

2018

Occupational Fatalities in Oregon

ANNUAL REPORT



OREGON FATALITY ASSESSMENT & CONTROL EVALUATION (OR-FACE)

FACE

Definitions

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

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 event or exposure, 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.

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
NIOSH	National Institute for Occupational Safety and Health
NTSB	National Transportation Safety Board
NVDRS	National Violent Death Reporting System
OHA	Oregon Health Authority
OIICS	Occupational Injury and Illness Classification System Oregon
OSHA	Occupational Safety and Health Administration
SOC	Standard Occupational Classification
DCBS	Department of Consumer and Business Services
OERS	Oregon Emergency Response System

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 occur at a worksite (included in OR-FACE scope since 2011).
- 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.
- Fatal events or exposures of those in a Military occupation. OR-FACE erroneously included some of these deaths in previous reporting years.
- A fatal event that is solely the result of exposure to infectious disease.

Adapted from Bureau of Labor Statistics (2001), *Census of Fatal Occupational Injuries: Definitions*. U.S. Department of Labor. Available online (April 13, 2017) <https://stats.bls.gov/iif/oshcdef.htm>

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ANNUAL REPORT

Oregon Fatality Assessment and Control Evaluation

This report is dedicated to the people 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.

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INTRODUCTION

In 2018, OR-FACE recorded 55 fatal occupational incidents resulting in worker deaths, as well as four incidents that could not be determined due to insufficient information. The number represents a rate of 2.73 fatalities per 100,000 employed workers in the civilian labor force in Oregon. The national worker fatality rate in 2018 was 3.5 per 100,000 full-time equivalent workers.

The following notable trends occurred in 2018

- » The agriculture industry had the highest number of fatalities, followed by transportation and construction. These three industries have been among the top four industries for fatalities in all ten of the previous ten years (see pg. 13).
- » For events, fatal cases from transportation (motor vehicle) exceeded all other events, followed by contact with objects and equipment incidents. Motor vehicle incidents have the highest number of cumulative events through 2018 (see pg. 14).

REPORT HIGHLIGHTS

OR-FACE conducts surveillance, investigation, assessment, and outreach related to traumatic occupational fatalities in Oregon (see pg. 5–6).

OR-FACE published 6 blogs and 1 investigation report and 1 hazard alert (see pg. 7).

Characteristics of fatal events and the workers involved are quantified in charts (see pg. 9–17).

Abstracts provide a brief description and contributing factors of each incident (see pg. 18–33).

About OR-FACE, online resources and provide feedback (see pg. 35 and back cover).

CORE ACTIVITIES

ASSESSMENT

When fatalities are identified as FACE cases, sufficient data are collected about each incident for analysis 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 explain each fatality with the aim of preventing similar fatal incidents in the future.

SURVEILLANCE

The OR-FACE surveillance system is comprised of:

1. Fatality Intake Forms (FIF) supplied by OR-OSHA
2. Quarterly reports from Oregon Public Health Division's Vital Statistics of death certificates marked "at work"
3. Death certificate and Census of Fatal Occupational Injuries (CFOI) data from the Oregon Health Authority (OHA)
4. Consultations with a Department of Consumer and Business Services (DCBS) analyst
5. Reports from the Oregon State Police (OSP)
6. Reports from the Oregon Emergency Response (OERS)
7. Monitoring of programmed Google keyword alerts such as: Oregon, drowning, body found, killed, occupational safety and health, crash, suicide, Coast Guard, fatal, died, fisherman, work, fishing boat, death investigation, fall, occupational fatalities

For 2018, the majority of first notifications regarding work-related fatalities originated from Oregon OSHA; other first notifications came from news media and other state agencies (see below).

NOTIFICATIONS | Timing of first notification following incident

	DAYS		MONTHS				TOTAL
	0-2	3-30	1-3	3-6	6-12	12+	
Google Alerts	4	1	0	0	0	1	6
Oregon Emergency Response	1	0	0	0	0	0	1
Oregon OSHA	23	11	0	0	0	0	34
Oregon State Police	6	0	0	0	0	0	6
Oregon Health Authority	0	0	3	4	0	1	8
Oregon DCBS Analyst	0	0	0	0	0	0	0
Total	34	12	3	4	0	2	55



The sum of notifications may not equal 100% due to rounding.

INVESTIGATION

In-depth investigations of selected cases are conducted by an OR-FACE fatality investigator/outreach specialist. Investigations may be completed independently, in collaboration with OR-OSHA investigators, or with contractors with relevant industry-specific expertise, as needed.

Investigation reports are reviewed by professional safety experts and NIOSH prior to publication. Investigation reports seek to draw urgent attention to the root causes of fatal workplace incidents, and to provide recommendations for preventing similar fatal injuries.

One investigation report was published in 2018: OR-2016-16-1 (see page 8).

PRESENTATION CITATIONS

- Construction Safety Summit - Safety Directors' Roundtable quarterly meeting (Jan. 2018). "Trends and key factors in Oregon construction fatalities."
- Portland Safety Stand-down event (May 2018). "Toolbox Talks."
- WestON Conference (Sept. 2018). "Construction field research: Building engagement through multi-pronged recruitment."
- State FACE presentations at National Occupational Injury Research Symposium (Oct. 2018). "Oregon partnership to prevent fatalities in agriculture."
- Oregon Trucking Associations Safety Management Council (Oct. 2018). "Learning from fatal case studies."

OUTREACH AND DOCUMENT DISTRIBUTION

<p>240 "FALLERS LOGGING SAFETY" BOOKLETS to State Street Saw Shop</p>	<p>170 HARD HAT STICKERS to SafeBuild Alliance Safety Week</p>
<p>100 HAZARD ALERT: "CAN YOU IDENTIFY FATAL HAZARDS ON YOUR FARM OR RANCH?" to Oregon OSHA</p>	<p>80 TOOLBOX TALK: "CONSTRUCTION WORKER KILLED AFTER FALLING 20-25 FEET FROM PUMP-JACK SCAFFOLD" to Portland Safety Stand-down</p>
<p>5 TOOLBOX TALKS Oregon OSHA</p>	<p>35 PORTLAND STAND-DOWN FLYER to OR-OSHA Construction advisory committee</p>
<p>9 TOOLBOX TALKS AND INVESTIGATION REPORTS to Portland Stand-down</p>	<p>22 INFORMATIONAL BROCHURE AND TOOLBOX TALKS to WestON 2018</p>
<p>30 HAZARD ALERT: "CAN YOU IDENTIFY FATAL HAZARDS ON YOUR FARM OR RANCH?" to Blue Mountain Occupational Safety & Health Conference</p>	<p>60 "LEARNING FROM FATAL CASE STUDIES" HANDOUT to Oregon Trucking Associations Safety Management Council Quarterly Meetings</p>
<p>20 VARIOUS TOOLBOX TALKS AND FATALITY INVESTIGATION REPORT, "CONSTRUCTION WORKER DIED AFTER FALLING 20-25 FEET FROM A PUMP-JACK SCAFFOLD" to Construction Safety Summit</p>	<p>25 PORTLAND STAND_DOWN FLYERS to American Society of Safety Professionals (ASSP) Columbia-Willamette Chapter</p>

PUBLICATIONS

OR-FACE publications 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 confidential under Oregon law (ORS 413.196).

A screenshot of the OR-FACE website. The header includes the OHSU logo and the text "Oregon Fatality Assessment and Control Evaluation". Navigation links include "About Us", "Publications", "Investigation Reports", "Toolbox Talks", "Incident Maps", "Incident Abstracts", and "Archived News and Updates". A search bar is present with the text "Search all of OHSU" and "Enter keyword". The main content area features a large image of a vineyard with a white banner that reads "Oregon Fatality Assessment and Control Evaluation". To the right of the banner is a QR code and a short description of the program: "OR-FACE is a NIOSH sponsored program designed to prevent occupational injury and traumatic work-related deaths in Oregon. Read our investigation reports."/>

OHSU

Oregon Fatality Assessment and Control Evaluation

OHSU Home Find a Doctor MyChart Donate Jobs Directions Contact

Search all of OHSU Enter keyword

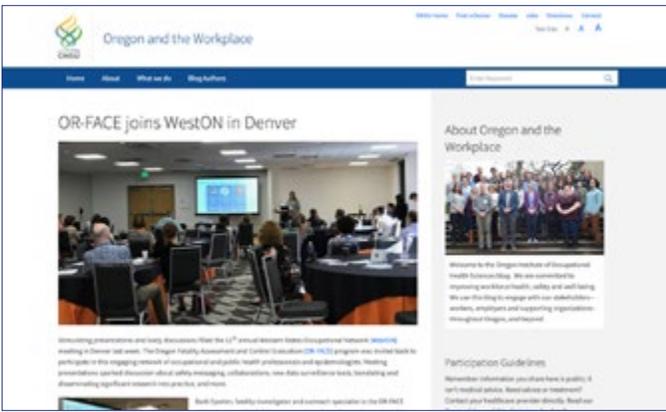
About Us Publications Investigation Reports Toolbox Talks Incident Maps Incident Abstracts Archived News and Updates

Oregon Fatality Assessment and Control Evaluation

OR-FACE is a NIOSH sponsored program designed to prevent occupational injury and traumatic work-related deaths in Oregon. Read our investigation reports.

Find published presentations, safety booklets, reports, and other resources at the OR-FACE website or scan the provided QR code. New reports are published regularly.

www.ohsu.edu/or-face



BLOG POSTS

OR-FACE staff regularly publish contributions to the “Oregon and the Workplace” blog, which is part of the social media outreach of the Oregon Institute of Occupational Health Sciences.

Once a blog is published, it is shared through Twitter (868 followers), Facebook (346 likes), and the Institute newsletter (2100 subscribers).

OR-FACE contributed six blogs in 2018.



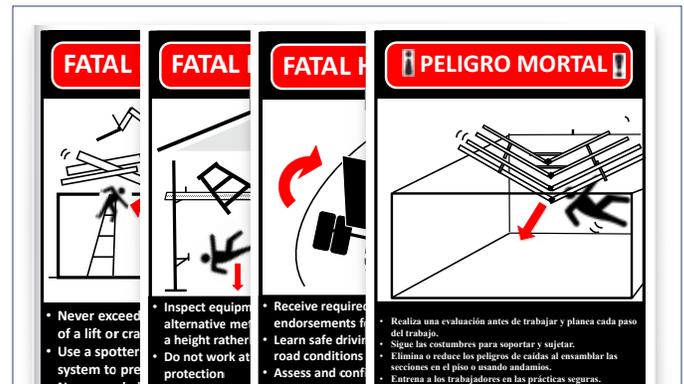
INVESTIGATIONS AND HAZARD ALERTS

One investigation report and one hazard alert were published in 2018. The investigation was on a construction worker killed when a trench collapsed. The hazard alert was a Spanish translation of “Can you identify hazards on your farm or ranch?”



COLLABORATIONS

OR-FACE publications were featured online in “Safety and Health” and “Safe Construction Network.” Toolbox Talks were distributed at the Construction Safety Summit and Portland’s annual Safety Stand-down.



TOOLBOX TALK GUIDES

One toolbox talk guide was produced in 2018 (and translated into Spanish). These guides are based on Oregon occupational fatality cases and are designed to help supervisors share fatal stories with their employees and discuss prevention recommendations. The front of each two-sided guide shows an image depicting the event with key prevention recommendations listed underneath. This side is shown to the workers and the other side provides text to help the supervisor tell the fatality story and identify preventive actions that can be taken at their own work-site.

CHARTS

In the sections of 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/Forestry/Fishing/Hunting (code 11) is separated into sub codes: Agriculture (codes 111, 112), forestry/ logging (code 113); and fishing/hunting/trapping (code 114).

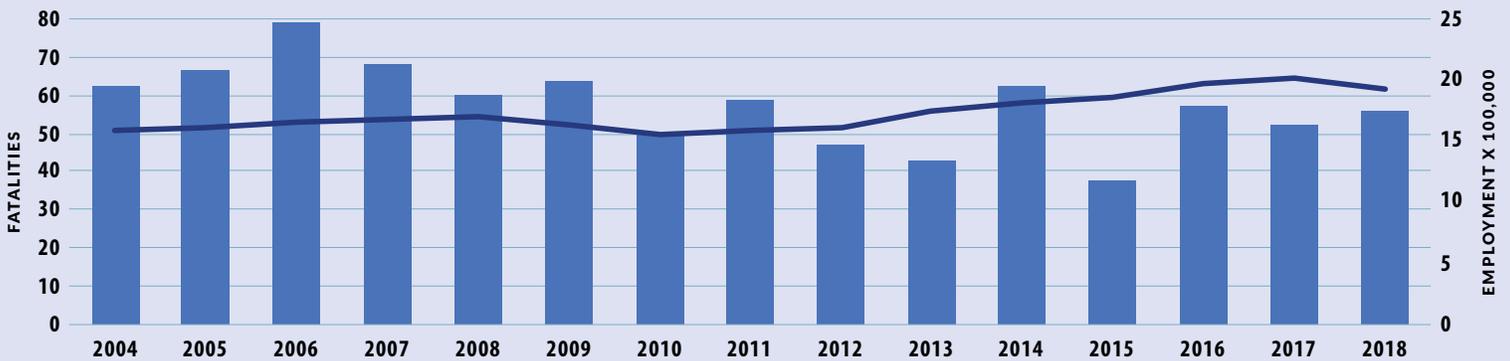
For occupation (SOC), Farming/Fishing/Forestry (code 45) is split into sub codes: Agriculture (code 45 2000), fishing and hunting (code 45 3000), forest/conservation (code 45 4010); and logging (code 45 4020).

For event (OIICS), Transportation is divided into the following codes: Aircraft (code 21), rail vehicle (code 22), animal/other non-motorized vehicle (code 23), pedestrian vehicular (code 24); and water vehicle (code 25).

For descriptive purposes in response to industry interest in Oregon, OR-FACE further delineates motorized land vehicle events (codes 26 and 27) into motor vehicle and mobile machinery.

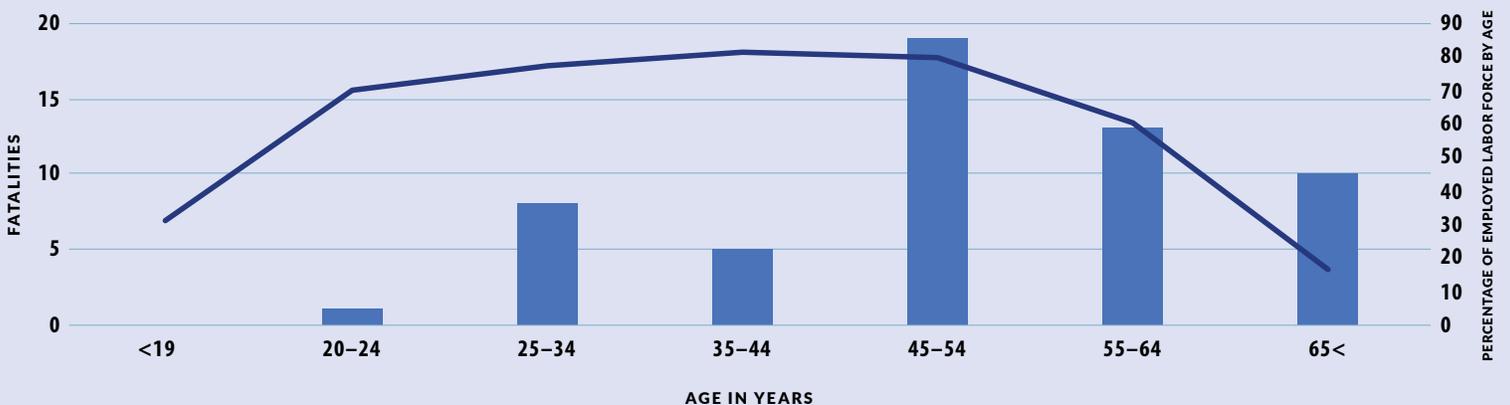
Oregon Employment Rate vs. Occupational Fatalities

The bars below reflect fatalities; the line reflects employment rate.



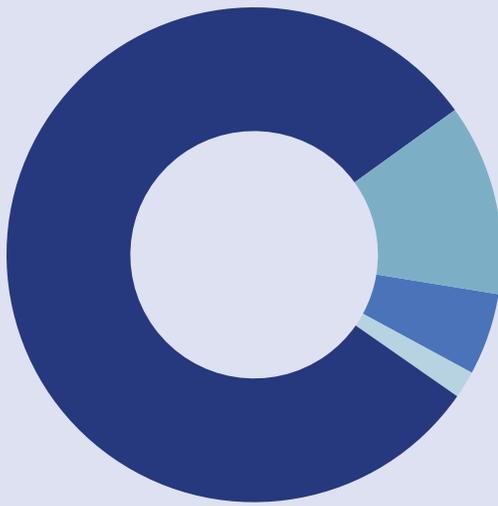
Occupational Fatalities in Oregon by Age Compared to Oregon Age Distribution of Labor Force, 2018

The bars below reflect fatal cases by age; the line reflects age distribution of labor force.



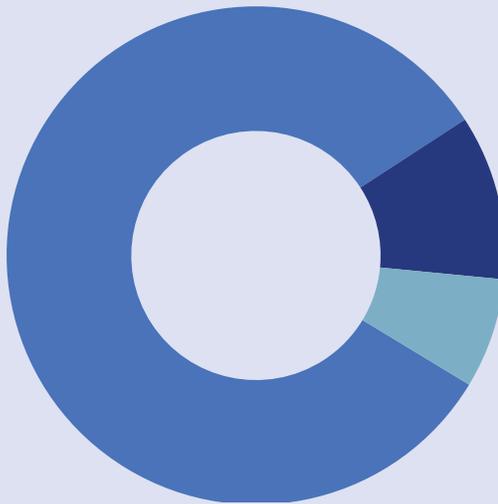
Source of labor force: BLS <https://www.bls.gov/lau/table14full18.pdf> Retrieved: August 2020. Source of fatality counts: OR-FACE

Demographics of Occupational Fatalities (55 total)



Race

- American Indian/Alaska Native | 5%
- Black/African American | 2%
- Unknown | 13%
- White | 80%



Ethnicity

- Not Hispanic/Latino | 82%
- Unknown | 7%
- Hispanic/Latino | 11%

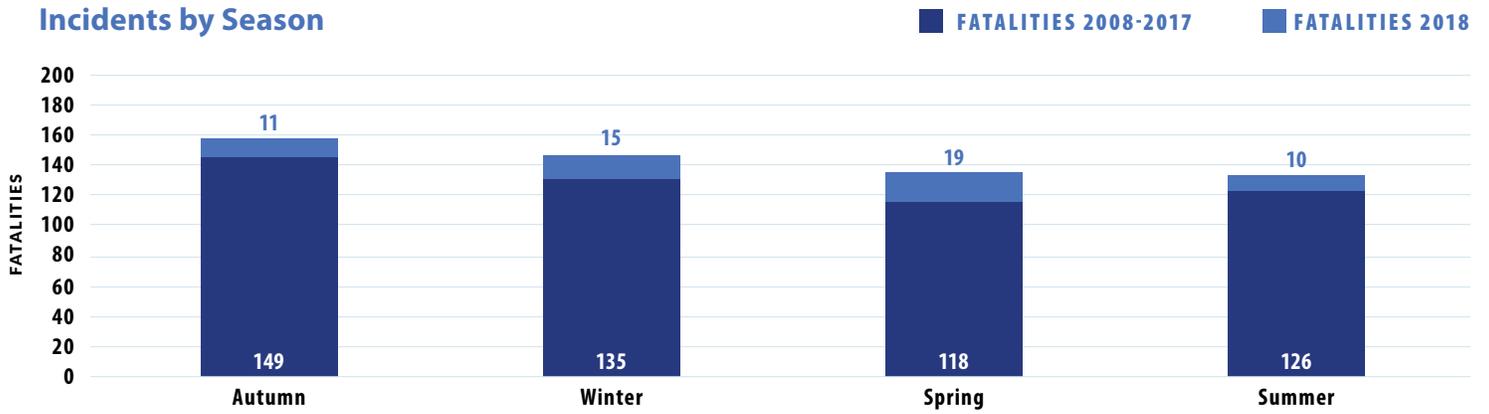


Gender

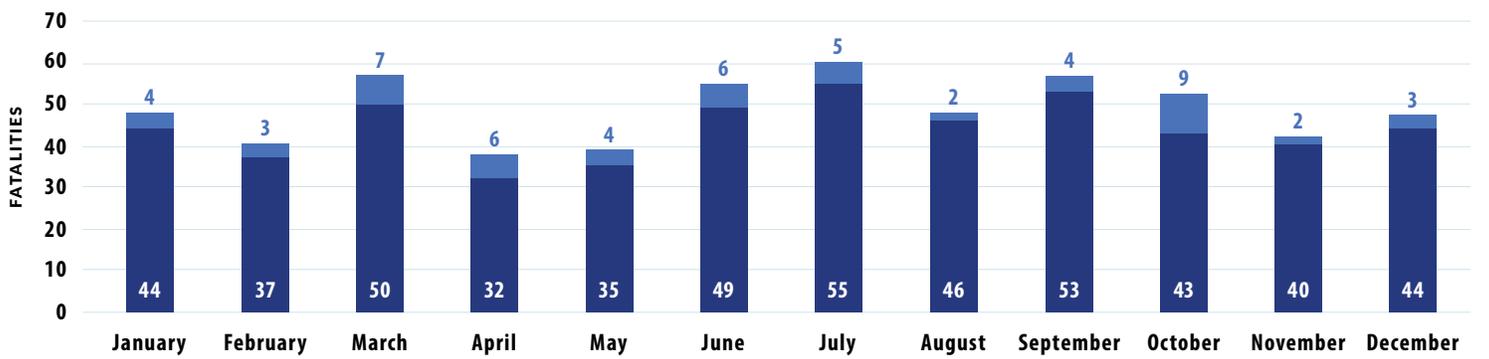
- Female | 5%
- Male | 95%



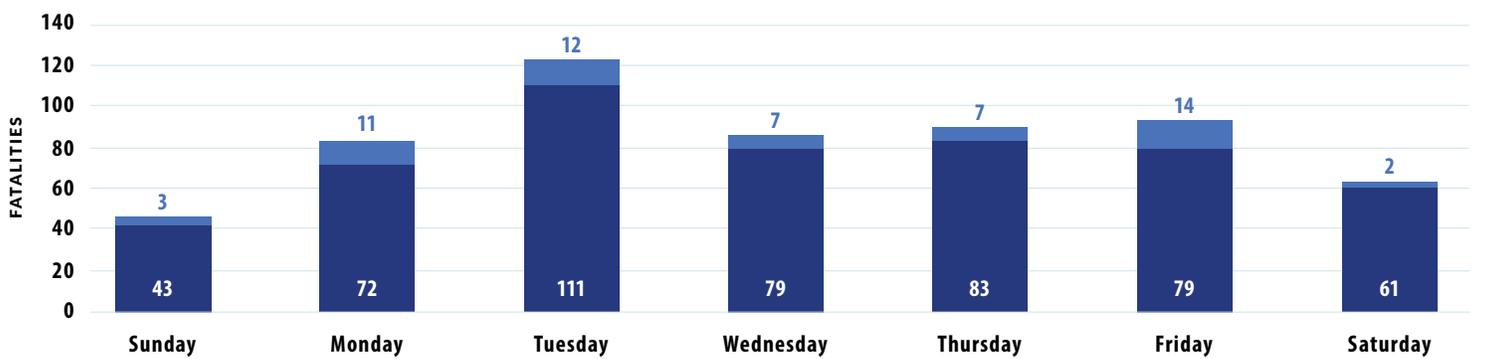
Incidents by Season



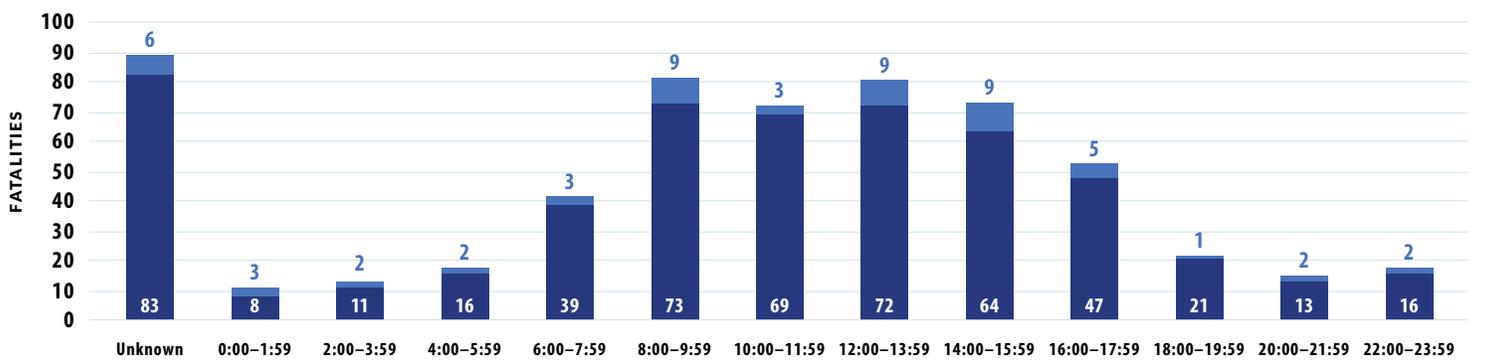
Incidents by Month



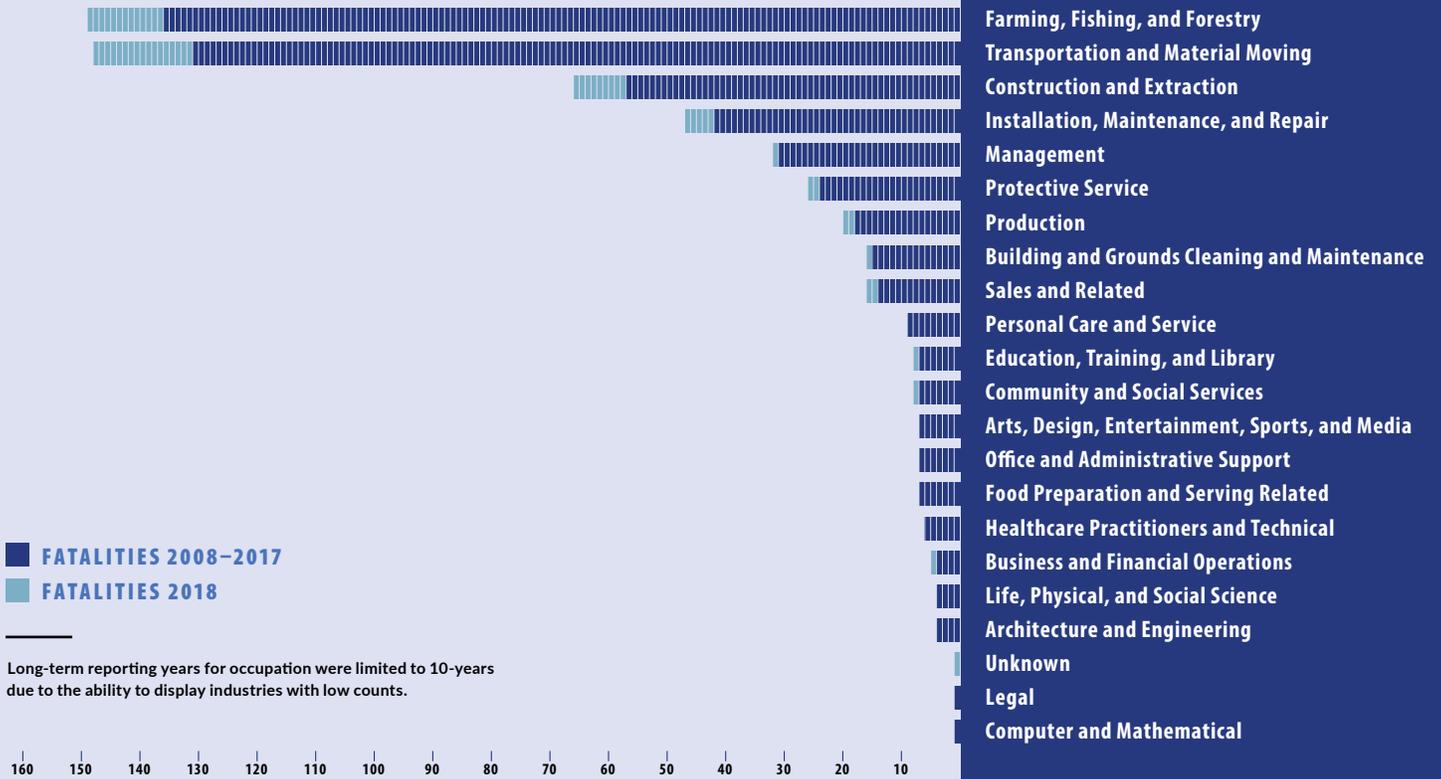
Incidents by Day of Week



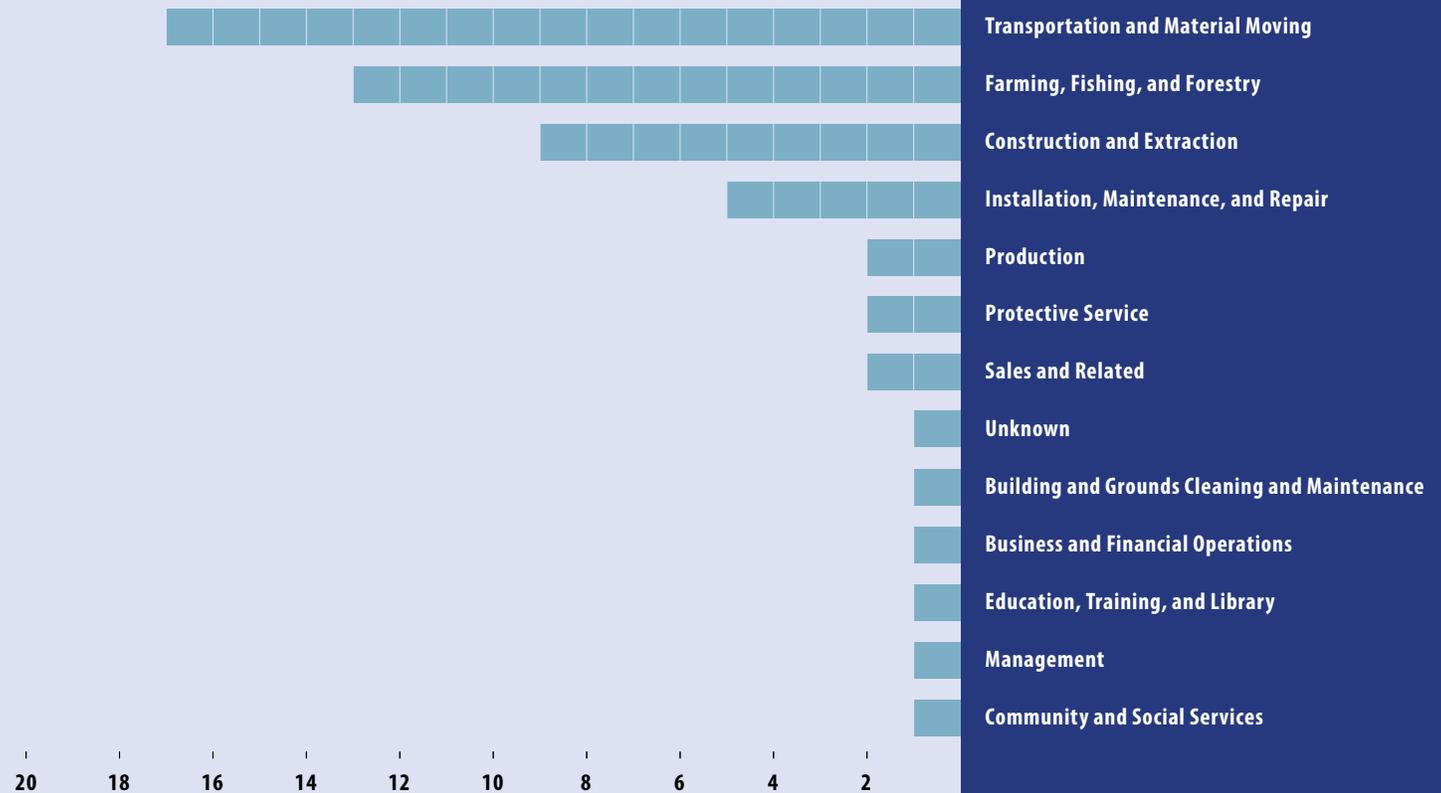
Incidents by Time of Day



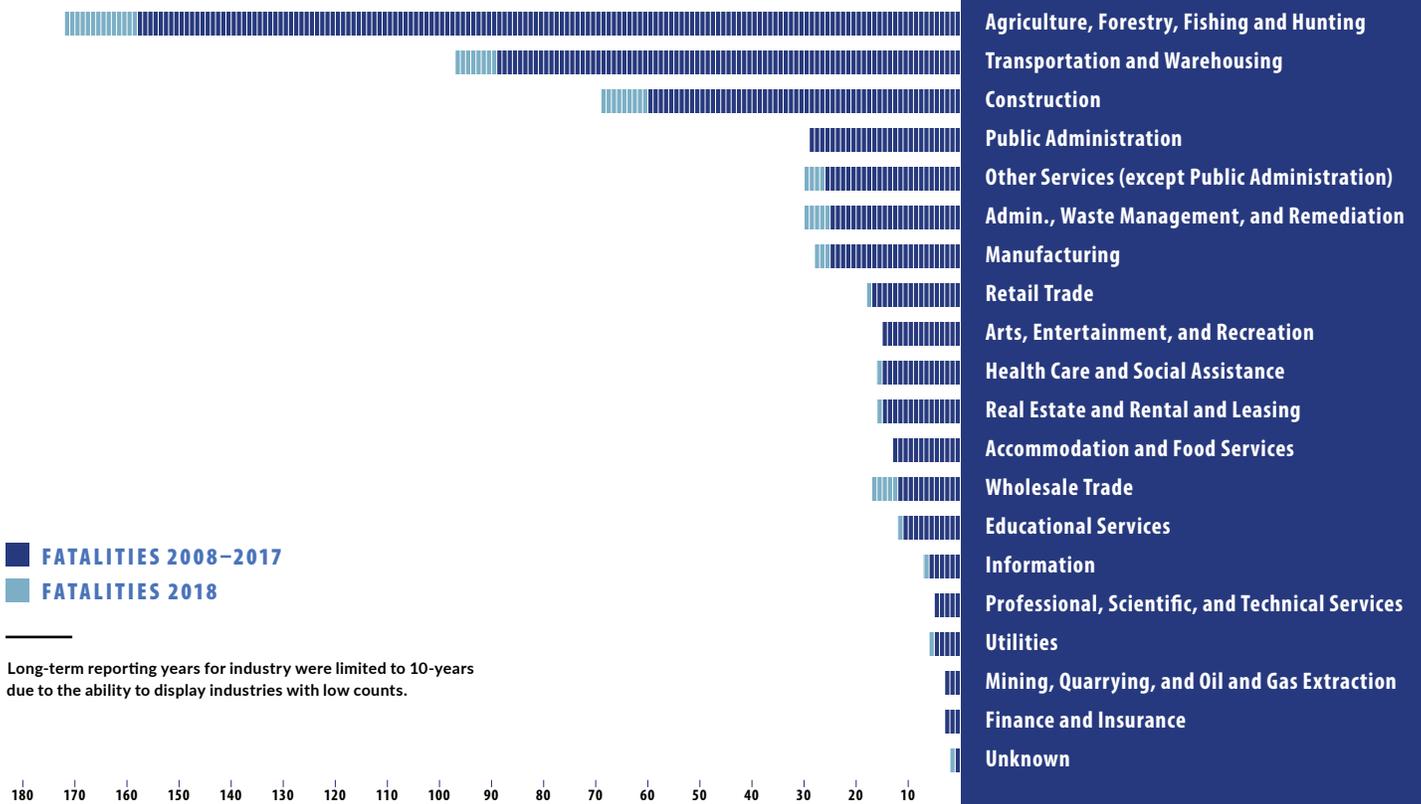
Fatalities by Occupation, 2008-2018



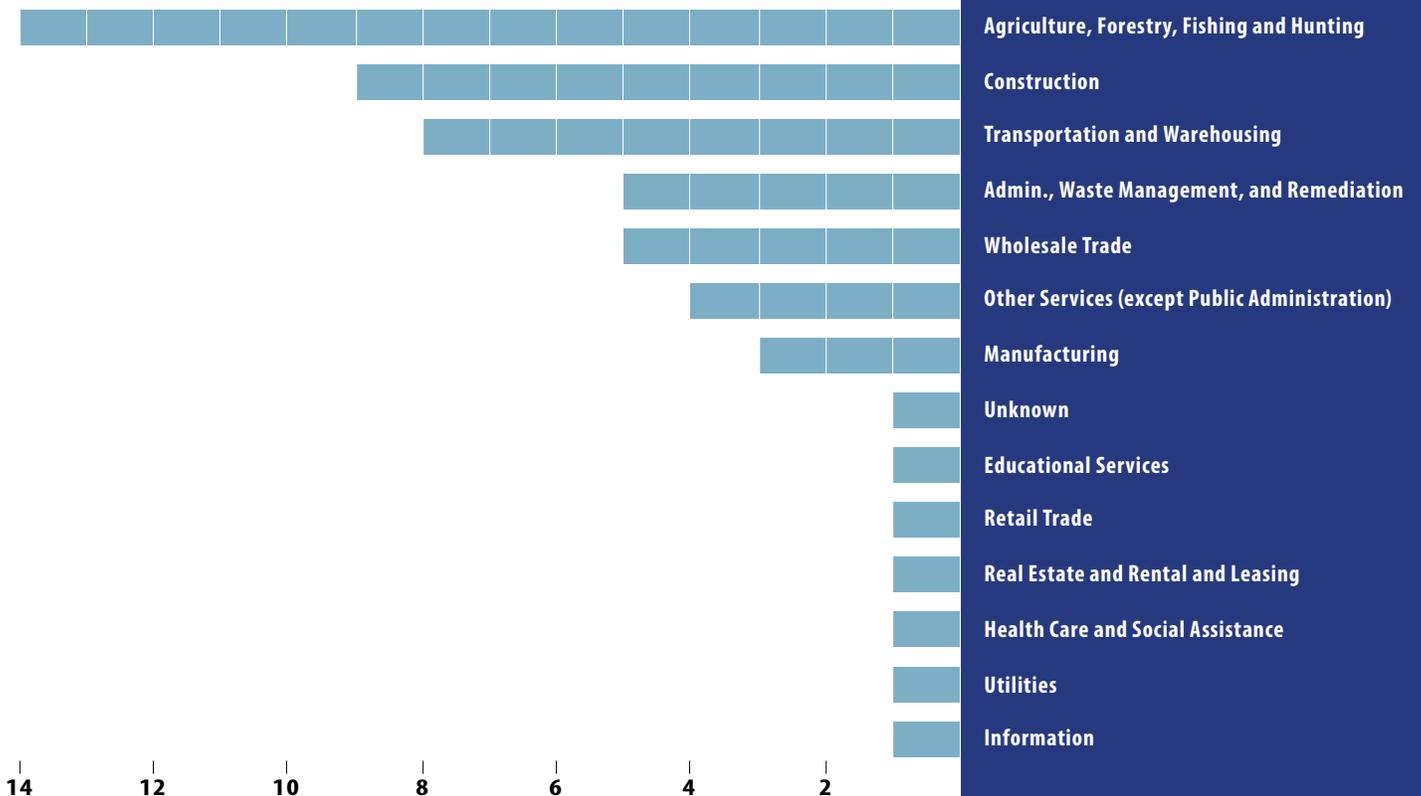
Fatalities by Occupation, 2018



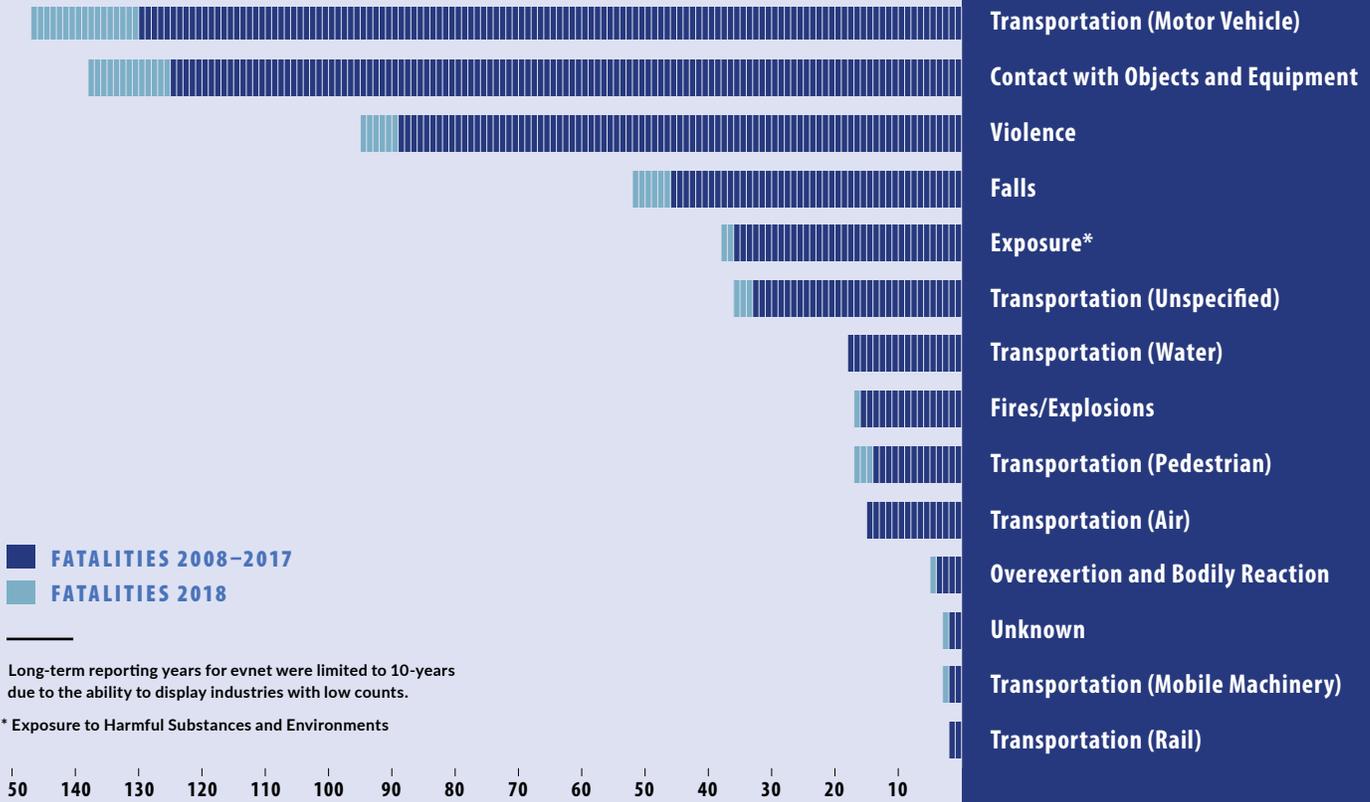
Fatalities by Industry, 2008-2018



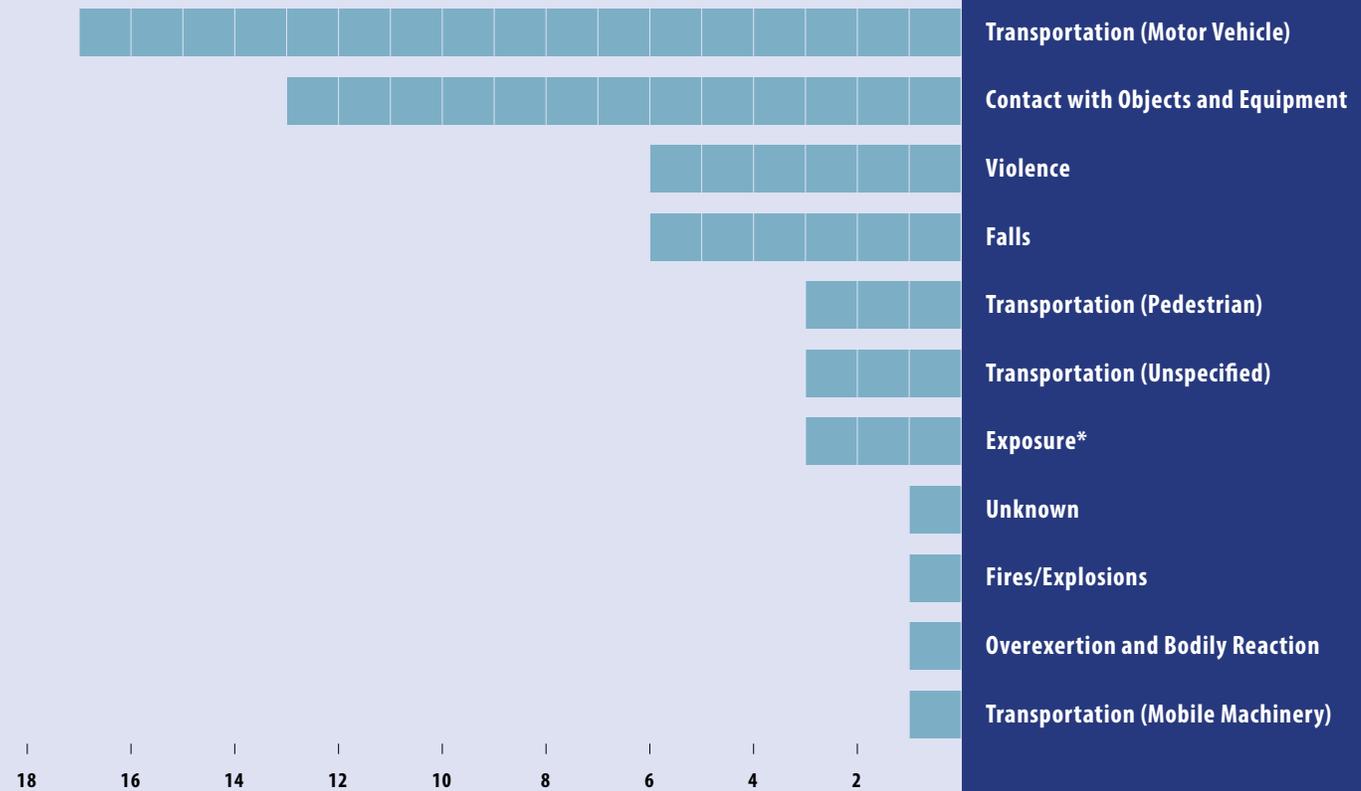
Fatalities by Industry, 2018



Fatalities by Event, 2008-2018



Fatalities by Event, 2018



Fatalities by Select Industries, 2008–2018

Agriculture

- Contact with Objects and Equipment
- Transportation (Motor Vehicle)
- Transportation (Water)
- Exposure*
- Fall
- Violence
- Fires/Explosions
- Transportation (Animal And Other)
- Transportation (Air)
- Unknown

Construction

- Fall
- Contact with Objects and Equipment
- Transportation (Roadway)
- Exposure*
- Transportation (Pedestrian)
- Violence
- Transportation (Non-roadway)
- Overexertion
- Transportation (Mobile Machinery)
- Transportation (Rail)
- Transportation (Air)

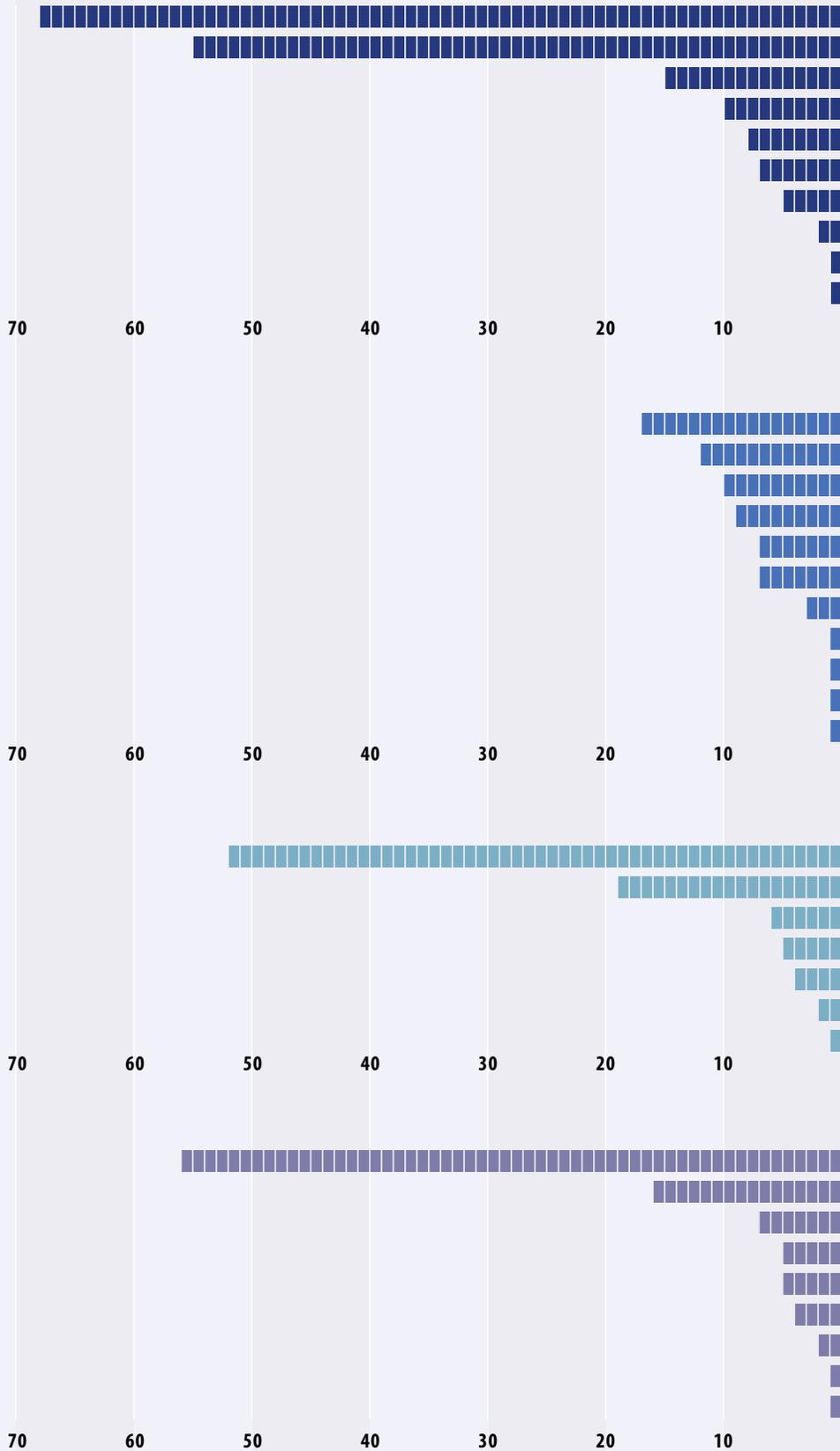
Forestry And Logging

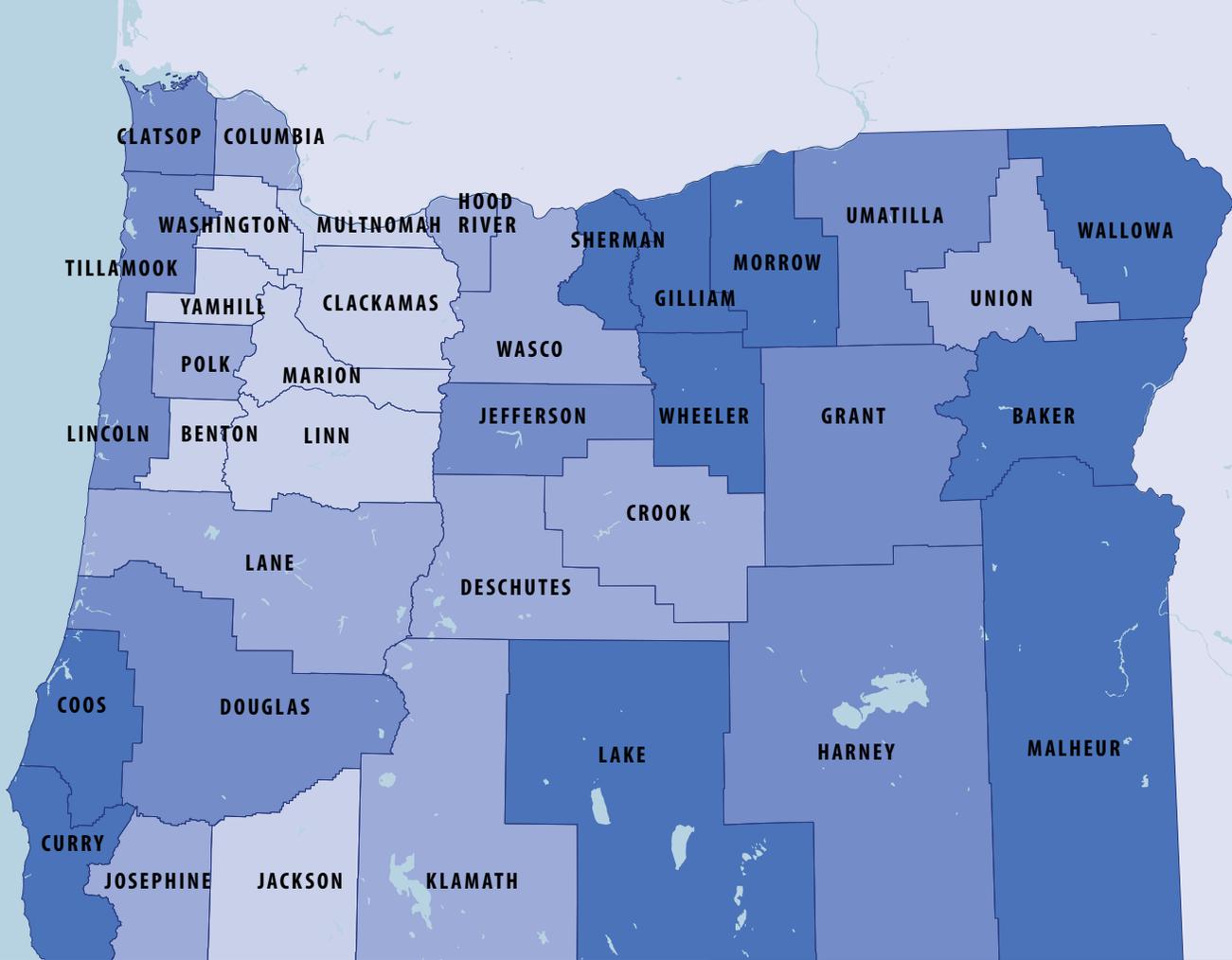
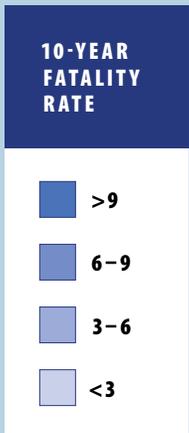
- Contact with Objects and Equipment
- Transportation (Roadway)
- Transportation (Non-roadway)
- Fall
- Exposure*
- Violence
- Fires And Explosions

Transportation

- Transportation (Roadway)
- Contact with Objects and Equipment
- Violence
- Exposure*
- Transportation (Pedestrian)
- Fall
- Transportation (Air)
- Fires/Explosion
- Transportation (Non-roadway)

* Exposure To Harmful Substances and Environments





Oregon county labor statistics, 10-year fatality trend, 2018 fatality count, and 10-year fatality rate.

	TOTAL POP. 2018	LABOR FORCE 2018	FATALITIES 2008-2018	FATALITIES 2018	10-YR RATE PER 100,000 WORKERS
Baker	16,765	6,751	11	0	15.58
Benton	93,590	46,727	8	2	2.14
Clackamas	419,425	210,191	35	1	1.74
Clatsop	39,200	18,496	12	3	7.69
Columbia	51,900	23,120	13	0	5.76
Coos	63,275	24,856	23	2	9.32
Crook	22,710	8,953	3	0	3.37
Curry	22,915	8,420	9	1	11.33
Deschutes	188,980	91,160	29	4	3.93

Table continues on following page >

2.90

2008-2018 OVERALL FATALITY RATE PER 100,000 EMPLOYEES

2.73

2018 OVERALL FATALITY RATE PER 100,000 EMPLOYEES

The employed Oregon labor force (as report by BLS) is used as a denominator for the fatality rate. The figure is adjusted to represent a rate of 100,000 full-time employees. Thus, the 10-year fatality rate is calculated by adding up all fatalities from every year, multiplying by 100,000, and then divided by the summed Oregon labor force across the 10 years. The rates in counties with low population density are highly variable year by year.

	TOTAL POP.	LABOR FORCE	FATALITIES	FATALITIES	10-YR RATE PER 100,000 WORKERS
	2018	2018	2008-2018	2018	
Douglas	111,735	44,054	24	6	6.65
Gilliam	1,985	825	2	0	20.81
Grant	7,400	2,921	3	0	9.55
Harney	7,380	3,329	2	1	8.93
Hood River	25,310	14,011	8	0	5.54
Jackson	219,200	99,404	25	0	2.50
Jefferson	23,560	9,635	5	3	8.60
Josephine	86,395	33,693	15	0	4.50
Klamath	67,960	27,720	15	0	5.12
Lake	8,115	3,384	4	1	14.44
Lane	375,120	173,399	52	5	3.19
Lincoln	48,210	20,056	13	0	6.03
Linn	125,575	56,053	14	2	2.88
Malheur	31,925	11,882	12	0	9.24
Marion	344,035	154,278	28	3	1.97
Morrow	11,885	5,496	7	0	12.01
Multnomah	813,300	436,194	52	6	1.31
Polk	82,100	37,986	10	2	3.26
Sherman	1,785	863	2	1	32.30
Tillamook	26,395	11,342	9	0	7.65
Umatilla	80,765	34,776	29	4	8.97
Union	26,885	11,325	6	1	5.77
Wallowa	7,175	3,204	3	0	9.00
Wasco	27,200	12,801	5	2	5.06
Washington	606,280	311,753	31	3	1.10
Wheeler	1,450	698	1	0	14.26
Yamhill	107,415	52,479	12	1	2.56

Population data sources: Portland State University Population Research Center and BLS Local Area. Unemployment Statistics. Retrieved August 2020.



ABSTRACTS

Fatal occupational incidents in Oregon by type of event in 2018

Contact With Objects and Equipment

Exposure to Harmful Substances or Environments

Falls, Slips, and Trips

Fires and Explosions

Nonclassifiable

Overexertion and bodily reaction

Transportation

Violence and Other Injuries by Persons or Animals

CONTACT WITH OBJECTS AND EQUIPMENT

DESCRIPTION	Struck by Pipe	SEASON	Winter
INDUSTRY	Construction of Buildings	COUNTY	Umatilla
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-10-1

A 49-year-old pipe fitter and crew were performing a 200-PSI hydrostatic test on a 12-inch diameter horizontal water pipe connecting two water storage tanks below ground. During the pressure test, the crew was unable to maintain the set pressure. The pipe fitter found a leak on the capped flange of a 12-inch diameter, six-foot vertical riser pipe thought to have been connected to the horizontal water pipe; the riser had been backfilled prior to the pressure test and was only 16 inches above grade. The pipe fitter attempted to tighten the bolts of the flange cap with an impact wrench during the pressure test. As he did so, the riser was suddenly thrust upward, pushing the impact driver into his chest and knocking him to the ground. Investigation revealed unfastened torque shear bolts which left the vertical riser unsecured to the horizontal water pipe below. The system was under approximately 175-PSI when the incident occurred. The pipe fitter died on the scene due to a spinal laceration of the thoracic aorta.

DESCRIPTION	Struck by Log	SEASON	Spring
INDUSTRY	Forestry and Logging	COUNTY	Coos
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-15-1

A 50-year-old rigging slinger died from blunt force chest and neck injuries while in the process of shovel logging, long line yarding, using the winch line to log. A choker setter pulled the line down to the rigging slinger, who was waiting for the chokers in order to set the next turn of logs. The rigging slinger set the turn and then cleared out to what he determined a safe distance and contacted the operator via the radio to inform him he could turn. The operator signaled he was going ahead by blowing a whistle. As the turn was being yarded uphill, the turn got hung-up on a small stump. One of the logs in the turn swung horizontally towards the rigging slinger, striking him on his upper body. He was pronounced dead on the scene.

DESCRIPTION	Struck by Vehicle	SEASON	Spring
INDUSTRY	Repair and Maintenance	COUNTY	Marion
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2018-19-1

A 31-year-old self-employed automotive technician died from open skull fractures and traumatic hemorrhagic shock while contracted to work on a vehicle. The deceased was under the car trying to remove the driver's side axle, when the car shifted and fell off the jack stands, ultimately crushing him. He was pronounced dead on the scene. The car had been in park, but the emergency brake had not been set while the car was sitting on the jack stands. The police report indicates that road conditions were dry at that time.

DESCRIPTION	Crushed by Forklift Mast	SEASON	Spring
INDUSTRY	Machinery Manufacturing	COUNTY	Clatsop
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2018-23-1

A 62-year-old mechanic was performing maintenance on a forklift in a saw shed. He placed some lumber pieces under the mast in order to self-jack the front wheels off the ground; this created clearance of about 10 inches or more between the mast and the concrete floor and allowed the wheels to spin freely. The mechanic was under the front of the raised forklift, attempting to lubricate the front drive shaft u-joint, when the lumber pieces failed; without support from jack stands or cribbing, the mast suddenly dropped down on him. The forklift (weighing about 14,180 pounds) crushed his upper chest, causing him to suffocate. He was subsequently found by coworkers and was pronounced dead on the scene.

DESCRIPTION	Crushed between Table and Plywood Press	SEASON	Spring
INDUSTRY	Wood Product Manufacturing	COUNTY	Multnomah
OCCUPATION	Production Occupations	OR-FACE NUMBER	OR 2018-26-1

A 57-year-old plywood press operator climbed on top of a loaded height-adjustable material table and appeared to reach into the machine to remove a piece of broken veneer. While the press operator was lying face down, he allegedly tripped the table's height adjusting sensor. The material table rose up until it crushed him between the table and the structure of the plywood press. He died on the scene from mechanical asphyxia.

DESCRIPTION	Caught by Dangle Head	SEASON	Spring
INDUSTRY	Forestry and Logging	COUNTY	Douglas
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-30-1

A 38-year-old was operating a fairly new Doosan log loading shovel converted into a log processor equipped with a 2008 Waratah (dangle head) that was not accurately measuring logs. The measuring wheel had fallen off, exposing disconnected electrical wires that had been attached to it. The operator was reportedly going to cover them with electrical tape to run the processor without the wheel, which had been repaired just a week prior. In addition, the dangle head had been reportedly malfunctioning for two weeks prior. To do this, the operator lowered the dangle head to the ground and exited the cab with the engine still running and the control arm was “up” (fully engaged); as a result, there was still power to all electronic and hydraulic controls. As the operator was standing in-between the open grapples of the dangle head, for an unknown reason the dangle head closed on the operator, compressing his torso. He died of asphyxia and rib and pelvic fractures.

DESCRIPTION	Caught by Drive Shaft	SEASON	Spring
INDUSTRY	Forestry and Logging	COUNTY	Douglas
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-17-1

A 49-year-old hooktender died while a logging crew attempted to unspool haulback line wrapped around the haulback shaft of a yarder. A yarder operator, a chaser, a rigging slinger, and the hooktender initially attempted to unspool the haulback line while the 071R Madil Yarder was off, but they were unable to completely do so manually. They decided to pull the haulback drum in reverse using a choker attached to the yarder’s haywire. The chaser first cleared out the west side of the yarder, then met up with the yarder operator and rigging slinger standing on the yarder deck above him. Before starting the engine of the yarder to begin reversing the haulback, the yarder operator called for all employees to get in the clear. No one had visual confirmation that the hooktender was in the clear. The hooktender was under the yarder where he had been originally when the four employees worked on the haulback line manually. When the yarder operator turned the yarder on, the hooktender’s baggy clothing became entangled in the driveshaft he’d been standing next to; the driveshaft pulled the hooktender towards it, wedging his body between the driveshaft and the deck above. The hooktender died on site due to compression asphyxia related to blunt force trauma of the chest. Crew members believed he was unaware that on this yarder model, the driveshaft constantly turns when the engine is on.

DESCRIPTION	Caught Between Two Bars of Festoon Rubber Processing Line	SEASON	Summer
INDUSTRY	Plastics and Rubber Products Manufacturing	COUNTY	Benton
OCCUPATION	Production Occupations	OR-FACE NUMBER	OR 2018-29-1

A 23-year-old rubber cutter was found caught between two bars of a festoon rubber processing line. The event was unwitnessed; however, circumstances suggested that he entered the festoon area to retrieve and redirect a rubber strip on a cooling bar that had passed the point where it should have fed onto a conveyor. It is believed that the worker raised his head between the moving cooling bars, and that the bars then forced his head against a structural support for an electrical panel. He was pronounced dead at the scene.

DESCRIPTION	Crushed by Landslide	SEASON	Summer
INDUSTRY	Specialty Trade Contractors	COUNTY	Curry
OCCUPATION	Extraction Workers	OR-FACE NUMBER	OR 2018-33-1

A 25-year-old rock driller was pioneering a road to the top of a mountain by drilling holes for explosives several feet deep into basalt rock. This was performed through horizontal drilling using a track-mounted, extendable boom rock drill. The drill arm controls were fixed on the side of the drill facing the 30 to 40-foot high vertical rock wall, putting the employee between the rock wall and the rock drill. In addition, only one 12 foot drill stick was used on the drill, as opposed to the normal 1.5 or 2 drill sticks, putting the rock drill closer to the rock wall. As the driller was drilling, a section of the rock wall next to him gave way, striking and burying him. The driller died at the scene from multiple blunt force injuries.

DESCRIPTION	Struck by Tree	SEASON	Autumn
INDUSTRY	Forestry and Logging	COUNTY	Harney
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-43-1

A 54-year-old lumber sorter was cutting a tree when it fell on him. The decedent was caught among branches and pinned by a limb face down, resulting in asphyxiation.

DESCRIPTION	Struck by Log	SEASON	Autumn
INDUSTRY	Forestry and Logging	COUNTY	Linn
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-49-1

A 48-year-old choker setter was struck by a 100-foot Douglas Fir tree length. The tree length was one of two that had been yarded to a 20-foot landing. Consequently, much of the tree length was cantilevered over the side of the landing, pointing downhill with the choker setter standing 200 feet below. The electronic choker holding the tree length in place suddenly released, and the tree length slid down the steep slope, hitting the choker setter in the head and eventually pinning him. The choker setter later died of multiple blunt force traumas. A second choker working nearby the first choker setter was also severely injured by the log but he survived. The electronic choker used on this particular tree length had been malfunctioning the day prior to the day of the incident.

DESCRIPTION	Struck by Log	SEASON	Autumn
INDUSTRY	Forestry and Logging	COUNTY	Benton
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-50-1

A 27-year-old choker setter ("Choker A") was setting a turn of logs on the far side of a steep draw in a 100-acre clear-cut unit. After setting the turn, he and another choker setter ("Choker B") moved down slope of the turn to the bottom of the draw, below large, bucked logs laying higher up the side of the draw. After the turn started moving towards the landing, another bucked log not associated with the turn broke loose from 100 feet up the slope above the two choker setters and started a chain reaction of at least 3 very large logs that rolled towards them. Choker B was struck in the chest by a log, which threw him into a small depression/hole. The butt end of another log struck Choker A in the head. The rigging slinger, who witnessed the event, attended to the Choker B first, then ran to the Choker A laying further down the hill; he found the victim unresponsive and not breathing. The victim died of blunt force head and extremity injuries. This crew normally worked smaller timber and was unfamiliar with the different hazards posed by large timber. Both Choker A and B had been employed with the company for less than a year.

DESCRIPTION	Caught by Pinch Point	SEASON	Autumn
INDUSTRY	Forestry and Logging	COUNTY	Douglas
OCCUPATION	Supervisors of Farming, Fishing, and Forestry Workers	OR-FACE NUMBER	OR 2018-54-1

A 57-year-old logging company owner died while checking for hydraulic leaks on a log processor. The owner instructed his son to operate the processor on a couple of logs while the owner looked through the boom opening at the back of the boom. The processing involved raising the boom high enough for each log to clear an adjacent bank to place them in storage. The owner's brother observed him looking face down through the boom opening, holding a baseball cap in his right hand; this likely was to block any light obscuring a good view but also may have prevented him from seeing some movement of the boom. After processing the logs, the owner's son exited the processor's cab and found the owner bleeding from his head. Evidence indicates that the owner's skull was partially crushed in a pinch point created between the elevated platform surface and the aftermarket large filter assembly box (mounted near the base of the boom's back side) while the boom was raised.

EXPOSURE TO HARMFUL SUBSTANCES OR ENVIRONMENTS

DESCRIPTION	Exposure to Toxic Gas	SEASON	Spring
INDUSTRY	Administrative and Support Services	COUNTY	Washington
OCCUPATION	Building and Grounds Cleaning and Maintenance Occupations	OR-FACE NUMBER	OR 2018-20-1

A 43-year-old landscape technician inhaled excessive amounts of toxic gas (1,1-difluoroethane), and died due to suffocation.

DESCRIPTION	Drowning	SEASON	Summer
INDUSTRY	Social Assistance	COUNTY	Linn
OCCUPATION	Community and Social Services Occupations	OR-FACE NUMBER	OR 2018-36-1

A 34-year-old student ministries director was overseeing a swimming event with youth at a local river. According to reports, the student ministries director was seen struggling in the water and called out for help. Subsequently, his coworker and a student went to help him, but ultimately were not able to bring him ashore. Fire department personnel were able to locate his body and he was pronounced dead on the scene. The cause of death was reported to be asphyxia by drowning.

DESCRIPTION	Electrocution	SEASON	Autumn
INDUSTRY	Specialty Trade Contractors	COUNTY	Washington
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-42-1

A 28-year-old electrician was electrocuted while working on a scaffold inside of a storefront. The employee had been changing and/or rewiring light fixtures just prior to being found lying on the scaffold and unresponsive by coworkers. The electrician died of cardiac dysrhythmia caused by the electrocution.

FALLS, SLIPS, AND TRIPS

DESCRIPTION	Fall from Slip/Trip	SEASON	Winter
INDUSTRY	Forestry and Logging	COUNTY	Lane
OCCUPATION	Forest, Conservation, and Logging Workers	OR-FACE NUMBER	OR 2018-03-1

A 35-year-old logging company owner was contracted to fell trees and cut them into 40 feet lengths from the butt end. The owner had felled a tree up on a knoll that ended up cantilevered with the small end approximately 30-40 feet off the steep ground below. He walked out to buck the log at the 40-foot mark and his blade got pinched. He got his ax to cut his saw free. When the end broke free, more than likely, it caused the portion of the log he was standing on to whip. His saw and ax were found below, but he was found some distance away, further down the hill.

DESCRIPTION	Fall from Elevated Level	SEASON	Winter
INDUSTRY	Specialty Trade Contractors	COUNTY	Deschutes
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-04-1

A 74-year-old plumber sustained severe intracranial hemorrhaging and skull fractures in an apparent fall from a ladder. He was found dead at the apparent fall site several hours later.

DESCRIPTION	Fall Through Skylight Kills Laborer	SEASON	Spring
INDUSTRY	Crop Production	COUNTY	Marion
OCCUPATION	Agricultural Workers	OR-FACE NUMBER	OR 2018-27-1

A 63-year-old farm laborer fell 26 feet through the rooftop skylight of a seed processing building to the concrete floor below. He died at the fall site from multiple blunt force injuries.

DESCRIPTION	Fall from Elevated Level	SEASON	Summer
INDUSTRY	Repair and Maintenance	COUNTY	Polk
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-38-1

A 57-year-old independent contractor was working on a billboard when he lost his balance and fell off the catwalk attached to a roadside sign. He fell 75 feet to the ground, sustained a traumatic chest injury, and was pronounced dead at the scene.

DESCRIPTION	Fall from Elevated Level	SEASON	Autumn
INDUSTRY	Specialty Trade Contractors	COUNTY	Lane
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2018-02-1

A 72-year-old worker died while helping seat corrugated pipe into a 40-inch deep trench spanning 28 inches in width. At the time, the worker was kneeling at the side of the trench, watching the owner of the property use a shovel to shave the side of the excavation to make room for the pipe. Suddenly, the worker fell face-forward across the trench and struck his forehead on the upper edge of the trench wall. The worker died of blunt force cervical trauma. The worker had a preexisting medical condition related to his neck that was frustrated when he fell across the trench, potentially leading to the fatal injury.

DESCRIPTION	Fall from Elevated Level	SEASON	Autumn
INDUSTRY	Construction of Buildings	COUNTY	Marion
OCCUPATION	Management Occupations	OR-FACE NUMBER	OR 2018-51-1

The 55-year-old chairman of a construction company died after a fall to a lower level. The deceased accessed the metal roof of a building, and was walking toward the area where a leak was suspected when the roof gave way and he fell 18 feet to the concrete surface below. He was pronounced dead at the scene.

FIRES AND EXPLOSIONS

DESCRIPTION	Agricultural Worker Dies from Wildfire Burns	SEASON	Summer
INDUSTRY	Crop Production	COUNTY	Wasco
OCCUPATION	Agricultural Workers	OR-FACE NUMBER	OR 2018-35-1

A 64-year-old agricultural worker was creating a fire line at the edge of a wheat field with a four-wheel drive tractor towing a rock flex disc harrow. On his second pass, he followed the contours of the first pass, which had come close to the edge of a 45-degree embankment. Toward the end of his second pass with the tractor, the tractor inadvertently traveled over the edge of the embankment and became stuck. It is likely that the worker did not see the edge of the embankment, as visibility was reduced due to extreme fire conditions. Evidence indicates that the front of the tractor made impact with a bank shortly after and that the driver stayed and attempted to free the tractor, which then slid several feet further down the embankment. The worker was caught in the encroaching wildfire and died at the side of the tractor with extensive thermal injuries. Although the worker was skilled at driving tractors and had built fire lines on three previous occasions, he was not trained in firefighting, nor was he given proper firefighting personal protective equipment.

NONCLASSIFIABLE

DESCRIPTION	Struck by Swinging Block	SEASON	Summer
INDUSTRY	Unknown	COUNTY	Unknown
OCCUPATION	Unknown	OR-FACE NUMBER	OR 2018-56-1

A 63-year-old heavy equipment mechanic died from complications of a seizure disorder. The disorder was the result of a previous on-the-job incident in which the mechanic was struck in the head by a suspended, swinging block and tackle.

OVEREXERTION AND BODILY REACTION

DESCRIPTION	Injured Worker Dies in Hospital of Pulmonary Embolism	SEASON	Spring
INDUSTRY	Specialty Trade Contractors	COUNTY	Multnomah
OCCUPATION	Helpers, Construction Trades	OR-FACE NUMBER	OR 2018-14-1

A 26-year-old working for a demolition and concrete removal company experienced pain while picking up a 10-15 lb. HVAC part. The worker went to the hospital that day, where it was determined that she had a pinched nerve. A week later, the worker went back to the hospital where it was determined that she had a multilevel intervertebral disc herniation and needed immediate surgery. The worker died in the hospital from a pulmonary embolism.

TRANSPORTATION

DESCRIPTION	Motor Vehicle Accident	SEASON	Winter
INDUSTRY	Administrative and Support Services	COUNTY	Deschutes
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2018-01-1, 2

Two field technicians, a 34-year-old driver and a 47-year-old passenger were traveling in a rental vehicle that lost traction and slid sideways while attempting to pass on a snow-covered highway. The vehicle then struck the front of a pickup truck towing an enclosed trailer and traveling in the opposite direction. Both technicians were pronounced deceased at the scene.

DESCRIPTION	Laborer Ejected from SUV	SEASON	Winter
INDUSTRY	Support Activities for Agriculture and Forestry	COUNTY	Umatilla
OCCUPATION	Agricultural Workers	OR-FACE NUMBER	OR 2018-05-1

A 48-year-old agricultural laborer was driving an eastbound SUV which, for unknown reasons, left the roadway and rolled over several times. He was not wearing a safety belt and was ultimately ejected from the vehicle. When emergency personnel arrived on scene, the SUV was fully engulfed in flames. The agriculture laborer was pronounced dead at the scene.

DESCRIPTION	Motor Vehicle Accident	SEASON	Winter
INDUSTRY	Merchant Wholesalers, Durable Goods	COUNTY	Union
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-06-1

A 52-year-old semi-truck driver was towing an unloaded flatbed trailer when he failed to negotiate a sweeping right-hand curve connecting I-84 to I-82. He was unable to keep the truck on the roadway, and the truck and trailer traveled diagonally to the left down a slight slope. The front of the truck then dug into the ground as the truck rolled, springing the driver's side door open. The driver was ejected from the cab and was crushed by the doorjamb. He died at the scene due to asphyxiation. The truck driver was not wearing a safety belt at the time of the accident.

DESCRIPTION	Delivery Driver Backed Over by Own Car	SEASON	Winter
INDUSTRY	Publishing Industries (except Internet)	COUNTY	Clatsop
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-07-1

A 50-year-old newspaper delivery driver attempted to drive up an icy hill, but her passenger vehicle kept sliding backwards. She then stopped her vehicle, got out to place de-icer behind her car, and it rolled backwards onto her; according to reports, the car was not placed in park beforehand. The delivery driver died on-scene from traumatic positional asphyxia.

DESCRIPTION	Motor Vehicle Accident	SEASON	Winter
INDUSTRY	Truck Transportation	COUNTY	Sherman
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-09-1

A 49-year-old semi-truck driver traveling southbound was hauling two tank trailers containing raw milk when another tractor trailer going northbound lost control on a slight curve sloping downward and slid into the southbound lane; the southbound semi-truck driver then struck the northbound tractor trailer. This caused the northbound tractor trailer to flip onto its passenger side and caused the cab of the southbound tractor trailer to be severely damaged and its cab to collapse. Just before the accident, the northbound tractor trailer had either completely passed another northbound tractor trailer or was just about to do so. Also, a police report and an eye-witness account indicate that road conditions may have been icy. The semi-truck driver traveling southbound died at the scene due to blunt force trauma. The employees in the northbound tractor received non-life-threatening injuries.

DESCRIPTION	Struck by Vehicle	SEASON	Winter
INDUSTRY	Administrative and Support Services	COUNTY	Multnomah
OCCUPATION	Protective Service Occupations	OR-FACE NUMBER	OR 2018-13-1

A 73-year-old security guard was crossing a street at 4:21 am as part of his regularly assigned duties, when he was struck by a passenger vehicle at a marked crosswalk, causing a blunt force injury to his head. Video footage indicates that the traffic signal for the passenger vehicle that struck the guard was green. In addition, no high-visibility vest was found on the guard or near the accident site. The security guard was pronounced dead at the scene.

DESCRIPTION	Crushed by Skid Steer Cab	SEASON	Spring
INDUSTRY	Construction of Buildings	COUNTY	Multnomah
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-08-1

A 34-year-old construction operator died from compression asphyxia while he was in the process of installing helical piers with a skid steer using a helical hydraulic head attachment. The operator tried to operate the skid steer standing outside of the cab and was crushed between the skid steer cab and the front frame rail cross member from the skid steers lift arms. He was pronounced dead at the scene.

DESCRIPTION	Crash into River Causes Drowning	SEASON	Spring
INDUSTRY	Support Activities for Transportation	COUNTY	Coos
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-16-1

A 66-year-old pilot truck driver drifted off the highway, down a steep embankment, and into a river where he drowned. He was wearing a safety belt. Medical reports indicate the driver was intoxicated at the time of the crash.

DESCRIPTION	Sales Representative in Head-on Collision	SEASON	Spring
INDUSTRY	Merchant Wholesalers, Nondurable Goods	COUNTY	Clatsop
OCCUPATION	Sales and Related Occupations	OR-FACE NUMBER	OR 2018-18-1

A 54-year-old sales representative was driving a passenger vehicle to his company's warehouse, when for unknown reasons, another vehicle driving in the opposite direction crossed over the highway center median and hit the victim's vehicle head on. The sales representative died at the scene.

DESCRIPTION	Motor Vehicle Accident	SEASON	Spring
INDUSTRY	Truck Transportation	COUNTY	Polk
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-21-1

A 67-year-old log truck driver was driving a fully loaded truck on Highway 99, when suddenly a pick-up truck pulled out onto the highway in front of him. The log truck driver attempted to stop; however, he hit the pick-up truck and both vehicles went into a 6-foot deep ditch. The impact crushed the log truck driver, and he died at the scene of the accident.

DESCRIPTION	Motor Vehicle Accident	SEASON	Spring
INDUSTRY	Transit and Ground Passenger Transportation	COUNTY	Jefferson
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-22-1

A 54-year-old shuttle service driver lost control of his vehicle, resulting in a single vehicle rollover collision. The shuttle service driver was restrained at the time of the accident. He was pronounced dead at the scene from a cervical spine fracture.

DESCRIPTION	Motor Vehicle Accident	SEASON	Spring
INDUSTRY	Truck Transportation	COUNTY	Lake
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-24-1

A 63-year-old truck driver was hauling a load northbound at approximately 50 mph (in a 55 mph zone), when the rear passenger side tires on his trailer drifted off the narrow highway. According to one eye-witness, the trailer struck a driveway as the truck driver was attempting to get the trailer back onto the asphalt, which caused the trailer to rock to the left (driver's side). The truck and trailer subsequently rolled and landed completely upside-down, which crushed the cab and caused fatal blunt force head trauma. Although the driver was not wearing a safety belt, this was not thought to have contributed to the fatality.

DESCRIPTION	Motor Vehicle Accident	SEASON	Spring
INDUSTRY	Rental and Leasing Services	COUNTY	Multnomah
OCCUPATION	Material Moving Workers	OR-FACE NUMBER	OR 2018-28-1

A 51-year-old rental car service agent was preparing to wash a rental vehicle when, just as he was entering the car wash, his vehicle braked unnecessarily. The vehicle then accelerated at a high rate of speed and passed through and out the other end of the car wash before finally crashing into a concrete barrier outside the car wash bay and stopping there. The vehicle was equipped for accessibility, with hand controls on the steering wheel for acceleration and braking. After the accident, the vehicle was apparently unable to be turned off by other personnel, possibly due to the accelerator being stuck. The service agent died on-scene from blunt force injuries to the torso. Complications from existing cardiomegaly and obesity may have been contributing factors in the service agent's death.

DESCRIPTION	Motor Vehicle Accident	SEASON	Summer
INDUSTRY	Specialty Trade Contractors	COUNTY	Lane
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-25-1

A 63-year-old roofer died from blunt force chest trauma. The deceased was the driver of a pickup truck that left the roadway and crashed.

DESCRIPTION	Sedan Collision with Semi Truck Kills Both Drivers	SEASON	Summer
INDUSTRY	Truck Transportation	COUNTY	Clackamas
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-31-1

A 49-year-old semi-truck driver towing a wood-chip trailer died in a collision with a sedan. The westbound semi-truck was coming out of a posted 45 MPH left hand highway curve when an eastbound passenger sedan crossed over the double yellow center lines and struck the semi-truck in the left front portion and side, rupturing the driver's side fuel tank of the semi-truck and causing immediate ignition of its fuel. The semi-truck then crossed over two eastbound lanes and down an embankment, colliding with two trees and continuing to burn until the fire department arrived. Whether the driver was conscious after the impact could not be determined. Additional evidence indicates that the collision may have impaired the truck, affecting the driver's ability to steer had he been conscious. Lastly, road conditions were clear with dry pavement and no fog, and it was dark when the accident occurred. The driver of the sedan died upon impact with the semi-truck.

DESCRIPTION	Motor Vehicle Accident	SEASON	Summer
INDUSTRY	Religious, Grantmaking, Civic, Professional, and Similar Organizations	COUNTY	Lane
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-32-1

An 81-year-old volunteer delivery truck driver died from multiple blunt force injuries. The deceased was driving eastbound and for unknown reasons failed to negotiate a slight left-hand turn, causing the truck to travel off of the highway, down an embankment and across a side road before colliding into a large oak tree. The truck driver was pronounced dead at the scene.

DESCRIPTION	Motor Vehicle Accident	SEASON	Summer
INDUSTRY	Forestry and Logging	COUNTY	Yamhill
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-39-1

An 81-year-old logging truck driver died from blunt force trauma after his truck veered off the road and struck a tree. According to reports, the truck driver possibly suffered a medical problem, leading to the crash. He was pronounced dead at the scene.

DESCRIPTION	Union Resentative Dies in Head-on Collision	SEASON	Summer
INDUSTRY	Religious, Grantmaking, Civic, Professional, and Similar Organizations	COUNTY	Jefferson
OCCUPATION	Business and Financial Operations Occupations	OR-FACE NUMBER	OR 2018-40-1

A 52-year-old union representative was driving on an undivided highway to a meeting when a Ford E350 traveling in the opposite direction crossed the center line and struck his SUV. He died on-scene from blunt force trauma.

DESCRIPTION	Motor Vehicle Accident	SEASON	Summer
INDUSTRY	Merchant Wholesalers, Nondurable Goods	COUNTY	Wasco
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-41-1

A 50-year-old delivery driver sideswiped a guard rail at approximately 1:50 a.m. while driving a semitruck on a routine delivery route along the interstate. The truck first veered right and then appeared to have ridden the guardrail for 80 feet until the guard rail ended. After the guard rail ended, the truck continued veering to the right and collided with a rock hillside and caught fire. The cause of death was determined to be accidental. A witness driving behind the truck described no signs of poor driving by the delivery driver prior to the accident. In addition, maintenance logs and a pre-trip inspection checklist indicate that the semitruck and trailer were in good working order when the driver began his shift. The driver had been approximately one hour into his shift when the accident occurred, and there were no skid marks at the accident scene. He died of blunt force chest, abdominal, and extremity injuries as a result of the crash.

DESCRIPTION	Struck by Vehicle	SEASON	Autumn
INDUSTRY	Truck Transportation	COUNTY	Umatilla
OCCUPATION	Supervisors of Transportation and Material Moving Workers	OR-FACE NUMBER	OR 2018-45-1

A 74-year-old freight trucking company owner died while trying to get the air brakes on one of his semi-trucks to release. The truck had sat idle for three months before the owner began preparing it for harvest season. The owner was able to start the truck but unable to get the parking brakes to release. With the transmission in neutral, the brake lever knob still pushed in, and no chocks under the tires, the owner exited the still-running semi-truck and crawled under it to investigate. As a result of either the air pressure breaking the brakes free or a pressure leak being closed, the truck began to roll away. The owner was either already crawling out or tried to crawl out but was struck by the passenger side drive tires. He died of asphyxiation and exsanguination related to blunt trauma to the upper torso and upper spine.

DESCRIPTION	Semi Driver Dies While Hauling Cattle on Interstate	SEASON	Autumn
INDUSTRY	Truck Transportation	COUNTY	Unknown
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-46-1

A 46-year-old semi-truck driver towing a stock trailer with 28 head of cattle was traveling on the interstate when, for unknown reasons, she left the roadway, struck the guardrail, and overturned. She sustained blunt force trauma as a result of the accident and was pronounced dead at the scene.

DESCRIPTION	Motor Vehicle Accident	SEASON	Autumn
INDUSTRY	Merchant Wholesalers, Nondurable Goods	COUNTY	Douglas
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-48-1

A 59-year-old semi-truck driver struck a large cow on the highway while towing double fuel tanks carrying fuel. After striking the cow, the truck lost control, traveled off the roadway, and struck a power pole. The driver died at the scene from blunt force trauma of the head, neck, and torso.

DESCRIPTION	Garbage Truck Tips and Strikes Tree	SEASON	Winter
INDUSTRY	Waste Management and Remediation Services	COUNTY	Douglas
OCCUPATION	Motor Vehicle Operators	OR-FACE NUMBER	OR 2018-55-1

A 51-year-old garbage truck driver was heading eastbound on his usual route when, for unknown reasons, his truck failed to negotiate a slight, sweeping curve to the right. The truck then crossed the westbound lane and exited the roadway on the north roadside shoulder. After exiting the roadway, it flipped onto its left side and slid until the cab of the truck struck a standing tree, crushing the top of the cab inward against the driver. The driver died on-scene from a blunt force head injury. Evidence indicates that the vehicle's rear brakes may have been applied and/or may have locked up just prior to the truck tipping over. Conditions that day were wet, rainy, and windy. Although the driver was not wearing a safety belt, this was not thought to have contributed to the fatality.

VIOLENCE AND OTHER INJURIES BY PERSONS OR ANIMALS

DESCRIPTION	Electrician Dies from Self-Inflicted Gunshot Wound	SEASON	Spring
INDUSTRY	Utilities	COUNTY	Jefferson
OCCUPATION	Construction Trades Workers	OR-FACE NUMBER	OR 2018-12-1

A 55-year-old electrician died from a self-inflicted gunshot wound to the left chest with a handgun.

DESCRIPTION	Gunshot Wound	SEASON	Spring
INDUSTRY	Educational Services	COUNTY	Multnomah
OCCUPATION	Education, Training, and Library Occupations	OR-FACE NUMBER	OR 2018-26-1

A 63-year-old chef instructor was opening up a culinary school in the morning, when an intruder appeared and shot him once in the chest and once in the abdomen. He died at the scene.

DESCRIPTION	Gunshot Wound	SEASON	Autumn
INDUSTRY	Administrative and Support Services	COUNTY	Lane
OCCUPATION	Protective Service Occupations	OR-FACE NUMBER	OR 2018-44-1

A 69-year-old security guard was shot by another person outside of a bar. He died at the scene from his injuries.

DESCRIPTION	Gunshot Wound	SEASON	Autumn
INDUSTRY	Animal Production and Aquaculture	COUNTY	Umatilla
OCCUPATION	Agricultural Workers	OR-FACE NUMBER	OR 2018-52-1

A 35-year-old agricultural worker was operating a tractor to move feed from a barn to holding pens for dairy cows. While performing this task, another employee walked out of a milking barn and shot the agricultural worker multiple times. The agricultural worker died on the scene. The two workers had a history of interpersonal conflict.

DESCRIPTION	Car Salesman Dies from Gunshot Wound	SEASON	Autumn
INDUSTRY	Motor Vehicle and Parts Dealers	COUNTY	Multnomah
OCCUPATION	Sales and Related Occupations	OR-FACE NUMBER	OR 2018-47-1

A 42-year-old car salesman was shot in the head in an auto body shop parking lot. He died as a result of his injuries.

DESCRIPTION	Lumber Mill Supervisor Dies from Self-Inflicted Gunshot Wound	SEASON	Autumn
INDUSTRY	Forestry and Logging	COUNTY	Washington
OCCUPATION	Supervisors of Farming, Fishing, and Forestry Workers	OR-FACE NUMBER	OR 2018-53-1

A 63-year-old lumber mill supervisor died from an intentional, self-inflicted gunshot wound.

DELAYED CASES

Worker fatalities with delayed death from date of injury (over 48 hours), 2018.

EVENT	CAUSE OF DEATH	INTERVAL	FACE ID
FALL	Blunt force cervical trauma	3 days	OR 2018-02-1
OVEREXERTION	Left-sided pulmonary embolism	7 days	OR 2018-14-1
UNDETERMINED	Complications of immobilization	8 days	OR 2018-37-1
UNDETERMINED	Complications of seizure disorder	Unknown	OR 2018-56-1

UNDETERMINED CASES

OR-FACE attempts to verify the details of fatalities through as many avenues as possible, to determine if a case meets our criteria of an occupational traumatic fatality. In cases with insufficient data, or when we cannot rule out a case, it is classified as “undetermined.” For 2018, the following six cases are considered undetermined, pending additional information.

EVENT	DESCRIPTION	SEX	SEASON	NAICS CODE
MOTOR VEHICLE ACCIDENT	Unknown	Male	Spring	54 Professional, Scientific, and Technical Services
MOTOR VEHICLE ACCIDENT	Unknown	Female	Summer	48-49 Transportation and Warehousing
EXPOSURE	Natural causes	Male	Summer	23 Construction
EXPOSURE	Pneumonia/acute sepsis	Male	Summer	92 Public Administration
MOTOR CYCLE ACCIDENT	Traumatic chest injuries	Male	Summer	81 Other Services
FALL	Complications of immobilization	Male	Summer	48-49 Transportation and Warehousing

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.

Adapted from US Bureau of Labor Statistics (2012), *Occupational Injury and Illness Classification Manual*. US Department of Labor. Accessed online (April 2020): https://www.bls.gov/iif/osh_oiccs_2010_2_4.pdf

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 definition 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.

Bodily Reaction and Exertion

This event definition applies 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.

Contact With Objects and Equipment

This event applies to injuries produced by contact between the injured person and the source of injury except when contact was due to falls, transportation incidents, 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."

Exposure to Harmful Substances or Environments

This event definition applies 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.

Falls

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

Fires and Explosions

This event definition applies 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 definition 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.

ABOUT

The Oregon Institute of Occupational Health Sciences at Oregon Health & Science University

The Oregon Institute of Occupational Health Sciences 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 accomplishes this mission through basic and applied research, outreach, and education.

Oregon Health & Science University (OHSU) is a nationally prominent research university and Oregon's only academic health center. It educates health professionals and scientists and provides leading-edge patient care, community service and biomedical research.

OR-FACE

The Oregon Fatality Assessment and Control Evaluation (OR-FACE) is a project of the Oregon Institute of Occupational Health Sciences at Oregon Health & Science University. OR-FACE is supported by a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH) (grant #2U60OH008472) through the Occupational Public Health Program (OPHP) of the Public Health Division of the Oregon Health Authority.

OR-FACE conducts surveillance, investigation, and assessment of traumatic occupational fatalities in Oregon, and produces safety materials to promote worker safety aimed at preventing similar injuries. 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.

Other Events or Exposures

This event definition applies to any event or exposure that is not classified or listed under any other division.

Transportation Incidents

This event definition applies to 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" should be interpreted to include powered industrial vehicles and powered mobile industrial equipment unless otherwise noted. Cases classified under this event definition 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.



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