# Occupational Fatalities in Oregon Annual Report 2014



Oregon Fatality Assessment & Control Evaluation (OR-FACE)

# **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 workrelationship 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/oshcfdef.htm

### **Acronyms**

BLS U.S. Bureau of Labor Statistics

CDC Centers for Disease Control and Prevention
CFOI U.S. Census of Fatal Occupational Injuries

NAICS North American Industry Classification System

NTSB National Transportation Safety Board

NVDRS National Violent Death Reporting System

OIICS Occupational Injury and Illness Classification System

Oregon OSHA Oregon Occupational Safety and Health Division

SOC Standard Occupational Classification

# Annual Report 2014

Oregon Fatality Assessment and Control Evaluation

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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**

Oregon Institute of Occupational Health Sciences

Oregon Health & Science University

FACE Staff (Publication Year)

- Ryan Olson PhD
- Illa Gilbert-Jones MS, CIH, CSP
- Jason Malach-Fuller BS
- Katrina Bettencourt MA

Emeritus FACE Staff (Reporting Year)

Annie Cannon

OR-FACE is supported by the National Institute for Occupational Safety and Health (grant #2U60OH008472) through the Oregon Health Authority.

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Cover photograph by Ryan Olson

# **Report Summary**

### REPORT HIGHLIGHTS

- OR-FACE conducts surveillance, investigation, assessment, and outreach related to traumatic occupational fatalities in Oregon (see pp. 5-6 for descriptions of activities).
- OR-FACE published three investigation reports,
   Experienced journeyman machinist killed while operating an engine lathe, Vineyard worker killed in fall from trailer, and Collapsed roof trusses kill carpenter foreman (see pg 8).
- Characteristics of fatal events and the workers involved are quantified in charts (see pp. 10-15).
- Abstracts provide a brief description of each incident and contributing factors (see pp. 16-30).
- Contact information for OR-FACE to access resources and to provide feedback - see back cover.

### INTRODUCTION

Assessment and Control
Evaluation recorded 59 fatal
occupational incidents and 62
worker deaths. The number
represents a rate of 3.4 fatalities
per 100,000 employed workers in
the civilian labor force in Oregon.
The national worker fatality rate in
2014 was also 3.4 per 100,000 fulltime equivalent workers.

The following notable trends occurred in 2014:

- The total number and rate of fatalities was higher in 2014 relative to the 4 previous years (see fatality rate chart, p. 10).
- Forestry/logging industry had the highest number of fatalities followed by transportation. It has been since 2011 that this industry had the most number of fatalities:
- Fatal cases from contact events exceeded all other events.
   Half of these cases occurred in forestry/logging industry.
- Second to contact were events in the violence category. Six of the 11 violence cases were suicides.

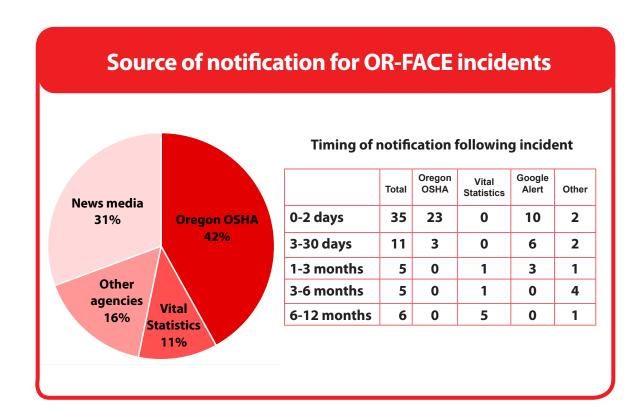
# **Core Activities**

### SURVEILLANCE

The OR-FACE surveillance system utilizes Oregon OSHA fatality notifications, quarterly reports of death certificates marked "at work" from the Oregon Public Health Division's Vital Statistics, a regular monitor of a programmed Google keyword alert and Oregon Emergency Response System (OERS) reports. For 2014, earliest first notification for work-related fatalities originated mostly from Oregon OSHA, news media, and other State agencies (see below).

# **ASSESSMENT**

When fatalities are identified as FACE cases, sufficient data and information are collected about each incident for analyses and to produce case abstracts. Assessment data sources for each case include Oregon OSHA investigation reports, Medical Examiner reports, police reports, news reports, workers' compensation records, and occasionally other records such as business profiles, hospital or emergency response records, or investigation reports from other sources. OR-FACE analyzes incident data to identify and summarize trends. Incidents are coded and analyzed by industry (NAICS), occupation (SOC), and event (OIICS), as well as by demographic and other variables, such as the specific source or setting of the injury. Incident abstracts are created to illuminate each fatality with the aim of preventing similar fatalities in the future.



# **Core Activities**

### INVESTIGATION

In-depth investigations are conducted for selected cases by OR-FACE staff utilizing OR-OSHA investigators and contractors with relevant industry-specific expertise. Investigation reports are reviewed by a board of professional safety experts prior to publication. Investigation reports seek to draw urgent attention to safety issues present in the fatality cases. Three investigation reports were published in 2014: OR-2012-18-1, Experienced journeyman machinist killed while operating engine lathe; OR-2013-05-1, Truck driver crushed between semi-trailer and loading dock; and OR-2013-27-1 Collapsed roof trusses kill carpenter foreman (see page 8).

The National Safety Council highlighted the investigation report, "OR-FACE 2011-16 Millwright fatality involving hydraulic accumulator" in their April 28, 2014 Safety + Health magazine, FACEValue.



### **OUTREACH**

OR-FACE outreach efforts include publications and their distributions, safety events and initiatives, posters, and presentations. Published OR-FACE safety materials are distributed online, directly by mail, and through collaboration with partner organizations. In 2014 OR-FACE distributed:

 400 Fallers Logging Safety booklets to saw shops, schools, the Oregon Department of Transportation, logging associations, and equipment dealers.

- 250 Young Workers Stay Alive on the Job! brochures were distributed by Workers' Compensation insurance partner to young workers in Southern Oregon.
- 50 English and 50 Spanish Ag Safety: Can you identify fatal hazards on your farm to Oregon State Employment Agency.
- 75 (25 each) of three logging toolbox talk guides to logging associations
- **25** *Snag Hazard Alert* to logging associations
- **250** online subscribers were notified of 2014 published documents (see pp 7-9).

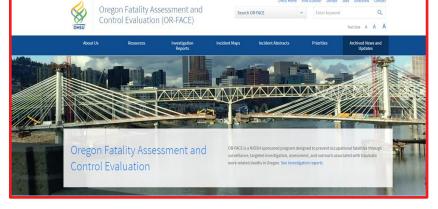
The National Safety Council highlighted three additional OR-FACE publications in the *Safety* + *Health* magazine.



# **2014 Publications**

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).

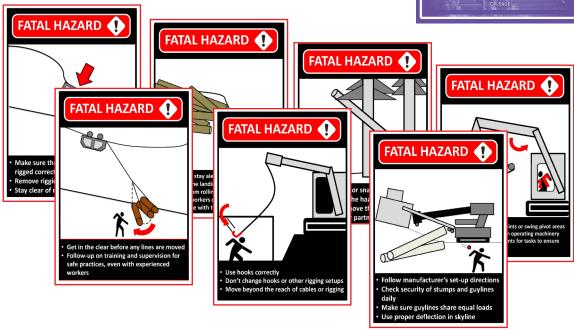
Find published presentations, safety booklets, reports, and other resources at the OR-FACE website (http://www.ohsu.edu/xd/research/centersinstitutes/oregon-institute-occupational-health-sciences/outreach/or-face/; or QR code. New reports are published regularly.



**Annual Reports -** The 2012 annual report was published on schedule (18 months after close of year) in 2014. OR-FACE annual reports include analysis of the incidents with charts for industry, event, age, gender, time, month, and more. These reports also include an abstract of each case.

**Toolbox Talk Guides -** These guides are based on Oregon occupational fatality cases designed to help supervisors give a toolbox talk about the incident. Each two-sided guide has one side showing an image with prevention recommendations that could be shown to workers and the other side providing text to help supervisors tell the fatality story and





# 2014 Publications

### **Investigations**



OR-2012-18-1, Experienced journeyman machinist killed while operating engine lathe. A 69-year-old journeyman machinist with over 30 years of experience was killed while operating an engine lathe. The victim was using the lathe to shape an eccentric shaft. When he reached over the work piece to smooth out a radiused transition with emery cloth and a file in hand his loose clothing (left arm sleeve) became entangled around the rotating work piece near the lathe tailstock. He was pulled into the part and suffered multiple fractures to his left arm and injuries to the neck and chest as he was struck repeatedly by the eccentric shaft. A coworker rushed to his aid and instinctively pushed the red button on the lathe to stop the machine. However, the red button was not an emergency stop and the machine continued. The victim was lifeflighted and died enroute to the hospital. The co-worker suffered non-life threatening injuries.



OR-2013-05-1, Vineyard worker killed in fall from trailer. It was the end of the day, workers were returning to the equipment shop after applying pesticide in the vineyard. On the crew was a 41- year-old worker who had worked for the employer for five years. Witnesses reported that he was standing on a make-shift wooden platform that had been attached to a trailer mounted 400 gallon chemical tank containing pesticide. The make-shift wooden platforms were created and installed by the employer. The trailer was in tow by a tractor. The worker's baseball cap blew off while he was riding on the platform on the moving trailer. He stepped off the platform to retrieve his cap. Once back on the platform, or as he was stepping onto the platform, the worker lost his balance and fell to the ground. He sustained a fatal head injury in the fall when his head struck a large rock.



OR-2013-27-1, Collapsed roof trusses kill carpenter foreman. A 33-year-old carpenter foreman was killed when the roof truss system he and his crew were installing collapsed. The critical elements of standard practice provided in the BCSI-B1 Summary Sheet Guide to Handling, Installing, Restraining and Bracing of Trusses prior to and during truss installation were not followed. After the thirteenth truss was toenailed into its place, the victim disconnected the truss from the rigging. The truck operator and crew member on the trailer saw the truss system collapsing and yelled to warn the crew. The foreman sustained a fatal head injury when he was struck on the head by a falling truss.

# 2014 Publications

**Blogs** - These blogs are part of the social media outreach of the Oregon Institute of Occupational Health Sciences. Once a blog is published it is shared through Twitter (573 followers), Facebook (257 likes), and the newsletter (1100 subscribers). OR-FACE contributed five blogs in 2014.



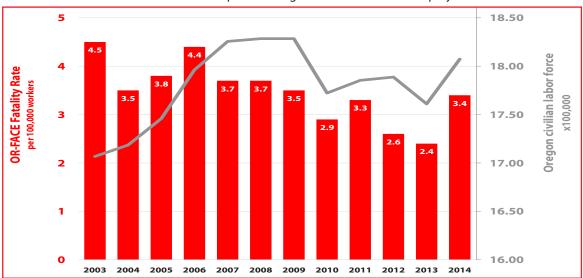
### **Hazard Alert**

Hazard alerts are one-page illustrated documents that use several similar case abstracts for repeating hazards. In 2014 a "Crab Fishing Hazard Alert," was published. A NIOSH study found that during 2000-2009 70% of commercial of commercial fishing deaths off the US West Coast were caused by drowning. Dungeness crab fisheries had the highest number of fatalities with a rate of 310 per 100,000 full-time equivalent workers. Falls overboard accounted for 24% of all fatalities. None of the victims of falls overboard in Oregon were wearing personal flotation device.



In charts and abstracts, OR-FACE highlights risk factors and patterns in fatalities. For these analyses a few of the major two-digit classification codes are split into sub codes. For industry (NAICS), Agriculture/Fishing/Forestry/Hunting (code 11) is separated into sub codes: forestry/logging (code 113), fishing (code 114) and agriculture (codes 111-113). For occupation (SOC), Farming/Fishing/Forestry (code 45) is split into sub codes: agriculture (code 45-2000), fishing (code 45-3000), forestry (code 45-4010) and logging (code 45-4020). For event (OIICS), Transportation is divided into types: Motor Vehicles, Mobile Machinery, Air, and Water.

R-FACE began occupational fatality surveillance in 2003. The first year fatality rate was the highest in the 12 years of the program. The lowest rate in 2013 coincided with a drop in the Oregon civilian labor force while the 2014 rate trended upward along with the increase in employment.



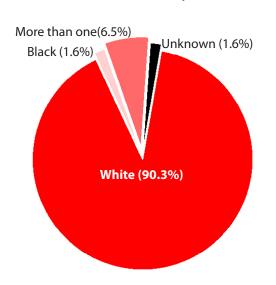
Source of labor force: BLS http://www.bls.gov/lau/table14full13.pdf p. 61-2. Retrieved: May 2016. Source of fatality counts: OR-FACE

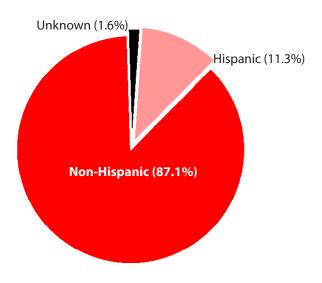
### Worker Fatalities with Delayed Death from Date of Injury (over 48 hours), 2014

EVENT	CAUSE OF DEATH	INTERVAL	FACE ID
Contact	Blunt head trauma	57 hours	2014-04-1
Contact	Blunt head trauma	5 days	2014-23-1
Fall	Complications of right fibula fracture due to ground level fall	16 days	2014-62-1
Violence	Multiple blunt trauma and secondary com- plications	17 days	2014-60-1
Transportation	Respiratory failure due to recurrent pneu- monias that were secondary to quad- riplegia from high cervical spine injury	4 years	2014-63-1

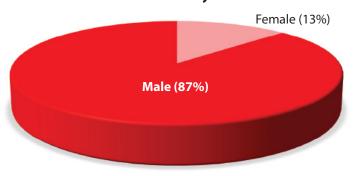
# **Worker Fatalities by Race**

# **Worker Fatalities by Ethnicity**

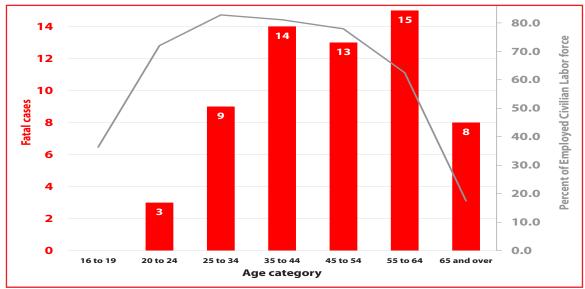




# **Worker Fatalities by Gender**

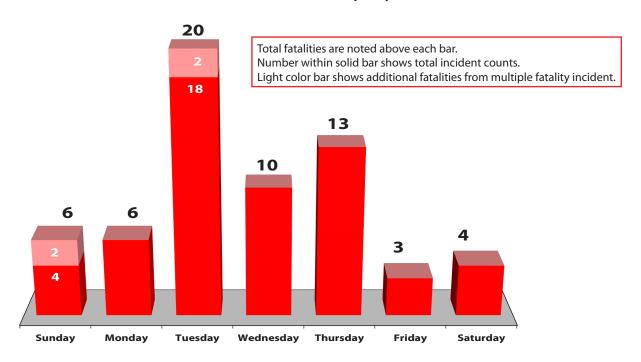


# Occupational Fatalities in Oregon by Age Compared to Oregon Age Distribution of Civilian Labor Force, 2014

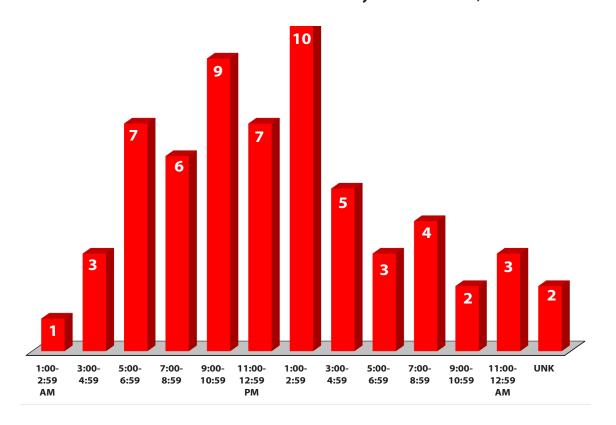


Source of labor force: BLS http://www.bls.gov/lau/table14full13.pdf p. 61-2. Retrieved: May 2016. Source of fatality counts: OR-FACE

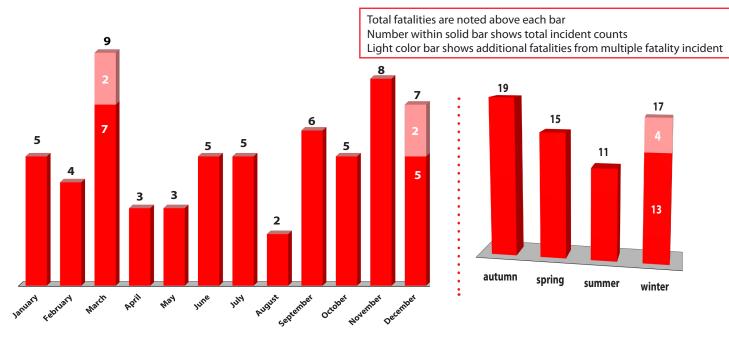
# Worker Fatal Incidents and Total Fatalities by Day of Week, 2014



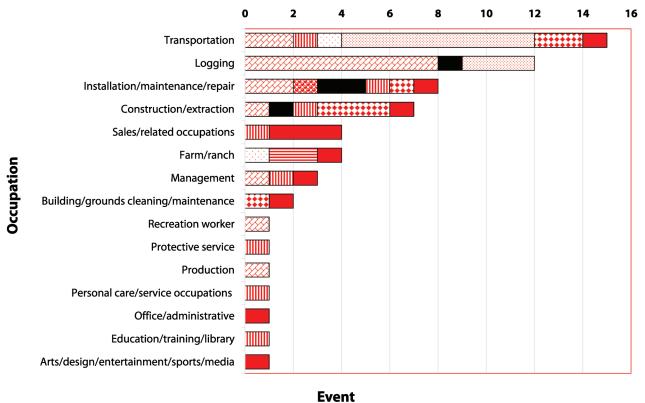
# Worker Fatal Incidents and Total Fatalities by Time of Incident, 2014



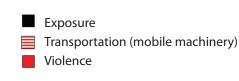
### Worker Fatal Incidents and Total Fatalities by Month and Season, 2014



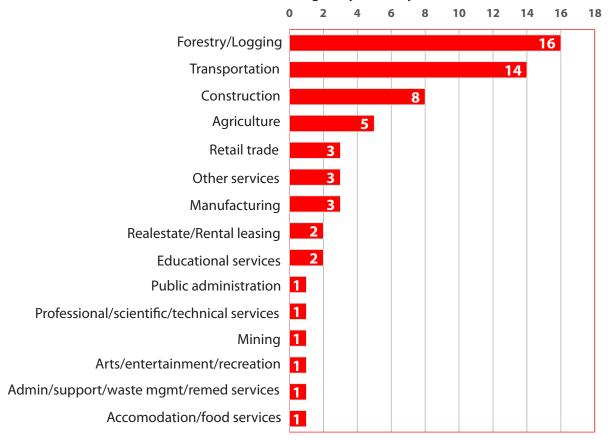
# Worker Fatalities in Oregon by Occupation and Event, 2014



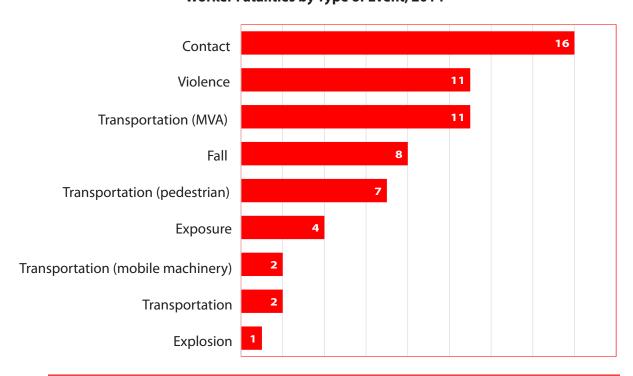




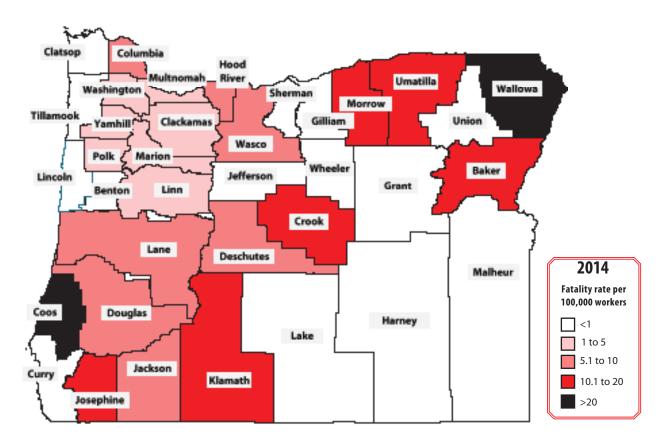
# Worker Fatalities in Oregon by Industry, 2014



# Worker Fatalities by Type of Event, 2014



# **Oregon Counties**



Oregon Population, Employed Labor Force, and Fatalities by County, 2014

	Total population	Employed labor force	Worker fatalities		Total population	Employed labor force	Worker fatalities
OREGON	3,962,710	1,807,328	62				
BAKER	16,325	6,155	1	LAKE	7,990	3,159	0
BENTON	88,740	42,108	0	LANE	358,805	157,644	9
CLACKAMAS	391,525	188,547	3	LINCOLN	46,890	18,948	0
CLATSOP	37,495	16,837	0	LINN	119,705	49,717	1
COLUMBIA	50,075	20,502	2	MALHEUR	31,470	11,085	0
COOS	62,900	23,729	5	MARION	326,150	138,319	1
CROOK	20,780	8,132	1	MORROW	11,525	5,101	1
CURRY	22,355	7,754	0	MULTNOMAH	765,775	394,947	6
DESCHUTES	166,400	74,791	4	POLK	77,735	33,100	1
DOUGLAS	109,385	40,028	4	SHERMAN	1,785	815	0
GILLIAM	1,975	759	0	TILLAMOOK	25,480	10,396	0
GRANT	7,425	2,808	0	UMATILLA	78,340	32,557	4
HARNEY	7,265	2,966	0	UNION	26,485	10,753	0
HOOD RIVER	23,730	12,986	1	WALLOWA	7,070	2,889	1
JACKSON	208,375	88,569	5	WASCO	26,105	12,687	1
JEFFERSON	22,205	8,555	0	WASHINGTON	560,465	276,845	3
JOSEPHINE	83,105	29,707	4	WHEELER	1,440	684	0
KLAMATH	66,910	25,932	3	YAMHILL	102,525	46,820	1

Population data sources: Portland State University Population Research Center and BLS Local Area Unemployment Statistics. Retrieved May 2016.

# **Worker Fatalities**

INFORMATION KEY

Description

Industry Occupation

Season County of Incident

**OR-FACE Number** 

# **Abstracts**

# of fatal occupational incidents in Oregon by type of event

2014

Contact - Explosion - Exposure - Falls
Transportation - Violence

# Contact with objects and equipment

Struck by falling tree branch

Forestry and logging Logging

Winter Josephine A 27-year-old logger died from severe head trauma after being struck in the head by a branch of a falling tree. The logger was working alone and no one witnessed the event. The logger was felling a tree that appeared to be approximately 90 feet high and about 12-14 inches in diameter. It is believed that the logger did not see a lower branch coming from the trunk of the tree. The branch estimated at eight feet long and two to three inches in diameter struck him as the tree fell. He was treated at the scene and then airlifted to a medical center where he died two days later.

OR-2014-04-1

Struck by avalanche

Arts/entertainment/ recreation Recreation worker

Winter Jackson

OR-2014-05-1

A 23-year-old worker died from a neck fracture after being struck by an avalanche. He was a fit and proficient outdoor recreational guide leading a group of people, cross country skiing, through steep terrain on a 5-day trip through the wilderness. He was struck by an avalanche and tumbled down the hill, sustaining fatal injuries.

Struck by truck tailgate

Construction
Construction and
extraction

Winter Coos

OR-2014-11-1

A 65-year-old worker died from a traumatic head injury after being struck by an inadequately secured dump truck tailgate. He normally operated a street sweeper, but on this day he was operating a dump truck hauling debris. He climbed into the bed of the truck to release the pins that secure the tailgate, so the bed could be easily off-loaded. After releasing the pins, he reached over the tailgate and the gate unexpectedly opened, causing him to fall to the ground. The tailgate detached from the truck and fell, resulting in the approximately 1000-lb tailgate to fall onto his head and chest.

# **Worker Fatalities – Contact**

Struck by tree branch  Forestry and logging Logging	A 59-year-old logger died from blunt force head trauma after being struck in the head by a falling tree. He was felling a large fir tree when it snapped the top off a nearby tree which had grown into the larger felled tree. When the larger tree fell, the top of the smaller tree came down and struck the logger.
Spring Lane	
OR-2014-20-1	
Fell and struck head on equipment	An 80-year-old logger died from a stroke after he struck his head in a fall while climbing onto a skidder. He arrived to the worksite approximately
Forestry and logging Logging	5 am. While he was getting into the skidder he fell and struck his head on the skidder blade. He was at the worksite for several hours before going to the hospital where he was admitted and released. Then, two days later, he
Summer Wasco	was re-admitted to the hospital where he died several days later.
OR-2014-23-1	
Crushed by machinery	A 34-year-old millwright died when he was crushed while attempting to
Manufacturing Install/Maintain/Repair	repair a hydraulic press. At approximately 11 pm, soon after his shift started, he and another worker were investigating a hissing hose on a hydraulic plywood press. Hazardous moving parts of the equipment was cordoned off by interlocked chains with signage. After measuring for the new hose,
Summer Linn	the other worker returned to start the press assuming that the millwright had left the area to retrieve a new cut hose. Out of view of the area, the co-
OR-2014-27-1	worker started the press which stopped 15-20 seconds later. The co-worker returned to the area behind the press to find the millwright caught between the machine and an I-beam. The millwright died from asphyxiation from compression injury to the chest and abdomen.
Crushed by felled tree	A 50-year-old tree feller working alone was missing for two days until a friend found his body crushed by a tree he felled. It appeared that the tree
Forestry and logging Logging	kicked back and fell on him, crushing his left side fracturing his rib cage.
Winter Josephine	
OR-2014-30-1	
Struck by felled tree	A 33-year-old self-employed timber faller suffered fatal head and chest
Forestry and Logging Logging	injuries after being struck by a tree he felled. At the time of the incident, he was cutting along a ridge with two other cutters; however, none had a clear line of sight to the others. One of the two cutters decided to stop cutting when the wind began to rise, making him uncomfortable. He went to check
Winter Douglas	on the others when he heard a saw idling and found the deceased logger. It appeared that as the felled tree caught on a snag, the base half of the tree fell back towards the direction of the logger who was fatally struck in the
OR-2014-33-1	upper chest and left side.

# **Worker Fatalities – Contact**

	A 61-year-old logger died after suffering a compound complex fracture of the left leg with extensive blood loss when crushed between two trees. The
Forestry and Logging Logging	logger was working in an extremely remote site and appeared to be felling a tree on a steep slope. There were three other loggers working in nearby areas but not within sight of each other. A signal on the two-way radio
Fall	prompted one of the loggers to reply, but there was no response. When the
Columbia	saws were shut off, they heard a yell. The injured logger was found with his
OR-2014-36-1	leg pinned between two trees on a steep terrain. One of the trees was cut to free him so that they could begin first aid treatment. He died as the other loggers were treating him.
Stuck by metal sheets	A 27-year-old died after his head was struck by metal sheets that fell off a moving forklift. A forklift operator was moving a raised load of 3, 20-foot-
Manufacturing Production	long metal sheets. As the operator made a sharp left turn in reverse, the load suddenly shifted and fell approximately 10 feet, striking the worker. The investigation revealed that one of the forklift prongs was bent which could
Fall Washington	have contributed to an unstable load.
OR-2014-37-1	
Crushed between two trailers	A 44-year-old truck driver died when his truck/trailer rolled backwards and pinned him against a parked trailer. The driver was contracted to move empty trailers in the yard to the loading dock. There were three adjacent
Transportation	trailers positioned on one side of the dock and a fourth at the other end. He
Transportation	was attempting to position a trailer between the 3rd and 4th trailers. He
Fall	exited the cab of the truck, left the engine idling and proceeded to walk between the trailers. Co-workers found the truck idling approximately one
Multnomah	hour later and found him pinned between a parked trailer and the one he
OR-2014-39-1	was parking.
Struck by a tree	A 55-year-old timber appraiser was killed when her vehicle was struck by a tree that was cut by a feller uphill adjacent to the road. She was driving
Public administration Management	her vehicle through an active logging operation. Her vehicle was struck by a tree that was felled approximately 145 feet uphill from the road. The tree
Fall	landed on top of her vehicle crushing the roof and collapsing the driver's compartment resulting in severe trauma to her cervical spine and immediate
Coos	death.
OR-2014-42-1	
Run over by yarder	A 48-year-old worker died after suffering severe leg trauma when he was struck by a yarder. The worker was attempting to rush in front of the yarder
Forestry and logging	to remove a piece of equipment that he thought would be in the way. He
Logging	tripped and fell in the path of the yarder on the operators' blind side and his left foot and leg was pulled under the track. He was unresponsive and
Fall	unable to be resuscitated by the time EMS arrived.
Coos	
OR-2014-43-1	

# **Worker Fatalities – Contact/Explosion**

*Caught in machinery* 

Manufacturing Install/maintain/repair

Fall Lane A 31-year-old worker died when he was caught in machinery he was troubleshooting. The worker was evaluating an unusual noise made by a board edger/chipper conveyor. The power to the machine was not off and locked out. When he got stuck in a chain he was pulled in. He was found with his upper body trapped in the machine and he died from blunt force head trauma.

OR-2014-54-1

Struck by falling box

Transportation Transportation

Fall Deschutes

OR-2014-66-1

Struck by tree branch

Forestry and logging Logging

Summer Lane

OR-2014-67-1

A 62-year-old worker died when he was struck by a box containing furniture and fell off the back of a semi-truck/trailer onto the pavement below. Two employees were working to unload several furniture items from the back of a truck using a forklift. The worker was in the trailer lifting, pulling, and postioning the furniture box for the forklift operator. After the worker gave the forklift operator the "okay" to move in, a box shifted and fell on the worker knocking him off the back of the trailer approximately 10-feet to the ground. He suffered severe head trauma and died the following day.

A 52-year-old logger died after he was hit by falling debris created by a tree he had cut. He and his son were hired to cut down trees on a friend's property. It was their third day of work when a tree top the logger cut fell onto a branch. Tree debris created by the impact began to fall and hit the logger. He suffered blunt force chest trauma and died at the scene.

# **Explosion**

Oxygen tank explosion

Other services Install/maintain/repair

Fall Columbia

OR-2014-44-1

A 43-year-old worker died after sustaining head injuries following an explosion while working in a truck repair shop. An investigation of the scene revealed that oxygen/acetylene bottles in the passenger side compartment of a large utility truck in the shop were leaking, with high levels of CO in the air. One worker had been grinding on a lift gate that was hanging from a crane mounted on a different service truck in the building while the decedent was holding the gate from swinging when the explosion occurred.

# Worker Fatalities – Exposure

# **Exposure**

Carbon monoxide exposure in enclosed space  Construction Construction and extraction	A 22-year-old worker died from carbon monoxide poisoning following chronic and acute methamphetamine abuse. The subject was found collapsed in the back of a box truck used as a construction vehicle. Crew members report that he entered the box truck approximately 40 minutes prior to being discovered collapsed and nonresponsive. With the truck cargo door ajar, he was using a bucket in the back of the truck as a makeshift restroom and it is reported that carbon monoxide levels rose to a dangerous
Spring Clackamas OR-2014-16-1	level within 1 minute of the door being lowered. The immediately dangerous to life of health (IDLH) according to the Centers for Disease Control and Prevention are 1200ppm and the medical examiner estimates the truck exposure to be at approximately 1816ppm following blood tests.
Heat stroke  Construction Install/maintain/repair  Summer Multnomah	A 71-year-old electrician, working in an attic of a single-story restaurant/club with a reported temperature of 100+ °F, died from probable heat stroke. Outdoor temperature that day recorded a high of 88°F. The building had a flat roof and uninsulated crawl space. Around noon, the electrician was observed on a ladder entering the crawl space. It was several hours later in the evening that he was found in the attic unresponsive.
OR-2014-45-1	
Hyperthermia from strenuous activity  Forestry and logging	A 42-year-old logger died from hyperthermia due to strenuous work. It was his first day back after being off several months. Mid-day co-workers saw the logger vomiting with dry heaves and offered a sports drink. They stated that he looked "white as a ghost," and generally unresponsive when asked
Logging Spring Coos OR-2014-49-1	questions of his well-being. When the logger reported that his legs weren't working the way that they should, they carried him to a pickup to transport him to a hospital. He became unresponsive and died in route. The medical examiner stated that his medication may have disrupted his body's ability to reduce his core temperature from a recorded 102.5°F. The recorded high temperature for the area that day was 59°F.
Saltwater drowning	A 52-year-old construction worker died from saltwater drowning after escaping from a vehicle that was driven into an ocean bay at approximately
Construction Install/maintain/repair	9:00 am. The worker was working on a water level wooden maintenance ramp located below a bridge. The ramp was used for heavy equipment working beneath the bridge. It appeared that metal scaffolding on the
Fall Coos	bridge above started falling during a heavy wind, and the worker attempted to drive his vehicle out of the way and ended up going off the ramp into the bay. He was later found drowned outside of his vehicle.
OR-2014-52-1	bay. The was later fourth drowned outside of this vehicle.

# **Worker Fatalities – Falls**

# **Falls**

Fall from collapsing platform	A 62-year-old worker was thrown from the platform of a collapsing seed leg conveyor and suffered fatal injuries from the fall. The worker was installing a conveyor belt onto a head pulley. He was on an articulating boom lift
Agriculture Install/maintain/repair	without fall protection. He then climbed out of the basket onto the conveyor platform which was not adequately braced. The structure collapsed and
Winter Wallowa	threw the worker off the platform. He fell to the gravel surface more than 70 feet below the platform and fractured his skull.
OR-2014-10-1	
Fall down embankment	A 59-year-old miner was attempting to free stuck dredging equipment when he lost his footing, fell from the top of a steep embankment and
Mining	died. He and a friend were dredging for gold when the dredge became
Construction and	stuck. Attempting to free the equipment caused him to lose his footing
extraction	and he fell an estimated 270 feet down an embankment, landing in a creek approximately 8 feet deep. He survived the fall. His friend went to locate
Winter	an area with cell coverage and called for assistance at a nearby lodge. He
Josephine	died from severe pelvic/lower body trauma and blood loss before assistance arrived.
OR-2014-32-1	
Fall from slip/trip	A 21-year-old wildland fire-fighter appeared to have slipped or tripped over a rock, fell backwards and suffered a fatal back injury. While off-duty the fire-
Forestry and logging	fighter was taking a walk away from his fire camp. There were no witnesses
Logging	to the event, however, evidence suggested that at approximately 6:30 pm he tripped or slipped on a rock, fell backwards and landed on his back on a
Summer	downed tree.
Jackson	
OR-2014-50-1	
Fall from top of trailer	A 64-year-old truck driver was covering his double trailer load with tarp,
load	lost his balance, fell to the floor below and suffered fatal head injuries. The truck trailer had been loaded by forklift to a height of 11 feet and moved to
Transportation	a covered location where the driver was placing a protective tarp over the
Transportation	load. At approximated 2 pm a witness saw the driver atop the front trailer. He was found lying face down on the concrete floor ~20 inches from the side
Spring	of the truck trailer. A supervisor and medical assistance were immediately
Deschutes	notified but the driver was unresponsive and without a pulse when they arrived. Investigation of the scene suggested that the driver was atop the
OR-2014-53-1	front trailer load, and while bent over and pulling the tarp open, he lost his

balance and fell backward.

# **Worker Fatalities – Falls**

Fall from ladder

Other services
Personal care and
service occupations

Spring Deschutes A 58-year-old business owner was found lying on the ground after falling from a ladder. He was observed by an employee on a ladder trimming branches of a tree with a hedger. Three to five minutes later the same employee found him lying on the ground atop a "still running" hedger tool. The owner had a history of heart disease and had mentioned being very tired earlier that day, but it was unknown whether a cardiac event contributed to the fall. However, as a result of the fall, he suffered traumatic chest injury with rib fractures and died at the scene.

OR-2014-56-1

Fall from ladder after electrical shock

Accommodation and food services Management

Summer Umatilla head injury. While working on the sign, he yelled when he was shocked, fell back off the ladder, striking the side of a dumpster below, and then hitting his head against the paved parking lot surface. He lost consciousness and emergency response was summoned. After suffering a seizure in the emergency room and CT scan images confirmed significant head injury, Life Flight to a trauma 1 hospital was activated. He arrived at the second hospital comatose and conditions continued to deteriorate until his death.

A 40-year-old café owner, working on a neon sign in front of his café, suffered

a low voltage electrical shock, fell 15 feet from a ladder and died from his

OR-2014-57-1

Same level fall

Educational services Education, training, and library

Fall Jackson A 63-year-old librarian died from complications of a right fibula fracture as a result of a fall at work. Two weeks after her fall she suffered a myocardial infarction. Initially the cause of death was believed to be of natural causes. After further review by the medical examiner, a new death certificate was issued citing that the death was accidental and the cause was a complication of the fracture sustained in the fall.

OR-2014-62-1

Fall from missed step

Real estate and rental leasing Sales and related occupations

Winter Multnomah

OR-2014-68-1

An 83-year-old real estate agent died after she missed a step leading to the sidewalk, fell, and hit her head on the curb. At approximately 8 pm the agent concluded a meeting with clients at their condominium then walked to her vehicle parked in a visitor parking spot. She was found approximately 40-60 minutes later. It appeared that she retrieved business cards and was returning to the entryway. She was walking in the dark with no overhead lighting, missed a step, fell and struck her head against the sidewalk curb.

She died at the scene from blunt force head trauma.

# **Transportation (Motor Vehicle)**

Ejected from vehicle Forestry/Logging Transportation Winter Polk OR-2014-01-1	A 39-year-old driver was killed when he was ejected from the cab of a logging truck after it veered off the haul road into a canyon. The driver had left a landing with a load of logs at about 5:30 am. There were reports of dense fog in the area until about 7:30 am. Shortly thereafter, about ½ mile from the landing, another truck driver noticed tire tracks that trailed off the main haul road into a steep canyon. He then saw the wrecked truck and trailer below. The driver was found next to the rear axle of the truck, approximately 150 yards below the road. There were no skid marks or steering corrections indicated by the tire tracks suggesting that the driver inadvertently drove off the road after encountering the dense fog condition. Cause of death was multiple blunt force head traumas. It is unknown if the driver was wearing a safety belt.
Truck roll-over  Transportation Transportation  Winter Lane  OR-2014-03-1	A 49-year-old worker died from multiple blunt force injuries after losing control of the commercial semi-truck he was driving onto an exit ramp off a freeway. Road conditions were wet and the speed of the truck was sufficient to cause the truck and trailer to roll over. The truck's cab was crushed by the trailer. Toxicological examination confirmed the presence of methamphetamine.
Motor vehicle accident  Transportation Transportation  Winter Douglas  OR-2014-07-2	A 43-year-old driver, asleep in the sleeper berth of a semi-truck, died after the semi-truck driven by his co-operator crossed the white road border (fog line) and collided with a parked, disabled tractor-trailer. On impact the sleeping driver was thrown from the sleeper forward between the front seats and into the dash of the semi-truck. He died at the scene from blunt force head and neck trauma with multiple skull and neck fractures.
Truck roll-over  Transportation Transportation  Summer Lane  OR-2014-29-1	A 56-year-old truck driver died from blunt force head and neck trauma when he lost control and overturned his semi-truck/trailer. At approximately 3:25 am the driver was traveling westbound on a highway and lost control of his truck as he entered overturned to its left side. Road marks according to the investigating officer indicated that he was travelling too fast. The marks suggested he was in control until it drifted off the road and the truck tipped over onto the driver side. The semi-truck/trailer went through the center guardrail and came to a final rest in the eastbound lanes facing westbound.

Motor vehicle accident	A 51-year-old truck driver died from injuries he sustained when he was partially ejected from his truck cab after it collided with an overturned
Transportation	tractor/trailer. At approximately 7:30 pm, he passed a slow moving vehicle
Transportation	going at an estimated 50-55 mph. In the heavy fog and icy condition, he
	may not have seen the overturned semi-trailer extending into the outside
Winter	passing lane. The overturned tractor/trailer was the first in a series of four
Umatilla	collisions that occurred at the scene. Evidence showed that the driver's truck
	impacted the left rear corner of the trailer and his cab was shorn apart. This
OR-2014-31-1	incident was the second of the four collisions at the scene.
Motor vehicle accident	A 51-year-old truck driver died from injuries sustained when he was ejected
	from his semi-truck after colliding with an overturned trailer. In the heavy
Transportation	fog and icy road conditions the semi-truck was pulling a loaded flatbed
Transportation	trailer, traveling at an unknown speed, when it collided with the overturned
	trailer. The driver was ejected from his vehicle along with his seat. It is
Winter	unknown if he was wearing a safety belt. This incident was the third in a
Umatilla	series of four collisions at the scene.
OR-2014-31-2	
Logging truck accident	A 30-year-old logging truck driver died when his truck crashed in the bottom
Logging track accident	of a ravine. The loaded log truck left the landing before 3 am. The road he
Forestry and logging	was traveling was steep with many sharp turns, and had numerous water
Transportation	bars that crossed the road. Tire marks indicated that the truck had crossed
•	a water bar and continued straight off the left side of the road and into
Fall	the ravine. His truck went into a ravine at an estimated 30-35 mph and
Crook	continued forward until the front axle struck the far side of the ravine. The
	impact sheered the undercarriage and cab from the frame. He was ejected
OR-2014-38-1	upon impact and died immediately. It is believed that the driver was not
	wearing a safety belt at the time of incident.
Icy road collision	A 62-year-old tractor/trailer driver died from injuries he sustained in a
,	collision after he loss control of his vehicle. He was driving westbound on
Transportation	an interstate highway and lost control when his vehicle hit an icy patch on
Transportation	the road. There was significant damage to the truck cab and it was difficult
•	to remove his body. He died of massive abdominal trauma. There was no
Fall	report of whether a safety belt was in use at the time of this incident.
Baker	
OR-2014-46-1	
Truck travels off logging	Three died in a crash laged 27-26 and 41. The 24 year old driver died from
embankment	Three died in a crash, aged 27, 36, and 41. The 36-year-old driver died from
emounkment	positional asphyxia due to a pickup truck crash. Two passengers were thrown from the vehicle and both died from blunt force trauma. The truck
Forestry and logging	rolled down an embankment. It was reported that five people had been
Logging	traveling in a truck to a logging site at approximately 6:30 am when the truck
Logging	left the logging road, hit an embankment, and went down into a 300-foot
Fall	canyon.
Lane	
OR-2014-48-1, 2, 3	

# **Transportation (Pedestrian)**

Crushed between	truck
and wall	

Construction Construction

Winter Jackson A 42-year-old construction worker died from severe blunt chest trauma after being crushed between a dump truck and a brick wall. The truck on the construction site was parked next to a building with a trash chute coming from an upper story window to the truck. The truck was parked on a section that sloped back toward the building and the driver was attempting to pull away from the building when the truck popped out of gear. The worker had just stepped behind the truck to attend with the chute as the truck rolled back, pinning him against the wall.

### OR-2014-02-1

Crushed between trucks

Transportation Install/maintain/repair

Winter Douglas

OR-2014-07-1

A 54-year-old roadside assistance mechanic died from injuries he sustained after being crushed between his service truck and a disabled semi-truck. The disabled tractor-trailer was parked on the right northbound shoulder of a freeway eight feet to the right of the fog line. Three reflective triangles were positioned at the rear of the disabled tractor-trailer. The mechanics service truck was parked in front of the disabled tractor-trailer with activated amber flashing lights. At approximately 11 pm, during heavy rain condition, the mechanic was standing between the disabled tractor and his service truck stowing his tools and preparing to leave when another tractor-trailer in the northbound right lane crossed the fog line and struck the rear of the parked tractor-trailer. The impact pushed the tractor-trailer forward pinning the mechanic between the semi-truck and his service truck. The mechanic died at the scene of injuries to his pelvis and lower extremities.

### Struck by vehicle

Construction
Construction and
extraction

Summer Umatilla A 54-year-old raker on a road maintenance chip sealing project died when he was struck by a dump truck that was backing up. He was behind a dump truck towards the passenger side, in the driver's blind spot, facing away from the truck. The dump truck operator, loaded with gravel, was traveling in reverse when it struck him. He died at the scene from a massive skull fracture.

### OR-2014-08-1

### Run over by forklift

Transportation Transportation

Spring Clackamas

OR-2014-12-1

A 57-year-old truck driver died from multiple blunt force traumatic injuries sustained when he was run over by a forklift. The driver was familiar with the lumber yard and picked up loads 2-4 times per day from the facility. It was standard practice for the drivers to strap their loads onto the trailer while they were loaded. On the day of the incident the driver did not wear his visibility vest. While loading the truck, the forklift operator saw the truck driver attach straps to the rear load on the driver's side. The forklift operator passed the driver, drove around the rear towards the passenger-side. The forklift operator then removed two bundles of lumber from a stack, and while backing up, he ran over the driver. The forklift did not have a backup alarm.

Struck by SUV

Admin/support/waste mgmt./remediation services Building/grounds cleaning/maintenance

Spring Washington

OR-2014-13-1

A 49-year-old grounds worker died from blunt force chest trauma after being struck by a vehicle. At approximately 7:30 am he and a co-worker were unloading a lawnmower from the back of a work trailer that was parked on a two-way street in a residential neighborhood. The truck and trailer was parked parallel to the south curb facing east. An SUV travelling eastbound swerved to miss the trailer and struck the worker who had his back to the oncoming vehicle at the rear of the trailer. He was pronounced dead at the scene. The other worker sustained non-life threatening injuries was taken to emergency and released. The SUV driver reported his windshield was fogged and the sun was in his eyes. The grounds worker was wearing a high visibility vest at the time of injury.

Crushed by rolling truck

Forestry and logging **Transportation** 

Summer Josephine

OR-2014-21-1

A 67-year-old truck driver died from multiple blunt force traumas when his truck rolled backwards and over him. An excavator was transported to a logging site and off-loaded from a low boy trailer. The driver was reattaching the trailer behind the truck when the truck and trailer rolled backwards. The truck rear wheel tires rolled over the driver.

Crushed by truck

Construction Construction and extraction

Summer Morrow

OR-2014-22-1

A 64-year-old construction worker died when he sustained crushing blunt force injuries after being run over by a one-ton pickup. He and a trainee were carving "rumblestrips" on the shoulder of an interstate highway. The twoperson job required one to operate the truck towing the concrete cutter and the other to monitor the cutter. At approximately 11 pm the worker exited the pickup to monitor the cutter, leaving the trainee to operate the vehicle. After feeling a slight bump the trainee called out and when there wasn't a response and he didn't immediately return to the truck as expected the trainee stopped to check on him. He found the worker behind the passenger side rear wheels of the pickup with his body pinned underneath the wheels.

# Transportation (Mobile machinery)

Agriculture Farm/ranch

Spring Klamath

Flipped all-terrain vehicle A 45-year-old farm worker died from severe blunt head trauma when her all-terrain vehicle flipped over and pinned her underneath the vehicle. At approximately 2:00 in the afternoon, she and a co-worker were operating their ATV's searching for livestock. While descending a steep hill, her vehicle struck a rock, causing it to flip over. She was not wearing a helmet and sustained significant head trauma, she was also pinned beneath the vehicle.

OR-2014-47-1

Farm tractor-trailer struck
from rear
sustained in a motor vehicle accident. He was operating a farm tractor that
was pulling an old single axle trailer along a country road to another section
Agriculture
of a farm. At the time of incident, the weather was good and the road was
Farm/ranch
free of any obstructions, was well-maintained, and well-marked. Witnesses
observed a car traveling approximately 70 mph colliding with rear of the
tractor causing the driver of the tractor to be slung upwards from his seat,
approximately 15-20 feet into the air, and then he landed on the roadway.
He was declared deceased when medics arrived.

OR-2014-51-1

# **Transportation (Unspecified)**

Truck rollover	A 42-year-old truck driver traveling on a highway was unable to negotiate a right curve and died from blunt force trauma after his semi-truck pulling
Transportation Transportation	a full trailer rolled onto its side. The truck and trailer traveled across the roadway and rolled off the highway onto a grass field spilling the trailer
Spring Yamhill	contents. The driver was found without a safety belt in use. He was pronounced deceased at the scene and had to be extricated from the truck.
OR-2014-18-1	
Bucked from horse	A 75-year-old cattle rancher was bucked from a horse in 2010 and suffered
Bucked from horse  Agriculture Farm/ranch	a cervical spine injury causing quadriplegia. He recovered from the injury but had several hospitalizations with various health problems related to his quadriplegia. He died from respiratory failure, secondary to recurrent
Agriculture	a cervical spine injury causing quadriplegia. He recovered from the injury but had several hospitalizations with various health problems related to

# **Worker Fatalities – Violence**

# Violence

weapon

Transportation Transportation

Spring Klamath

OR-2014-14-1

Stabbed by resident

Real estate and rental leasing Sales and related occupations

Summer Washington

OR-2014-25-1

Shot with semiautomatic A 42-year-old supervisor was shot with a semiautomatic weapon and killed by an employee at their place of work. The supervisor died from multiple gunshot wounds to the head, chest, and abdomen. It was approximately 6 am when both arrived for the start of the shift. The assailant had been "written up" for a forklift violation the previous day. The next morning the assailant went to the supervisor's office and shot him.

> A 29-year-old worker died from a stab wound to the heart while working at an apartment complex. She was visiting residents to remind them their leases were going to expire and what they needed to do to renew their leases. There were no witnesses to the event. There were multiple reports immediately following the incident of hearing screams before someone saw the victim and called for medical assistance.

*Shot during routine stop* 

**Transportation** Office/administrative

Winter Clackamas

OR-2014-28-1

Beaten in the head with a blunt instrument

Retail trade Sales and related occupations

Summer Douglas

OR-2014-35-1

A 47-year-old worker died from a gunshot wound while working as a county weigh-master. He stopped an overloaded pickup/trailer for an inspection, which was a common activity in his job. He was then shot multiple times in the head. The vehicle's occupant, an ex-convict, left the scene in the pickup and efforts to resuscitate the victim were unsuccessful. The decedent was accompanied by an authorized observer/rider in his vehicle at the time of the incident and the rider witnessed the event.

A 38-year-old convenience store worker died from blunt force trauma to the head. She was found by a customer on the floor behind the counter of the convenience store where she was working alone. It appeared that she was beaten in the head by another person with a blunt instrument.

# **Worker fatalities - Violence**

Suicide by engine exhaust  Other services Install/maintain/repair  Winter Lane  OR-2014-55-1	A 49-year-old automotive repair worker was found alone and deceased in his workshop after several days of no contact with his family. He was last in contact with family five days before his body was found and they reported that he did not sound depressed or suicidal at that time. The decedent was found lying on his back on the floor of a van, with the vehicle door open, and the key in the ignition in the "run" position although the vehicle was no longer running. His wallet and identification was neatly centered and displayed across from the van in the workshop.
Suicide by hanging  Professional/scientific/ technical Arts/design/ entertainment/ sports/media  Fall Multnomah  OR-2014-58-1	A 42-year-old worker was discovered by a co-worker hanging by a rope secured around his neck at his place of employment. The morning seemed typical and the worker arrived at approximately 8 am. A co-worker reported that he gave an "out of character" hug, when he was greeted. At approximately 9:30 am the worker proceeded to a storage area to conduct an inventory. An hour later the co-worker went to check on the worker and found him suspended from his neck by a rope tied to a ceiling beam. The co-worker cut the rope and attempted CPR without success.
Suicide by hanging  Educational services Building/grounds cleaning/maintenance  Fall Hood River  OR-2014-59-1	A 64-year-old janitorial worker died by self-inflicted asphyxiation. He was found hanging from the neck at his place of work at approximately 7 am.
Trampled by a cow  Agriculture Farm/ranch  Fall Klamath  OR-2014-60-1	A 56-year-old ranch worker died due to delayed complications of multiple blunt traumas after being trampled by a cow. Late in the afternoon, on December 16, 2013, the ranch worker was assisting in loading cattle into an unidentified area. A cow got loose and trampled him and he suffered multiple inuries to the head, neck, chest, abdomen, upper extremeties and left tibia. He underwent surgery to repair the tibial fracture and was recovering from his injuries. Approximately 12 months after the incident he went into shock. Imaging did not reveal major complications or concern, but after 16 days in hospital recovery he went into cardiorespiratory arrest, and eventual death.

# **Worker fatalities - Violence**

Suicide by jumping from crane tower	A 33-year-old construction worker was found at his work site with fatal injuries consistent with falling from a crane tower. At approximately 6:25 am the gate to the construction site was opened and employees found
Construction	the worker's body. The position of the body indicated that he fell or jumped
Construction and	approximately 150 feet off of the crane arm. A locked seven-foot chain-link
extraction	fence restricted access to the construction site and access to the crane tower was limited to personnel with a combination to unlock the barrier around
Summer	the base of the tower. The worker had called in sick a few days earlier and
Multnomah	was last seen around 10 pm the evening before he was found at the site. It is suspected that he climbed a secure fence and ascended the crane tower
OR-2014-61-1	before his fatal fall.
Self-inflicted gunshot	A 38-year-old worker died from a self-inflicted gunshot wound to the head.
wound	At approximately 9 am, the worker arrived to work and went into the attic
Retail trade	where boxes and guns were stored. There were several people at work that heard the shots fired but no one witnessed the incident. It was reported that
Management	he had been experiencing suicidal thoughts, depression, problems sleeping,
aagee	and moodiness.
Fall	
Jackson	
OR-2014-64-1	
Suicide by hanging	A 65-year-old worker died following self-inflicted asphyxia by hanging at her place of work. Co-workers who opened the store for the day found
Retail trade	the worker hanging on stairs leading into a basement. Reportedly, two
Sales and related	years prior, she had sustained a significant brain injury after being hit by a
occupations	car while riding her bike. Co-workers stated that since the bike incident,
•	she had undergone drastic behavioral changes with frequent emotional
Fall	outbursts and verbally threatened to kill herself. She had a history of
Multnomah	seasonal depression from fall to spring and showed visible signs of mental
OR-2014-65-1	deterioration leading up to her death.
ON-2014-03-1	

# **Event Definitions**

The event or exposure describes the manner in which the injury or illness was produced or inflicted by the source of injury or illness.

### **CONTACT WITH OBJECTS AND EQUIPMENT**

Codes apply to injuries produced by contact between the injured person and the source of injury except when contact was due to falls, transportation accidents, fires, explosions, assaults, or violent acts. Contact may be denoted by a statement that the injured person struck or was struck by an object, was caught in an object, rubbed against an object, or by words such as "hit by," or "hit," "bumped into," "crushed by," or "banged."

### **FALLS**

Falls are events where the injury was produced by an impact between the injured person an object or surface when the motion was generated by gravity.

### **BODILY REACTION AND EXERTION**

Codes apply to cases, usually non-impact, in which injury or illness resulted from free bodily motion, from excessive physical effort, from repetition of a bodily motion, from the assumption of an unnatural position, or from remaining in the same position over a period of time.

### **EXPOSURE TO HARMFUL SUBSTANCES OR ENVIRONMENTS**

Codes apply to cases in which the injury or illness resulted from contact with, or exposure to, a condition or substance in the environment. Cases of burns, heat stress, smoke inhalation, or oxygen deficiency resulting from an uncontrolled or unintentional fire are generally coded fire and explosions, unless a transportation incident or assault or violent act was involved.

### TRANSPORTATION ACCIDENTS

This code covers events involving transportation vehicles, powered industrial vehicles, or powered mobile industrial equipment where at least one vehicle (or mobile equipment) was in normal operation and the injury/illness was due to collision or other type of traffic accident, loss of control, or a sudden stop, start, or jolting of a vehicle regardless of the location where the event occurred. References to "vehicles" in should be interpreted to include powered industrial vehicles and powered mobile industrial equipment unless otherwise noted. Cases classified in this code include pedestrians, roadway workers, or other non-passengers struck by vehicles, powered industrial equipment on or off the roadway (including indoor locations) when the incident meets these criteria (a) at least one vehicle was in regular operation, and (b) the impact was caused by a traffic incident or forward/backward travel of the vehicle.

### FIRES AND EXPLOSIONS

Codes apply to cases where the injury or illness resulted from an explosion or fire. Included are cases where the person fell or jumped from a burning building, inhaled a harmful substance, or was struck by or struck against an object as a result of an explosion or fire. This division also includes incidents where the worker was injured due to being trapped in a fire or whose respirator had run out of oxygen during a fire. Excluded from this category are injuries to firefighters resulting from lifting fire hoses and falls not related to the fire or explosion itself, such as falls in the parking lot of a burning building.

### **ASSAULTS AND VIOLENT ACTS**

Assaults and violent acts include cases where a person was injured or made ill by assaults, or by violent, harmful actions regardless of intent. Included in this division are assaults by others, injuries to oneself, and assaults by animals. This category includes injuries occurring in a hostile environment even though the person injured was not the intended victim, such as a teacher hit while breaking up a fight.

### OTHER EVENTS OR EXPOSURES

This division classifies any event or exposure, which is not classified or listed under any other division.

Adapted from US Bureau of Labor Statistics (2012), *Occupational Injury and Illness Classification Manual*. US Department of Labor. Available online (December 28, 2012): http://www.bls.gov/iif/osh\_oiics\_2\_4.pdf.

# **Contact Information**

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OR-FACE conducts surveillance, investigation, and assessment of traumatic occupational fatalities in Oregon, and produces safety materials to promote worker safety. OR-FACE investigations of fatal occupational incidents assess risk factors that include the working environment, the worker, activity, tools, energy exchange, and role of management.

# About the Oregon Institute of Occupational Health Sciences at Oregon Health & Science University

The Oregon Institute of Occupational Health Sciences (OHSU) is dedicated to health and safety in the workforce. The Institute's mission is to promote health, and prevent disease and disability among working Oregonians and their families during their employment years and through retirement. The Institute does so through basic and applied research, outreach, and education.

Oregon Health & Science University is dedicated to improving the health and quality of life for all Oregonians through excellence, innovation and leadership in health care, education and research. OHSU includes the schools of Dentistry, Medicine, Nursing, and Science & Engineering; OHSU Hospital; Doernbecher Children's Hospital; numerous primary care and specialty clinics, multiple research institutes; and several outreach and community service units. OHSU is an equal opportunity, affirmative action institution.

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