victim was ejected, and was found dead at the scene a few feet above the skidder. He was an inexperienced operator, and was not wearing the seatbelt provided in the skidder.
Forestry/Logging Construction	
September 5 Curry OR 2008-32-1	

Worker Fatalities – Transportation

Transportation (Air)

<i>Small plane business</i>	A 58-year-old real estate developer and a 36-year-old sales agent were killed in a small-plane crash shortly after take-off as they embarked on a business trip. The younger coworker was the pilot. Early morning conditions were foggy. Witnesses heard the engine sputter just before the crash, indicating possible condensation in the fuel line. The pilot may have failed to maintain control due to spatial disorientation in the fog. The plane crashed into a vacation house and exploded.
Real Estate/Rental/ Leasing Sales and Related	
Real Estate/Rental/ Leasing Management	
August 4 Clatsop OR 2008-27-2	

Transportation (Water)

<i>Crab boat at jetty</i>	Two crew members on a commercial crabbing boat, aged 44 and 55, were killed when the boat was swamped by large waves while exiting the bar at Tillamook Bay. The 45-foot-long boat was loaded with 97 crab pots and 400 gallons of fuel. A series of large waves, higher than the cabin, struck the boat in the middle of the bar. The boat turned and was pitched onto the end of the jetty and began to break up. The skipper and two crew members were not wearing personal flotation devices or survival suits. The skipper managed to swim to the jetty and was rescued. The two victims were discovered separately several days later.
Fishing Fishing	
November 28 Tillamook OR 2008-50-2	

Worker Fatalities – Contact

Contact with objects/equipment

<i>Tree kickback</i> Forestry/Logging January 7, 2008 Clatsop OR 2008-02-1	A 29-year-old logger, working as a faller, was killed when the tree he was falling struck a stump, which caused the butt to recoil and strike him. The faller was working on a steep slope in the snow, which may have impeded his ability to escape from the base of the tree. When he did not show up at the end of the work day, a coworker went looking for him, and found the victim deceased, and snow-covered under the tree. Cause of death was chest compression, with no broken bones or other injury from the impact.
<i>Boom swing control</i> Wholesale Trade Install/Maintain/Repair January 8 Columbia OR 2008-01-1	A 47-year-old mechanic was killed by an excavator bucket during a maintenance operation. The conveyor on a portable rock crusher had stopped working, and the mechanic and equipment operators were working to raise the conveyor with the arm of a hydraulic excavator to get underneath. The mechanic stood on the conveyor, 15 feet above the ground, rigging a chain between the conveyor frame and the lifting eye on the excavator bucket – when the excavator boom suddenly dropped and swung, and crushed him. The excavator operator had leaned to the right to see the mechanic working at the bucket, and the pocket of his raincoat caught on the left-side control handle for the boom, activating it.
<i>Swinging log in turn</i> Forestry/Logging Logging March 18 Lincoln OR 2008-07-1	A 30-year-old logger, working as a rigging slinger in a cable yarding operation, was killed when a log in a turn of logs upended and struck him. The rigging slinger signaled to go ahead on the turn without first getting in the clear. He stood 15-25 feet from the turn. The log that struck him was 37 feet long. As the turn moved forward, the log struck a stump and swung toward the rigging slinger. He dove to the ground for cover, but the log came down on top of him. The victim was pronounced dead at the scene.
<i>Debarker roller</i> Admin/Support/ Waste/Remed. Install/Maintain/Repair April 8 Klamath OR 2008-12-1	A 45-year-old millwright was killed while performing maintenance on a debarker machine at a sawmill. The millwright was preparing to weld, and was clearing bark from the in-feed area. He moved his hand inside the machine and inadvertently blocked the photo eye of the hydraulic valve, which allowed the 3,000-pound holddown roll to descend and crush him. The millwright had locked out electrical energy, but did not lock out hydraulic energy, and did not install the pins on the frame of the machine to prevent movement of the holddown roll. The millwright was a temporary worker hired through an agency, and had worked at the mill a few months.
<i>Run over by tractor</i> Agriculture Farm/Ranch April 25 Hood River OR 2008-10-1	A 53-year-old farmer was killed when he was run over by his tractor. The farmer was apparently mounting the tractor while it was running and in neutral. He typically used the steering wheel for support when mounting the tractor, and may have slipped and activated the gear. The tractor moved forward and pulled the farmer beneath the rear wheel and under the attached mower, before running into a garage wall. The victim was transported to a hospital where he later died.

Worker Fatalities – Contact

<i>Dump truck bed</i> Transportation Transportation May 7 Josephine OR 2008-15-1	A 59-year-old truck driver was killed apparently while doing maintenance on his dump truck outside his rural residence. The driver was found crushed between the bed and frame of the truck. No malfunctions were discovered. No tools were found near the body.
<i>Load pulled off truck</i> Construction Construction May 8 Lincoln OR 2008-11-1	A 60-year-old journeyman ironworker was killed at a building site when he fell off the back of a flatbed truck carrying steel I-beams, and pulled an I-beam after him, which crushed him. Each I-beam weighed about 340 pounds. The ironworker was on the bed of the truck marking the beams according to the erection plan, when he apparently tripped off the side of the truck. He grabbed an I-beam to try to steady himself, then fell 4 feet to the ground. The I-beam followed and landed on top of him. Bed stakes were not in place to secure the load.
<i>Tractor attachment</i> Agriculture Farm/Ranch May 16 Crook OR 2008-29-1	A 77-year-old rancher was killed when he was crushed between his tractor and a heavy attachment. The rancher's wife called a neighbor to go search when he did not come home. The rancher may have been working to connect a three-way hitch, or may have knocked out a holding pin to unhook the attachment and set it loose. Hydraulic hoses were connected. Police on the scene reported the tractor may have rolled. The victim was found crushed against the tractor under the weight of the attachment.
<i>Trailer door</i> Transportation Transportation May 20 Washington OR 2008-13-1	A 49-year-old truck driver was killed after sweeping out an unloaded trailer, when the top hinged hydraulic door on the trailer descended unexpectedly and crushed him. The trailer was equipped with a floor conveyor to assist with unloading, and the truck driver may have had the conveyor activated while sweeping the trailer of compost material he had just delivered. The event was unwitnessed, but the position of the driver's broom outside the trailer indicates he may have used it to reach around to turn off the conveyor, and unintentionally activated the door control instead.
<i>Dump truck sled</i> Construction Construction June 9 Josephine OR 2008-18-1	A 51-year-old lead road worker was killed while loading a trailer, or sled, into the bed of a dump truck. The road worker was operating controls near the rear of the truck to pull the sled into the bed. A coworker spotted the activity from above. Steps were recently installed inside the bed of the dump truck, and the road worker leaned to look inside to check the clearance as the sled was almost completely inside. His head was in a posted pinch point. As he continued moving the sled forward, his head was crushed against a box latch at the end of the sled.
<i>Tractor at fire pit</i> Agriculture Farm/Ranch June 17 Malheur OR 2008-42-1	A 61-year-old rancher was killed when his older-model tractor tipped over an embankment into a fire pit and trapped him underneath. With a front-loader attached to the tractor, the rancher was attempting to deposit a dead cow into the fire pit. The front wheels of the tractor slipped over the embankment and fell 6-8 feet. The right front tire broke off, the tractor pitched sideways, and the rancher was ejected. The victim was crushed under the tractor seat and burned.

Worker Fatalities – Contact

<i>Log slide</i> Agriculture Logging July 1 Douglas OR 2008-35-1	A 61-year-old inexperienced logger on a family farm was killed while limbing felled trees to bundle as firewood. The tree he was working on shifted and rolled downhill over him.
<i>Rolling snag</i> Forestry/Logging Logging July 24 Wallowa OR 2008-21-1	A 52-year-old logger, working as a faller, was killed when the top of a nearby snag broke off and struck him. The faller, with about 30 years of experience in the woods, was falling a tree uphill. The tree struck or brushed against the snag while falling, and the top of the snag fell or rolled down the hill onto the faller.
<i>Tree top falls</i> Forestry/Logging Logging September 2 Douglas OR 2008-31-1	A 45-year-old experienced tree faller was killed when a madrone tree (6-8 inches in diameter and 30 feet long) struck him. The madrone was probably pulled down with the fir tree he just felled. Fallers were in a crew working on a road excavation project. The faller was working alone, but with an hourly radio check. A search was conducted when he did not respond. The victim was found directly at the base of the tree he felled.
<i>Culvert trench collapse</i> Construction Construction September 29 Yamhill OR 2008-37-1	A 47-year-old construction worker was killed at an excavation site when a trench collapsed. The worker entered an unshored trench nearly 9 feet deep and 9 feet wide to retrieve an asphalt chunk that had fallen inside. He did not tell anyone his intention. He made his way from the beginning of the trench through a culvert section, 5-feet high, already laid in the trench. As he stepped out to retrieve the asphalt chunk, the dirt walls above him collapsed. Coworkers called for emergency help and dug out the victim, who died on the way to the hospital.
<i>Active machine</i> Manufacturing Production October 13 Curry OR 2008-39-1	A 54-year-old production worker at a plywood manufacturing plant was killed when he was crushed in the machine he was operating. The machine squared and sealed layers of plywood into sheets, working with a conveyor system and hydraulic arms to push the plywood against a metal backstop to square the ends. A three-second delay occurs in the process, and in that interval, the worker reached in over the conveyor, apparently to clean the sensor that activates the hydraulic system. The hydraulic arms of the machine descended and crushed him.
<i>Log rolls down slope</i> Forestry/Logging Logging October 25 Columbia OR 2008-40-1	A 54-year-old experienced logger, working as a faller for more than 30 years, was killed by a rolling log. The faller was training a new faller, working on a steep hillside with a 40-degree slope. While measuring a log to buck into lengths, a log length cut earlier on the hillside above rolled down and struck both fallers. The experienced faller was pinned against the log he was about to cut and the rolling log came to rest on top of him. The coworker recovered and got the faller out from under the log, but the victim died at the scene shortly after.

Worker Fatalities – Exposure

Exposure to harmful substance/environment

<i>Toxic fumes</i> Manufacturing Production October 8, 2003 Marion OR 2008-26-1	A 52-year-old production worker at silicon-wafer manufacturing plant suffered acute exposure to hydrofluoric acid (Oct 9, 2003), and died nearly 5 years later. The worker had lifted a safety shield to inspect a container of hydrofluoric acid, and was exposed to fumes in spite of his face mask. Suffering severe lung damage, his immediate condition deteriorated, with increasing dyspnea. Later, he was completely disabled, including cognitive dysfunction. Cause of death was pulmonary fibrosis.
Fumes at truck stop Transportation Transportation May 23 Multnomah OR 2008-41-1	A 59-year-old truck driver was found dead at a truck stop in the sleeping compartment of his semi-truck 2 days after parking at the spot. Carbon monoxide in his blood was measured at 29% saturation. The driver had no known medical conditions and recently passed a medical examination with no detected problems, but existing cardiac and pulmonary conditions were affected by the high carbon monoxide level. The sleeping cab was near the compressor to the refrigerated trailer; another truck had parked nearby with its engine running; but subsequent tests showed the cab had no leaks that would allow external fumes to enter. The source of exposure is unknown.
<i>Struck by lightning</i> Admin/Support/ Waste/Remed. Building/Grounds Mtc June 29 Clackamas OR 2008-43-1	A 59-year-old arborist was struck by lightning, and died 2 weeks later. The arborist was out inspecting a job during a lull in a storm. As the storm grew more intense, the arborist and his client began walking back to shelter. Near a stand of tall trees, the arborist was struck by lightning. Cause of death was cerebral anoxia.
<i>Meth use</i> Accommodation/ Food Services Food Prep & Related September 27 Lane OR 2008-55-1	A 43-year-old kitchen worker at a motel died from methamphetamine use. She had a pre-existing heart condition and was found on the kitchen floor. The worker was enrolled in a special program to assist her rehabilitation after release from prison. The event was apparently unintentional.

Worker Fatalities – Falls

Falls

Fall from truck

Transportation
Transportation

March 18
Klamath
OR 2008-17-1

A 63-year-old truck driver fell to the ground while unhooking a wrecked car from the top rack of his car carrier, and died 11 days later. The driver fell 15 feet onto his back. He was on the lower deck and reached up to grab the door handle of a car on the upper deck to pull himself up to finish the job, when the handle tore loose, causing him to fall. The driver was transported to a hospital with stable vital signs. Several ribs were fractured, but no head injuries. His conditions gradually worsened, however, and the victim died in the hospital.

Worker Fatalities – Delayed Death

Worker Fatalities with Delayed Death from Date of Injury (over 2 days), 2008

Event	Cause of Death	Interval	Reference
Fire/Explosion	Thermal injuries	7 days	Torch on fuel tank (p. 27)
Fall	Hypertension	11 days	Fall from truck (p. 26)
Exposure	Cerebral anoxia	15 days	Lightning (p. 25)
Violence	Terminal septic shock	17 months	Grocery robbery (p. 28)
Exposure	Pulmonary fibroses	56 months	Toxic fumes (p. 25)

Worker Fatalities – Fire/Explosion

Fire/Explosion

<i>Solvent fire</i> Forestry/Logging Install/Maintain/Repair April 11 Clackamas OR 2008-08-1	A 61-year-old mechanic for a logging firm was killed in a solvent fire at his shop. The mechanic was cleaning a vehicle fuel pump in a 20-gallon clean sink with a highly flammable solvent. He had the clean sink only a couple months. He attached the pump to a battery with alligator clips, apparently to power the pump to run solvent through it. Solvent may have sprayed on his clothing and a spark from the battery clips ignited it. He received second-degree burns on his face and parts of his body. Cause of death was cardiac dysrhythmia following the fire.
<i>Torch on fuel tank</i> Wholesale Trade Production August 8 Douglas OR 2008-34-1	A 46-year-old mechanic at an auto parts and repair shop was burned severely in an explosion while cutting a vehicle into parts, and died 8 days later. The mechanic apparently used the cutting torch too close to the gas tank, which was separated from the vehicle frame, but remained nearby. The mechanic's 7-year-old daughter was watching the operation, but escaped the explosion unharmed and alerted a relative.
<i>Torch in tank repair</i> Other Services Install/Maintain/Repair October 2 Umatilla OR 2008-38-1	A 37-year-old truck mechanic was killed while using an acetylene torch inside a water tank. The mechanic was welding baffles inside the tank. The explosion occurred within 20 minutes after he began. The oxygen line to the torch may have been damaged and leaked oxygen to fill the tank, which was ignited by a spark. The torch equipment had been left in the tank overnight and the oxygen and acetylene was turned on first thing in the morning, 2½ hours before hot work began in the tank. The mechanic was not certified to work in confined spaces.
<i>Bomb squad</i> Public Administration Protective Services December 12 Marion OR 2008-51-2	Two police officers, both aged 51, were killed when a suspicious device they were investigating exploded. Earlier, police responded to a telephone bomb threat at a bank, and found a hoax device. News of the incident prompted a search at a nearby bank, and police were called when another suspicious device was discovered. The officers were called and determined it was also a hoax after using a portable X-ray tool to observe inside the metal box. One officer held the box while another attempted to pry off the lid with a crowbar, and it exploded.

Worker Fatalities – Violence

Violence

<i>Grocery robbery</i>	A 41-year-old grocery clerk was shot during a robbery (Mar 4, 2007), and died 17 months later. The clerk was filling in for a friend at the store for a few hours when the incident occurred. A gunshot wound to the neck left him paralyzed, but mentally alert. A secondary infection developed that resulted in terminal septic shock.
Retail Trade Sales and Related	
March 4, 2007 Multnomah OR 2008-23-1	
<i>Gas station homicide</i>	A 59-year-old gas station owner was shot and killed shortly after opening the station at 6 a.m. He typically worked alone in the mornings until staff arrived at 9 a.m. Robbery may have been the motive for the shooting, but some cash remained in the open cash drawer, and a substantial amount of cash remained in the victim's pockets. The victim was discovered by a customer.
Retail Trade Management	
February 4 Clackamas OR 2008-09-1	
<i>Shot at work</i>	A 48-year-old maintenance technician at a manufacturing plant was shot and killed at work by an ex-girlfriend. The couple had a pattern of relationship problems. The ex-girlfriend drove to the technician's workplace and asked for him at the door of the shop. While he was coming, she returned to her car and returned to the doorway with a large-caliber pistol, and shot the technician in the chest.
Manufacturing Install/Maintain/Repair	
February 28 Clackamas OR 2008-05-1	
<i>Exposure suicide</i>	A 53-year-old licensed practical nurse at a health clinic died after taking an overdose of prescription drugs. She wandered in a field near her workplace, where she fell asleep, and succumbed to hypothermia. The nurse had been depressed for some time. She left a suicide note that blamed her mental stress on conditions at work.
Health Care/Social Asst Health Practice/Tech	
March 22 Josephine OR 2008-57-1	
<i>Officer suicide</i>	A 50-year-old federal security officer killed himself with his handgun outside the building where he was scheduled to work later that day. The officer called a federal dispatch center to notify them he was going to kill himself. Local police officers arrived at the scene shortly after the event. The victim had an appointment with a physician to discuss work-related stress, but had not previously mentioned suicide to his close relations.
Public Administration Protective Services	
April 17 Multnomah OR 2008-19-1	

Worker Fatalities – Violence

Hanging suicide A 53-year-old boxing and fitness instructor died when he hung himself at work. The incident occurred on the day the instructor was supposed to report to jail. The victim left suicide notes.

Arts/Entertainment/Rec Management

June 9
Klamath
OR 2008-54-1

Jump off cliff A 57-year-old real-estate developer died after jumping off an 80-foot cliff. He was extremely upset by his “current financial situation, responsibilities, and debts,” according to a police report. The night before the incident, he began to make suicidal statements. The next morning he appeared to be better, and his wife went to an appointment and left him alone. Police later discovered his parked vehicle and his shoes placed at the edge of a nearby cliff. The victim had a history of depression and diagnosed mental illness.

Construction Management

June 23
Deschutes
OR 2008-45-1

Jump into river A 58-year-old real-estate developer died after jumping off a 25-foot cliff at a river waterfall. The body was found in the water downstream 2 days later. The developer was extremely depressed over marital and financial problems. With the economic downturn, he was potentially liable for an \$8 million debt.

Construction Management

July 5
Deschutes
OR 2008-46-1

Anesthesia suicide A 58-year-old hospital anesthesiologist died from a self-injected overdose of fentanyl, a powerful synthetic opiate. He was found in a sleeping suite reserved for on-call employees after a search was initiated when he did not return home. The anesthesiologist had several debilitating medical problems, and was anxious and depressed over working long hours. The victim was trained to know the drug, and an unintentional overdose is unlikely.

Health Care/Social Asst
Health Practice/Tech

July 15
Lane
OR 2008-44-1

Handgun suicide A 48-year-old real-estate developer died after shooting himself in the head with a handgun. The developer was distraught over impending bankruptcy, as well as a recent broken engagement, and had talked about suicide for several months.

Construction Management

July 18
Deschutes
OR 2008-47-1

Worker Fatalities – Violence

Handgun suicide

Real Estate/Rental/
Leasing
Sales and Related

A 53-year-old real-estate broker died after shooting himself in the head with a handgun. The broker was depressed over a financial crisis, due to a drop in the real-estate market, and the recent dissolution of his marriage. The victim left a suicide note, where he explained his motives, and indicated he had planned the event for months.

July 23
Clackamas
OR 2008-48-1

Hanging suicide

Retail Trade
Management

A 53-year-old owner of a recreational vehicle and marine dealership died when he hung himself at work. A suicide note indicated financial distress. The victim had a long history of past depression and recent suicide attempts.

September 28
Deschutes
OR 2008-53-1

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Oregon Fatality Assessment and Control Evaluation
Center for Research on Occupational and Environmental Toxicology



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