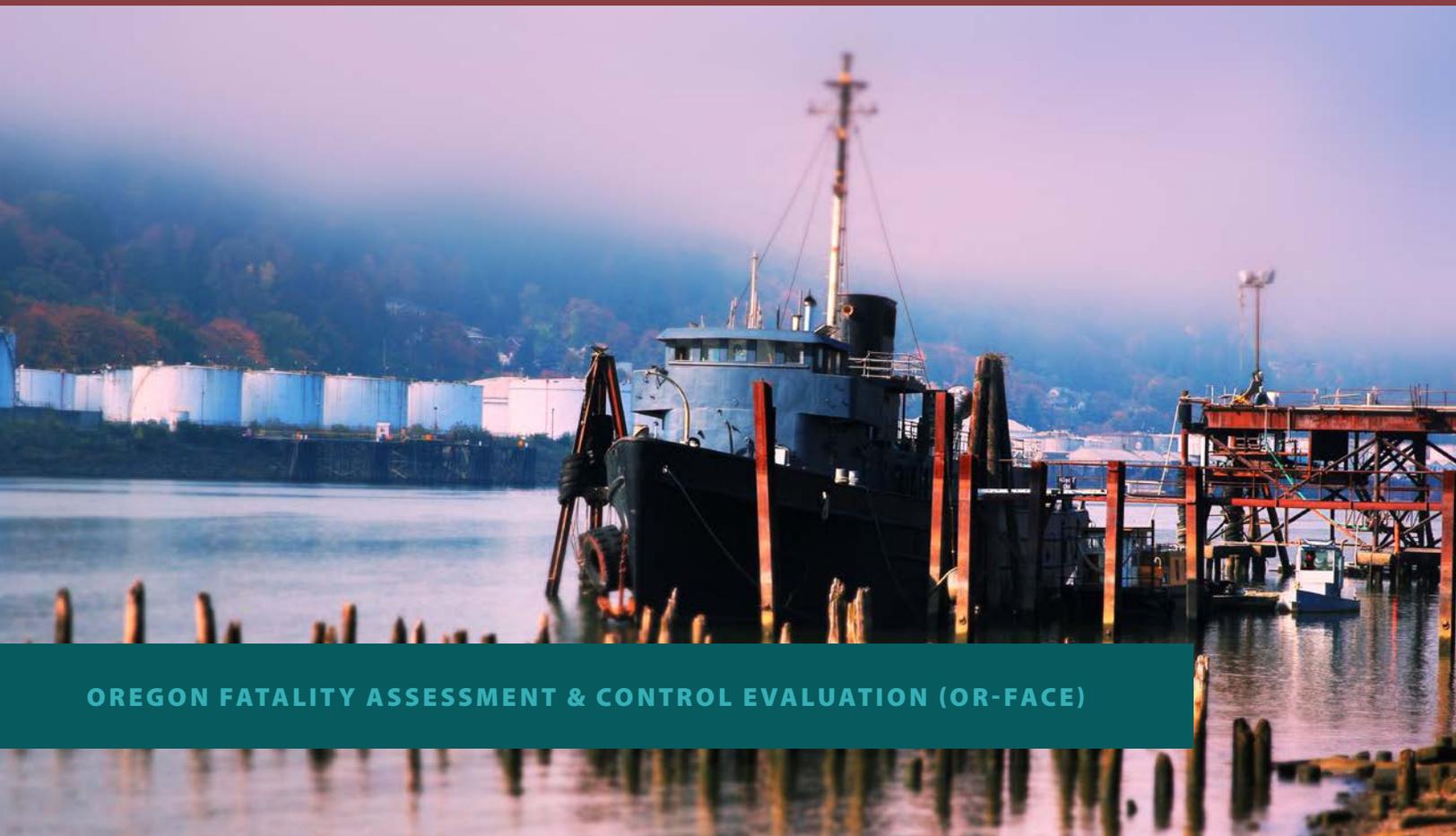


2019

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 and that occurred within Oregon.

A **location** within Oregon means the incident, or some portion of the event or exposure, occurred 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 occurred (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 performed the same duties or functions as paid employees, and that meet the work-relationship criteria.
- Suicides and homicides that occurred at a worksite (included in OR-FACE scope since 2011).
- Fatal events or exposures that occurred when a person was in travel status, if the travel was for work purposes, or was 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 occurred during a person's recreational activities that are not required by the employer.
- Fatal events or exposures that occurred 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 was 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>

2019

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.

Oregon FACE Program

Oregon Institute of Occupational Health Sciences
Oregon Health & Science University

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OR-FACE is supported by the National Institute for Occupational Safety and Health (grant #5U60OH008472) through the Oregon Health Authority.

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INTRODUCTION

In 2019, OR-FACE recorded 53 fatal occupational incidents resulting in worker deaths, as well as three incidents that could not be determined due to insufficient information (e.g., natural causes vs. a work-related incident, the decedent doing a work-related task, etc.). The number represents a rate of 2.61 fatalities per 100,000 employed workers in the civilian labor force in Oregon. The national worker fatality rate in 2019 was 3.5 per 100,000 full-time equivalent workers.

The following notable trends occurred in 2019

- » The agriculture industry had the highest number of fatalities, followed by construction and transportation. These three industries have been among the top four industries for fatalities in each year in the past decade (see pg. 13).
- » For events, fatal cases from transportation (motor vehicle) exceeded all other events, followed by slip/strips/falls, contact with objects, and incidents involving equipment (non-motor vehicle). Motor vehicle incidents have the highest number of cumulative events through 2019 (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 5 investigation reports, 4 blogs, and 1 annual report (see pg. 7–8).

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. 18–31).

About OR-FACE, online resources and provide feedback (see pg. 31 and back cover).

CORE ACTIVITIES

ASSESSMENT

When fatalities are identified as FACE cases, sufficient data are collected about each incident to analyze and develop 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

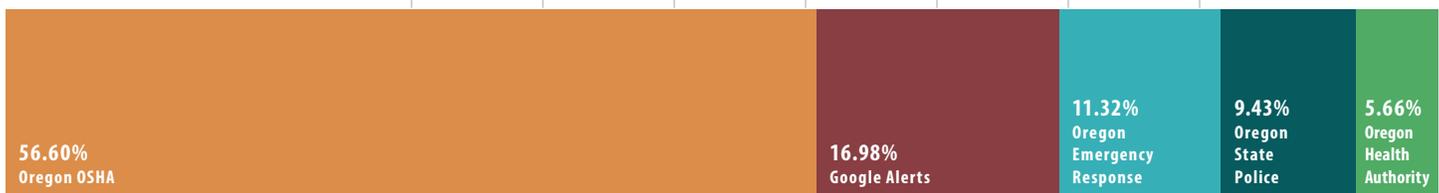
The OR-FACE surveillance system is comprised of:

1. Fatality Intake Forms (FIF) supplied by OR-OSHA
2. Quarterly reports from Oregon Health Authority (OHA)'s Vital Statistics of death certificates marked "at work"
3. Death certificate and Census of Fatal Occupational Injuries (CFOI) data from the 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 System (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 2019, 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	8	1	0	0	0	0	9
Oregon Emergency Response	6	0	0	0	0	0	6
Oregon OSHA	17	13	0	0	0	0	30
Oregon State Police	5	0	0	0	0	0	5
Oregon Health Authority	0	0	0	3	0	0	3
Oregon DCBS Analyst	0	0	0	0	0	0	0
Total	36	14	0	3	0	0	53



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. Cases are selected based on industries and occupations highly representative of Oregon, NIOSH areas of focus, and/or areas where there is a perceived gap in knowledge.

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.

Five investigation reports were published in 2019 (see page 8).

PRESENTATION CITATIONS

- OR-OSHA Managers Meeting (Mar. 2019). "OR-FACE & OR-OSHA Collaboration."
- Discussion with Washington University School of Medicine (Nov. 2019). "Using mobile phone marketing technology to increase safety meeting frequency among small residential construction companies: Final Report."
- The Center for Construction Research and Training (CPWR) Round-table on Reaching Small Employers & At-Risk Workers (Nov. 2019). "Using mobile phone marketing technology to increase safety meeting frequency among small residential construction companies: Final Report."

OUTREACH AND DOCUMENT DISTRIBUTION

<p>390 OR-FACE INVESTIGATION BROCHURE to OR-OSHA, Mid-Oregon Construction Safety Summit, Oregon Governor's Occupational Safety & Health (GOSH) Conference</p>	<p>6 FATALITY INVESTIGATION REPORT: VINEYARD WORKER KILLED IN FALL FROM TRAILER to Orchard & Vineyard Supply</p>
<p>70 "FALLERS LOGGING SAFETY" BOOKLET to The Cutting Garden, NW Logging Supply</p>	<p>15 ENGLISH 12 SPANISH SAIF AGRICULTURAL SAFETY SEMINAR INFO SHEET to Orchard & Vineyard Supply</p>
<p>35 ENGLISH 10 SPANISH CAN YOU IDENTIFY HAZARDS ON YOUR FARM OR RANCH? to OR-OSHA, Orchard & Vineyard Supply</p>	<p>16 FATALITY INVESTIGATION REPORT: TRENCH COLLAPSE to Mid-Oregon Construction Safety Summit</p>
<p>30 ENGLISH 30 SPANISH WORKING SAFELY WITH PESTICIDES IN AGRICULTURAL SETTINGS to Orchard & Vineyard Supply</p>	<p>10 YARDING & LOADING BOOK to The Cutting Garden</p>
<p>30 ENGLISH 30 SPANISH WASHING PESTICIDE WORK CLOTHING to Orchard & Vineyard Supply</p>	<p>20 NORTHWEST OCCUPATIONAL HEALTH CONFERENCE to SafeBuild Alliance Safety Week</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).

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Oregon Fatality Assessment and Control Evaluation

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

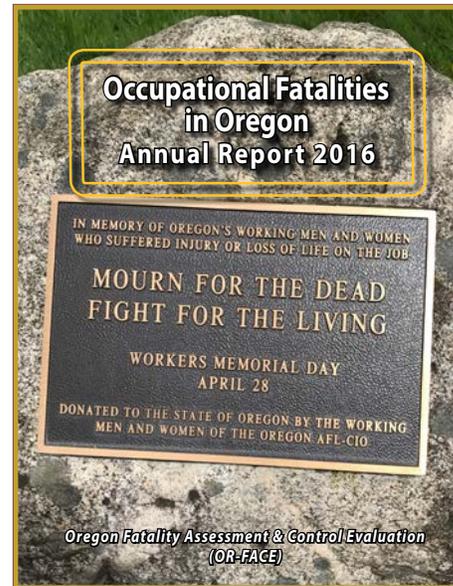
Find published presentations, safety booklets, reports, and other resources at the OR-FACE website or scan the provided QR code. New reports are published regularly.

www.ohsu.edu/or-face



ANNUAL REPORT

OR-FACE published its 2016 Annual Report during the 2019 calendar year. There were 57 recorded fatalities in that report, with an overall rate of 2.92 per 100,000 employees.



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 (1107 followers), Facebook (416 likes), and the Institute newsletter (2100 subscribers).

OR-FACE contributed four blogs in 2019.

INVESTIGATIONS

Five investigation reports were published in 2019:



Construction worker killed when trench collapsed

(OR 2016-16-1)

[Read the report](#)



Farm mechanic died after torch cutting explosion

(OR 2017-7-1)

[Read the report](#)



Rubber equipment operator died after his head was caught between bars of operating machinery

(OR 2018-29-1)

[Read the report](#)



Maintenance mechanic crushed working inside of a vertical storage machine

(OR 2017-22-1)

[Read the report](#)



Skid Steer Operator Crushed While Attempting to Remove Attachment

(OR 2018-08-1)

[Read the report](#)

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).

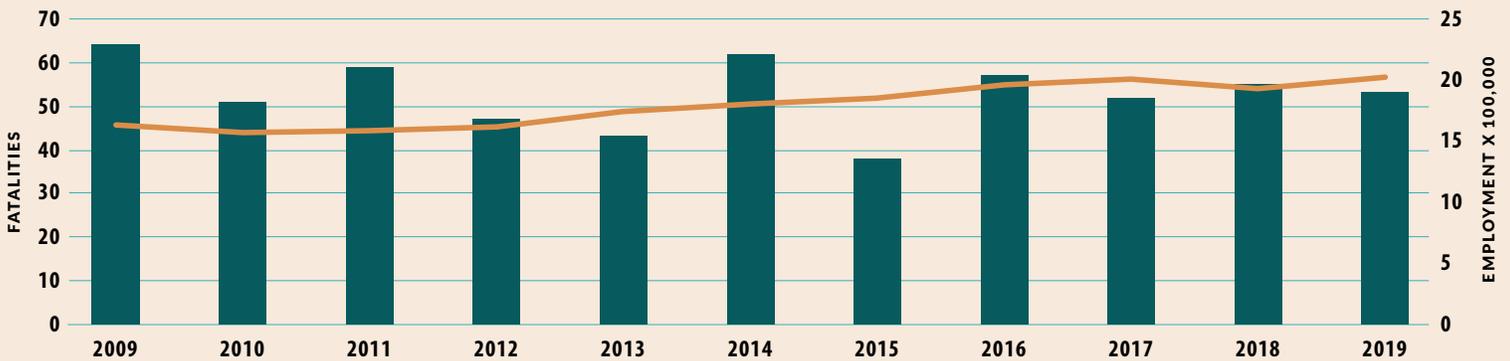
For occupation (SOC), Farming/Fishing/Forestry (code 45) is split into sub codes: Agriculture (code 45 2000), fishing and hunting (code 45 3000), forest/conservation (code 45 4010); and logging (code 45 4020).

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.

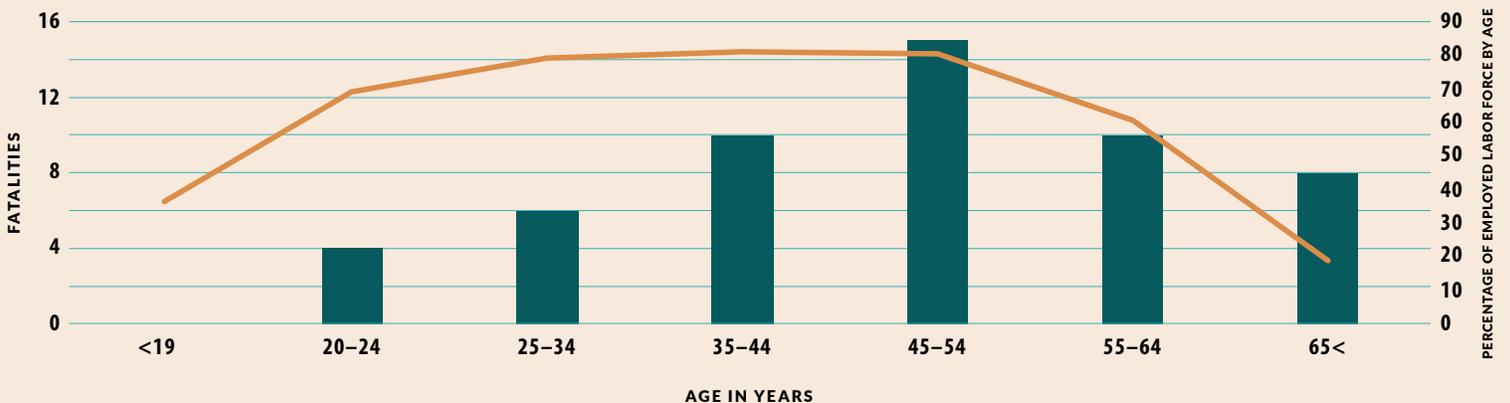
Oregon Employment Rate vs. Occupational Fatalities

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



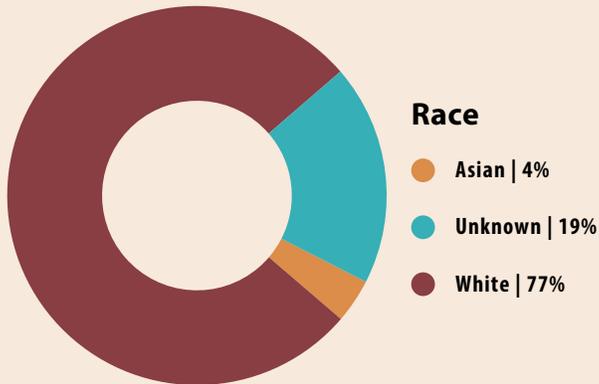
Occupational Fatalities in Oregon by Age Compared to Oregon Age Distribution of Labor Force, 2018

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

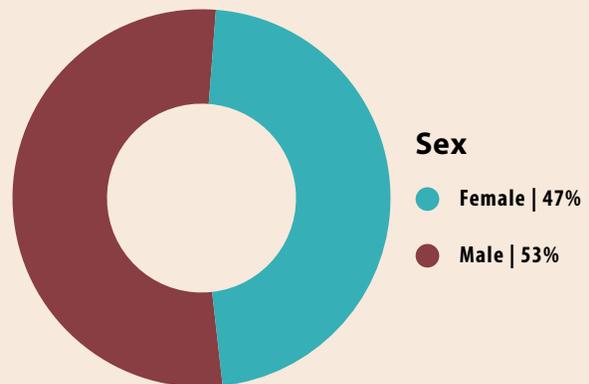
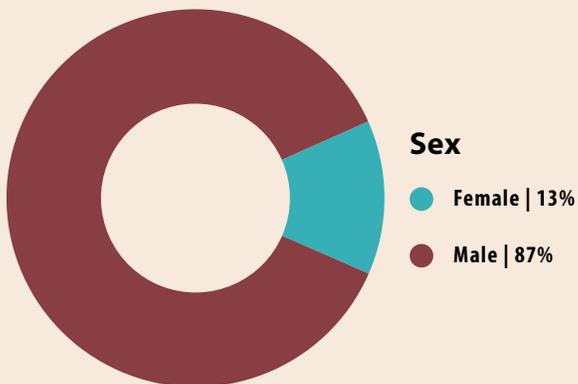
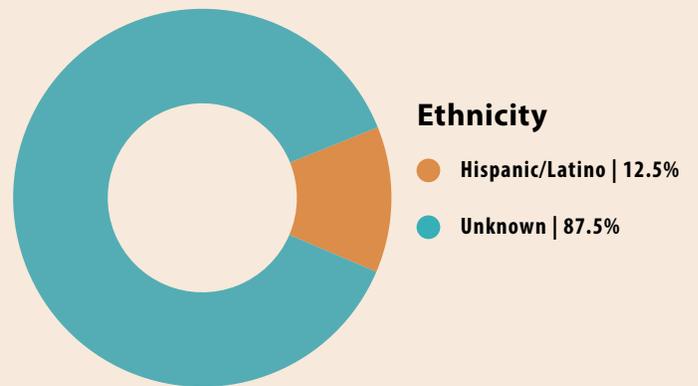
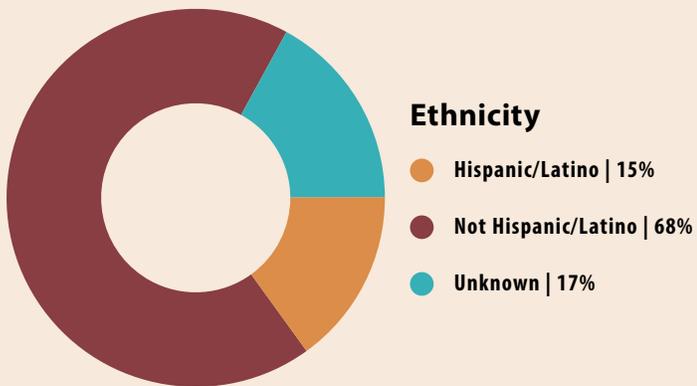
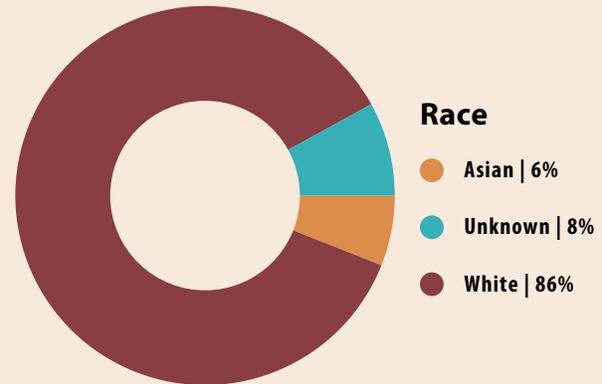


Source of labor force: BLS <https://www.bls.gov/lau/laucnty19.txt> Retrieved: July 2021 Source of fatality counts: OR-FACE

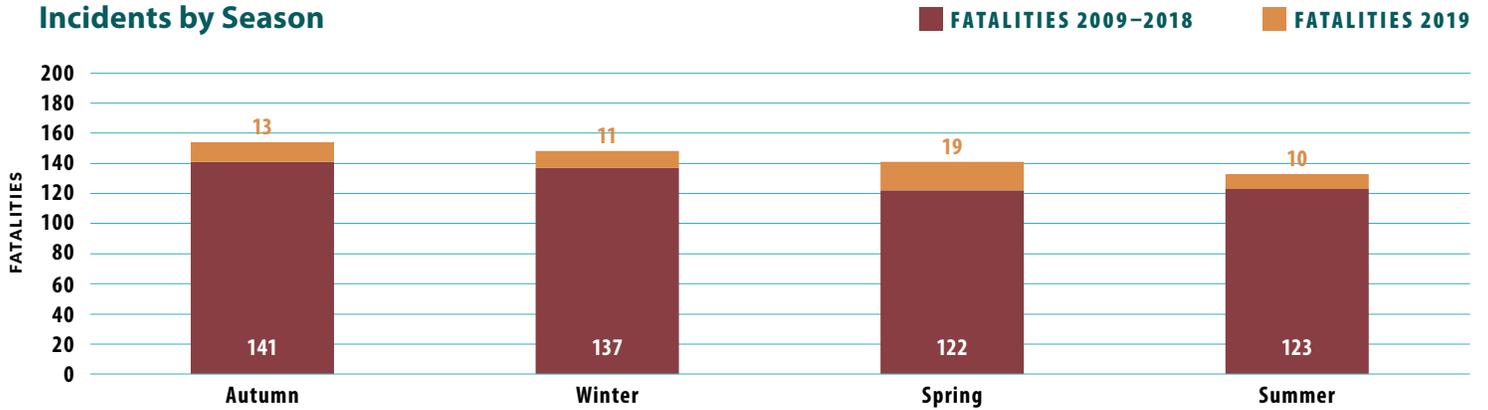
Demographics of Occupational Fatalities (53 total)



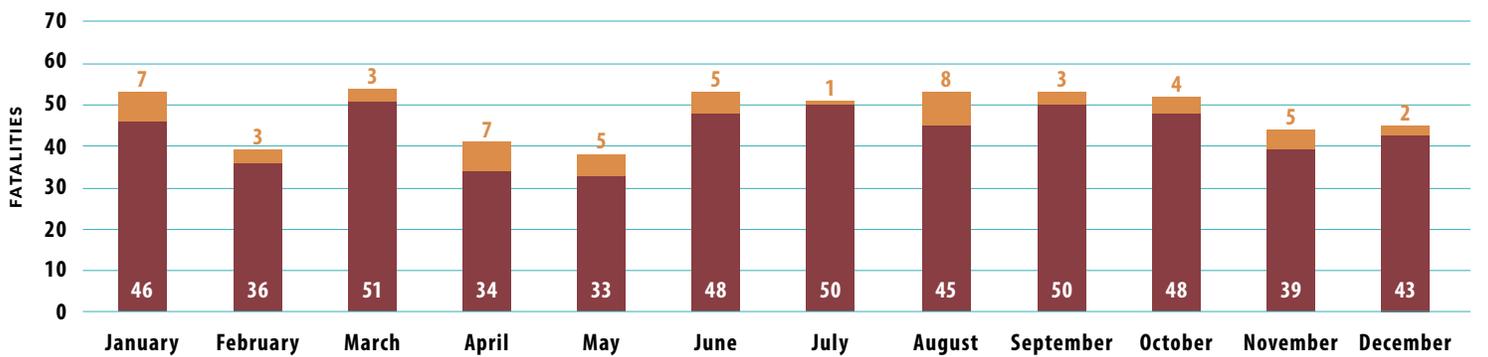
Civilian Labor Force in Oregon (BLS, 2019)



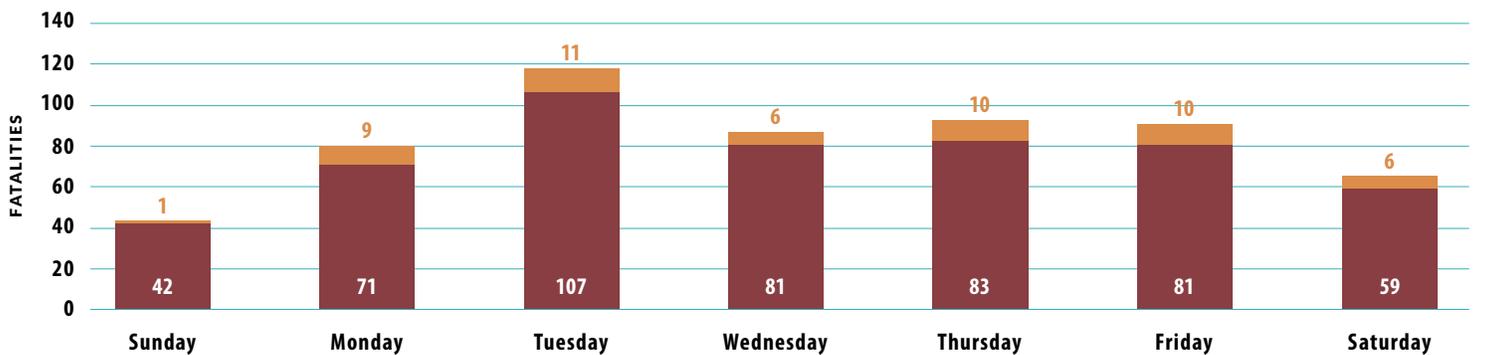
Incidents by Season



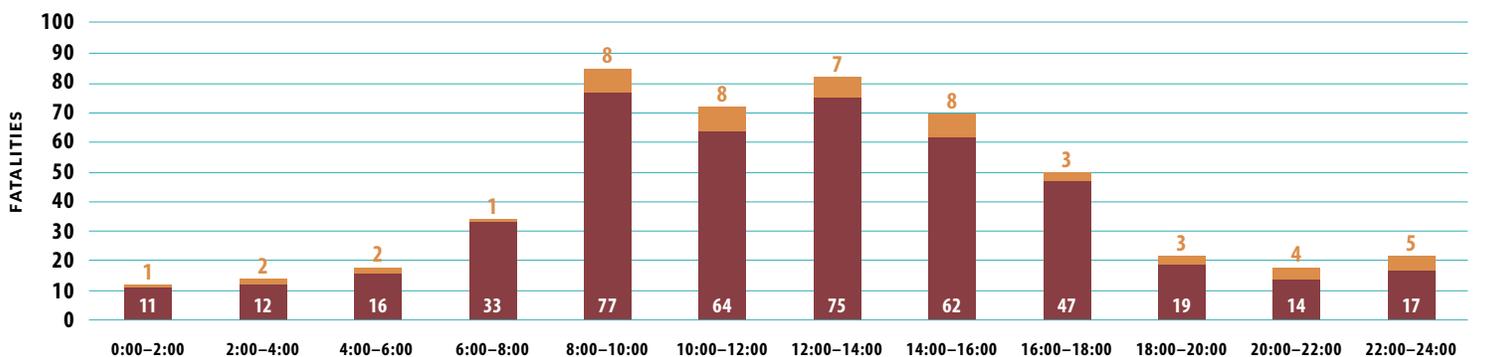
Incidents by Month



Incidents by Day of Week

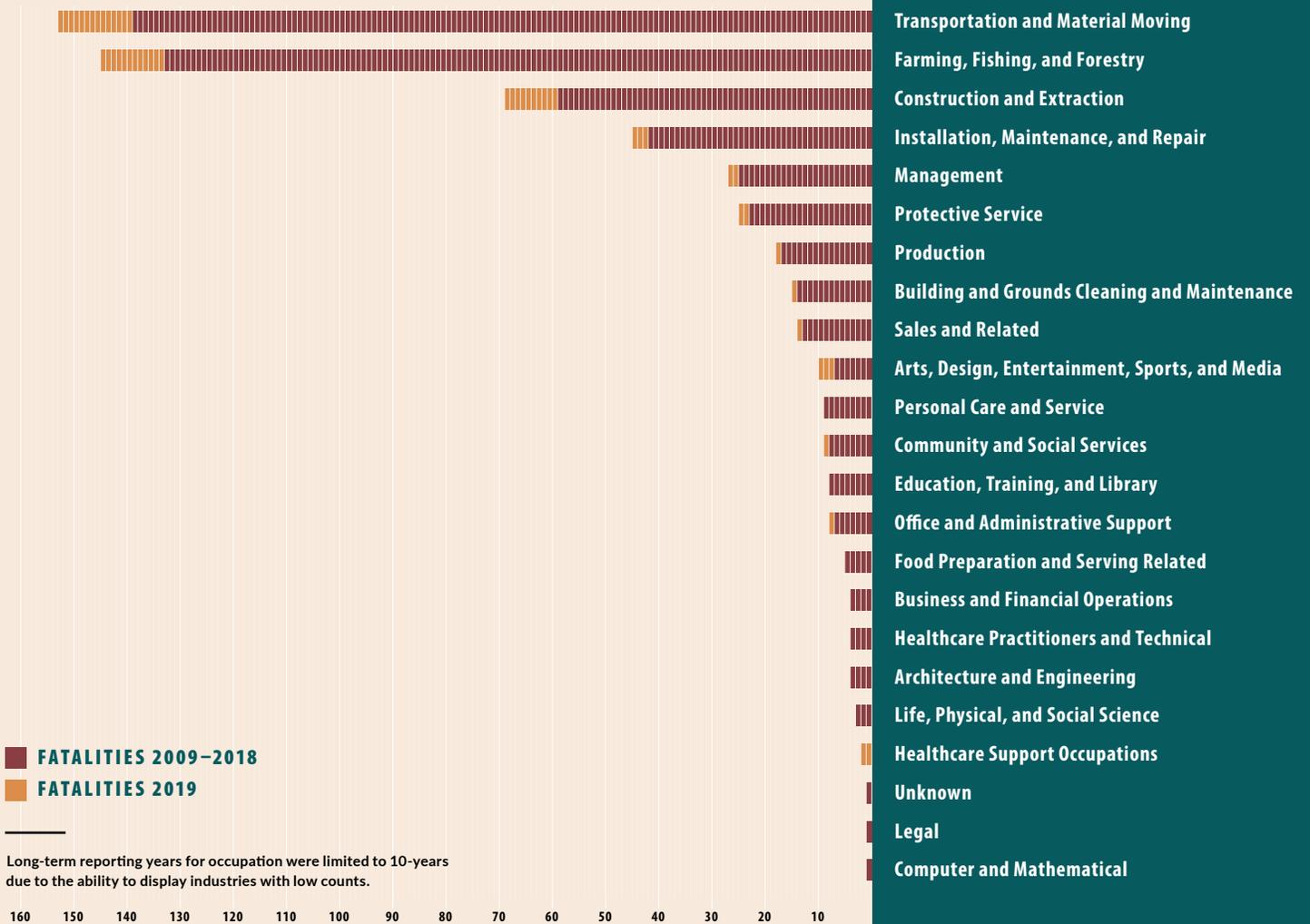


Incidents by Time of Day

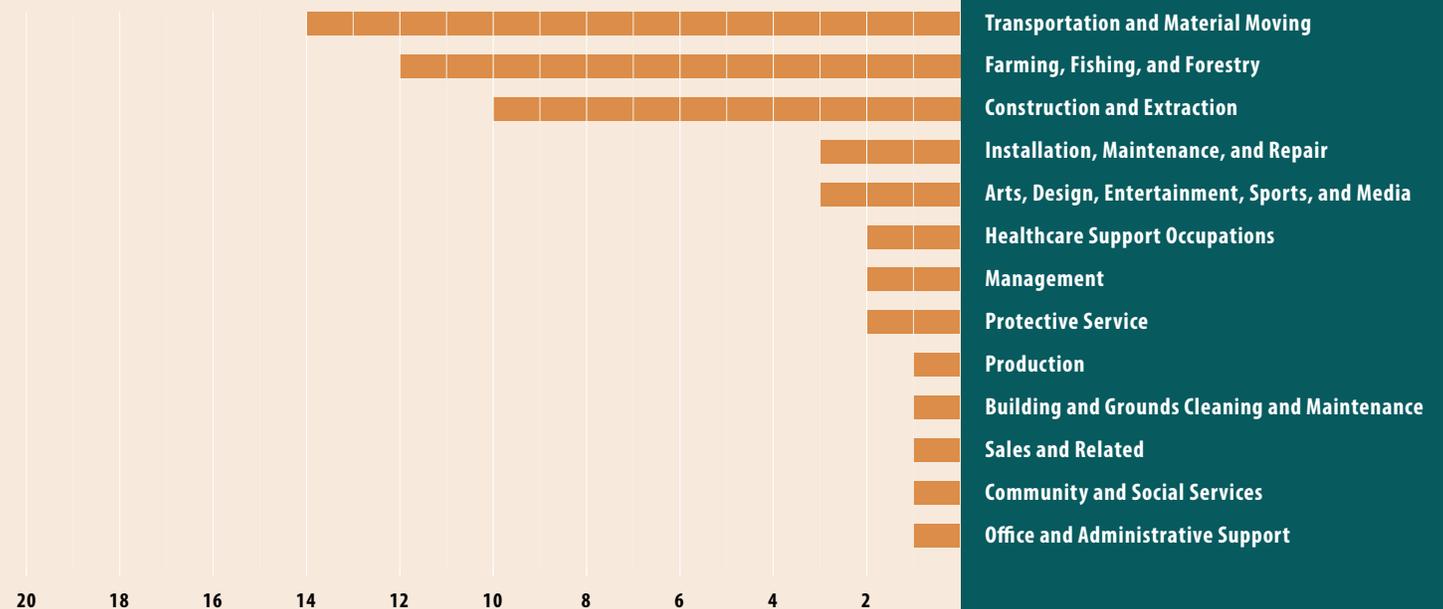


Note: Fatalities without a known time of incident are not included in the charts about.

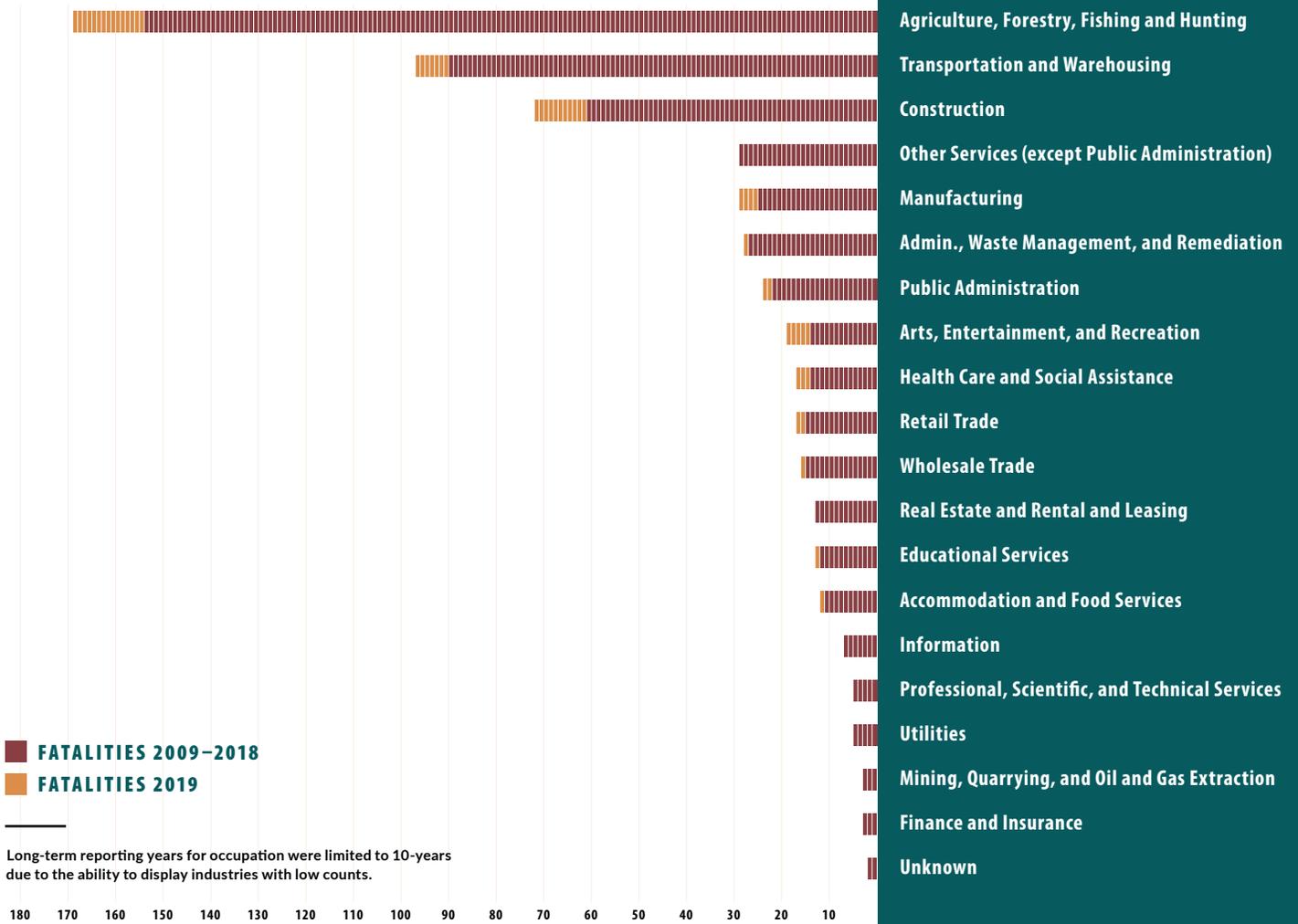
Fatalities by Occupation, 2009–2019



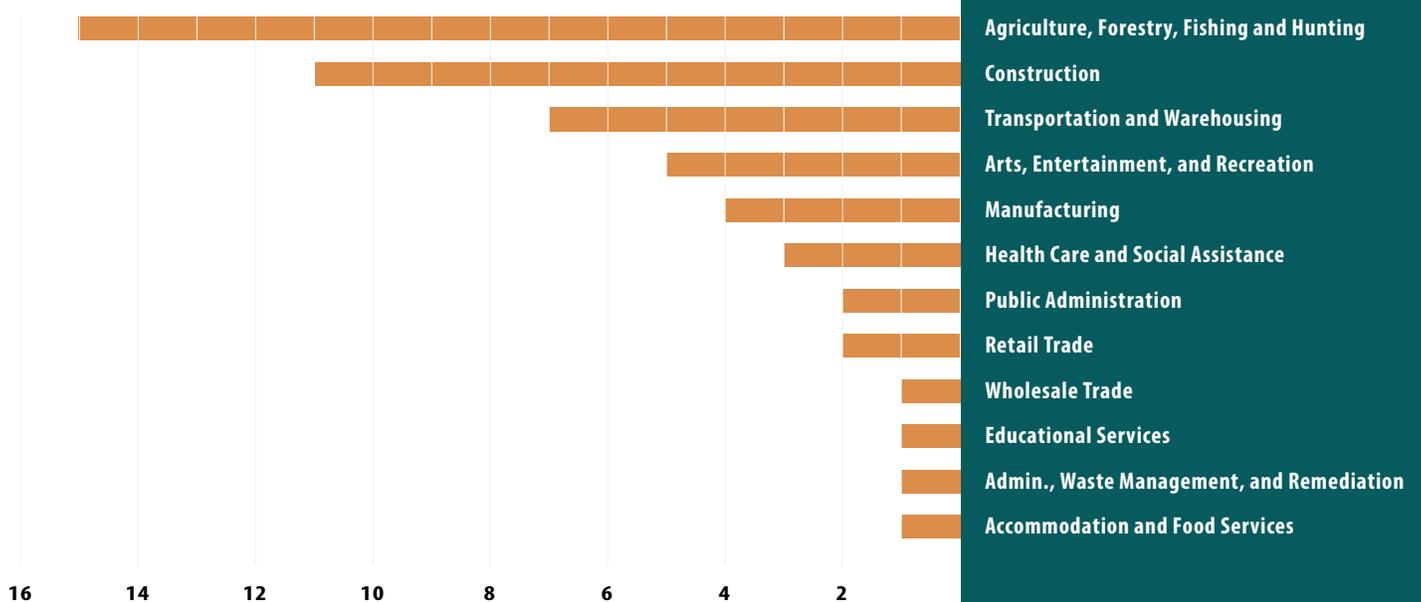
Fatalities by Occupation, 2019



Fatalities by Industry, 2009–2019

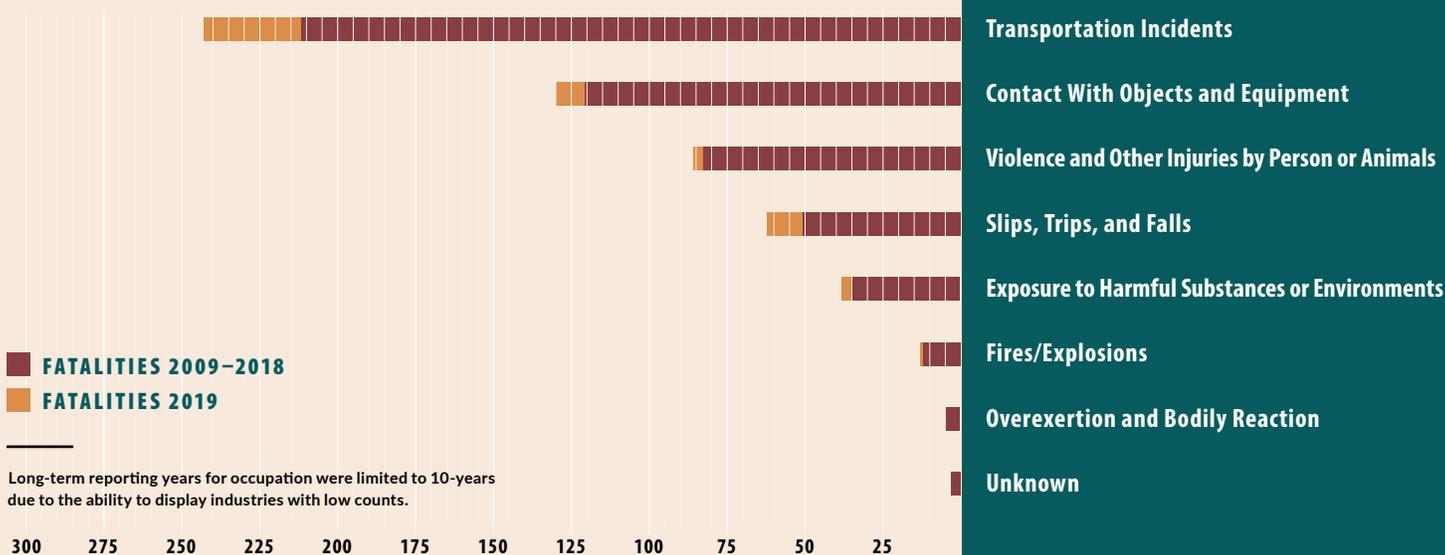


Fatalities by Industry, 2019

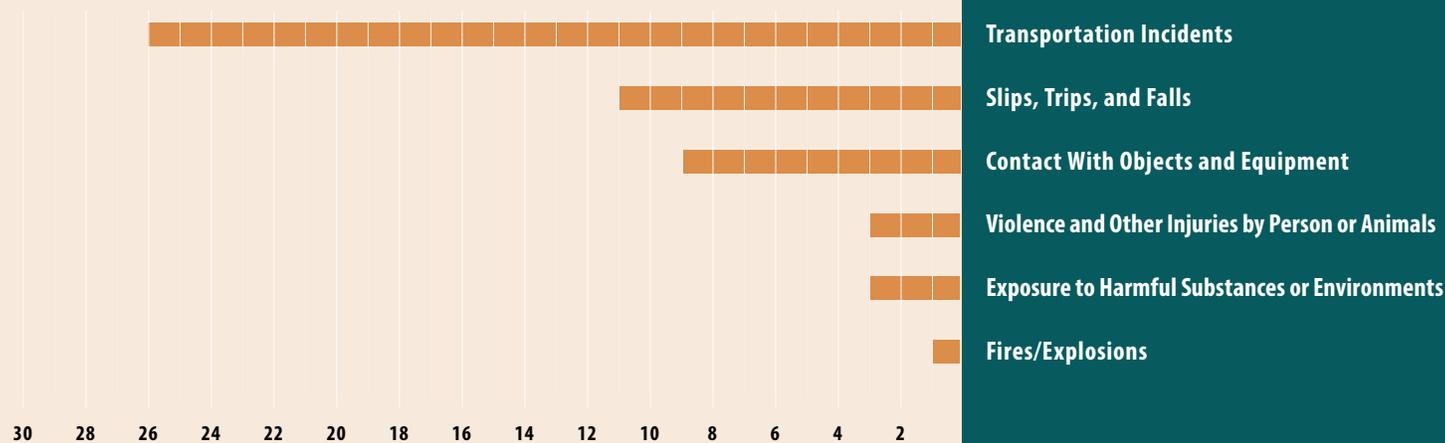




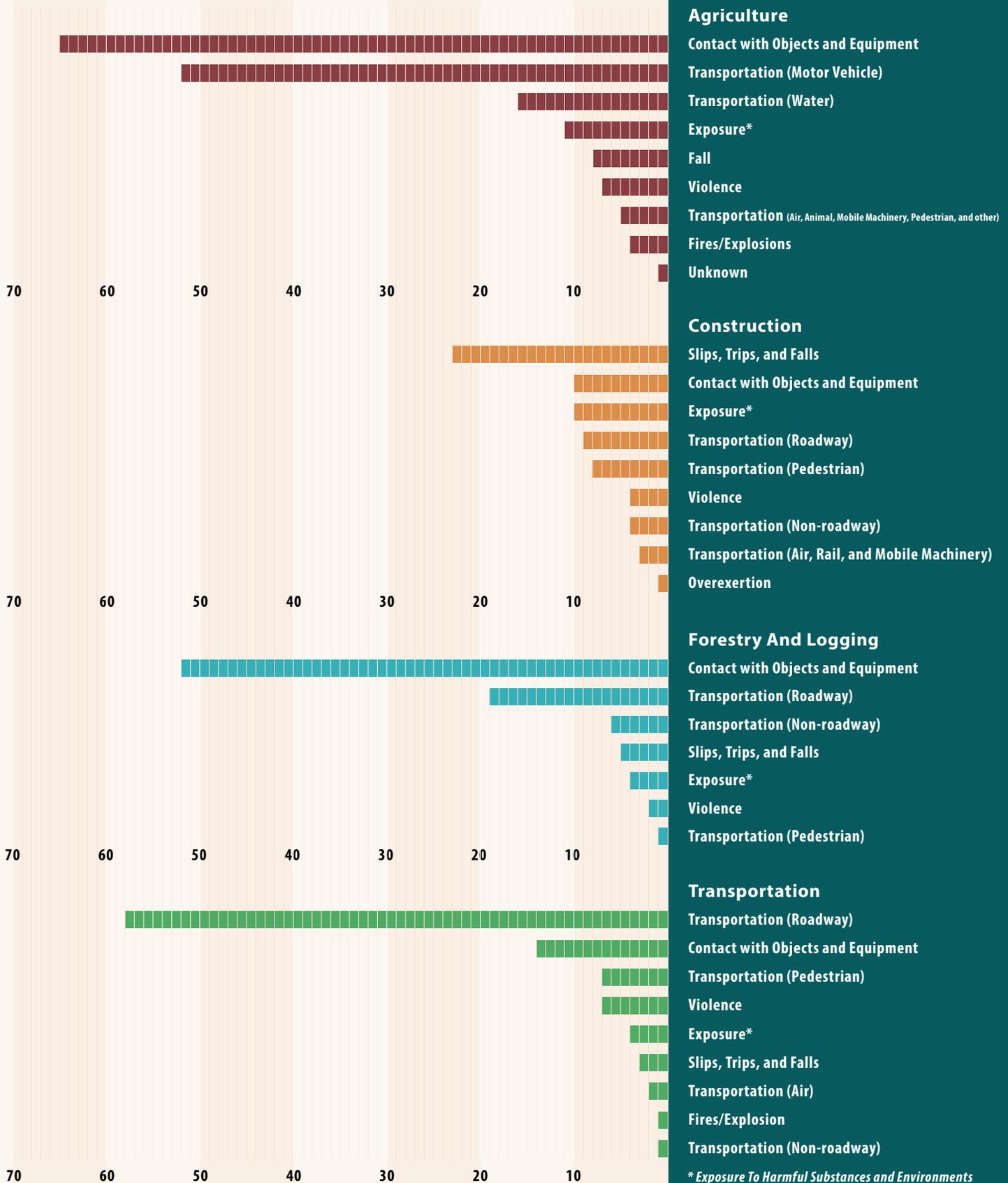
Fatalities by Event, 2009–2019



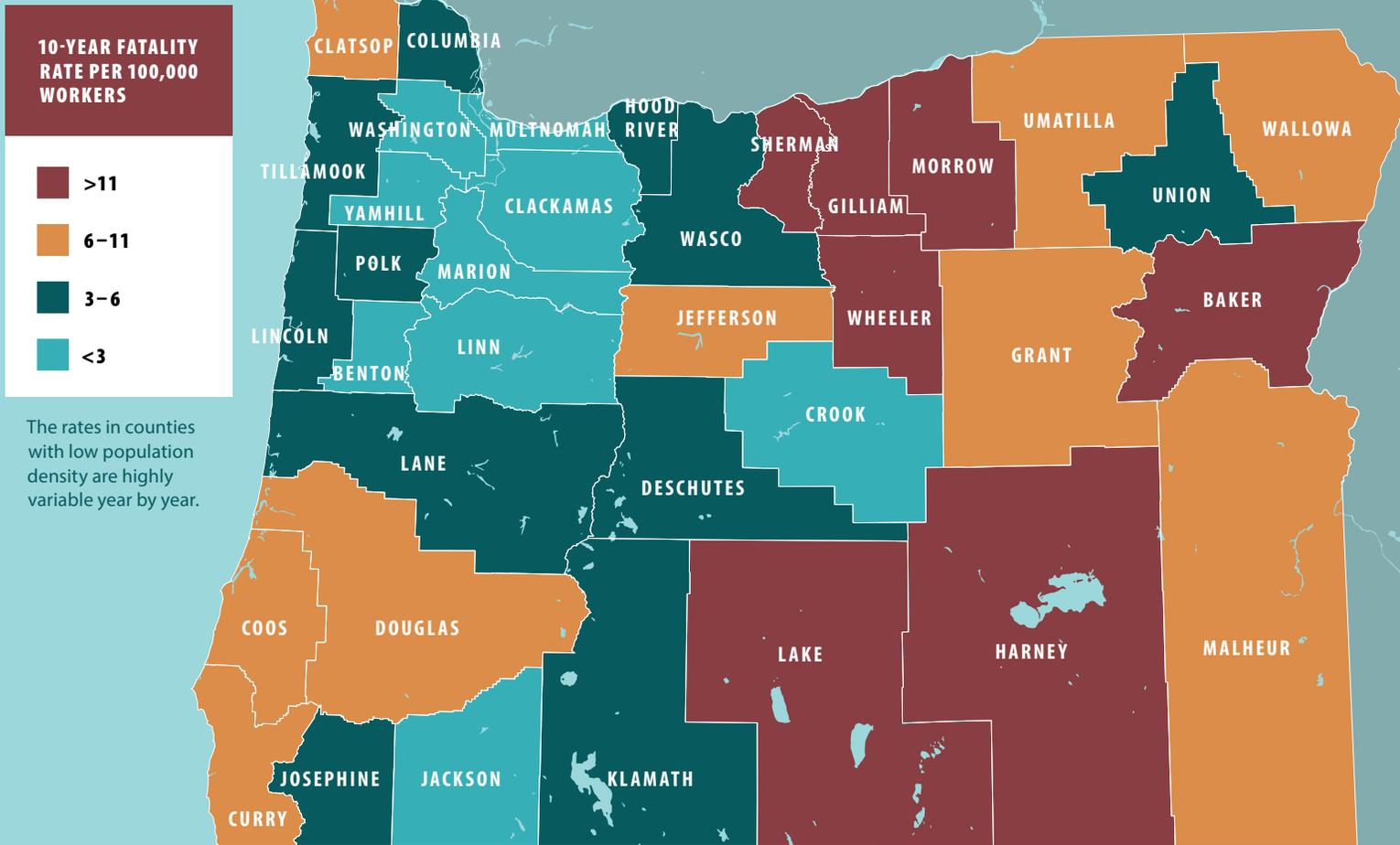
Fatalities by Event, 2019



Fatalities by Select Industries, 2009–2019



* Exposure To Harmful Substances and Environments



Oregon county labor statistics, 10-year fatality trend, 2019 fatality count, and 10-year fatality rate.

	TOTAL POP.	LABOR FORCE	FATALITIES	FATALITIES	10-YR RATE PER 100,000 WORKERS
	2019	2019	2009-2018	2019	
Baker	16,820	6,827	11	0	15.59
Benton	94,360	46,281	9	2	2.33
Clackamas	423,420	212,283	30	4	1.62
Clatsop	39,330	18,693	12	1	6.68
Columbia	52,750	23,252	10	0	4.42
Coos	63,290	25,009	25	0	9.35
Crook	23,440	9,359	2	0	2.23
Curry	23,000	8,451	7	0	7.96
Deschutes	193,000	92,745	28	1	3.38

Table continues on following page >

2.83

2009-2019 OVERALL FATALITY RATE PER 100,000 EMPLOYEES

2.61

2019 OVERALL FATALITY RATE PER 100,000 EMPLOYEES

The employed Oregon labor force (as reported 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.

	TOTAL POP.	LABOR FORCE	FATALITIES	FATALITIES	10-YR RATE PER 100,000 WORKERS
	2019	2019	2009-2018	2019	
Douglas	112,250	44,456	26	5	6.83
Gilliam	1,990	913	2	0	21.33
Grant	7,360	2,978	3	0	9.56
Harney	7,360	3,399	3	1	11.77
Hood River	25,480	14,021	6	1	4.80
Jackson	221,290	99,563	24	4	2.78
Jefferson	23,840	9,667	8	1	9.54
Josephine	86,750	34,123	12	1	3.87
Klamath	68,190	27,713	12	4	5.47
Lake	8,080	3,434	5	0	14.37
Lane	378,880	173,840	55	3	3.24
Lincoln	48,260	19,986	11	1	5.60
Linn	126,550	56,328	13	2	2.67
Malheur	32,030	11,840	11	2	10.01
Marion	347,760	156,103	28	2	1.89
Morrow	12,680	5,541	7	0	11.92
Multnomah	821,730	439,230	55	4	1.31
Polk	82,940	38,642	11	1	3.25
Sherman	1,770	898	3	0	32.36
Tillamook	26,500	11,465	6	0	5.12
Umatilla	81,160	35,058	31	2	8.98
Union	26,840	11,450	7	0	5.76
Wallowa	7,150	3,243	2	0	6.03
Wasco	27,240	12,888	7	0	5.05
Washington	613,410	315,863	32	5	1.18
Wheeler	1,440	683	1	0	14.05
Yamhill	108,060	52,829	11	3	2.71
Unknown			1	3	



ABSTRACTS

Fatal occupational incidents in Oregon by type of event in 2019

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 log	SEASON	Spring
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Polk
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-11-1

A 33-year-old rigging slinger died from a blunt head injury after his head was struck by a suspended log. The deceased was working with a four-person rigging crew who were setting chokers (wire, rope, or chain nooses used to attach logs to a line) approximately 600-feet to 700-feet from the landing. The trees were choked at their tops, and after the rigging was moved, the deceased was struck by the log.

DESCRIPTION	Crushed by forklift mast	SEASON	Spring
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Linn
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-17-1

A 38-year-old agricultural worker died after sustaining a mechanical crush injury while working in a grass seed warehouse. The agricultural worker was attempting to unload a 2,000-pound bag of sheep feed into a hopper when he was found trapped in a forklift mast, i.e., the system on a forklift that performs load lifting. He was found by a family member and pronounced dead at the scene.

DESCRIPTION	Crushed by house	SEASON	Summer
INDUSTRY	Construction	COUNTY	Lincoln
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-25-1

A 37-year-old carpenter died after sustaining multiple traumatic injuries from a falling house. The carpenter was setting a manufactured home on a slab foundation using four jacks, when the home became unbalanced, then slipped and fell onto the carpenter. He was transported to the hospital where he died.

DESCRIPTION	Boom lift overturn	SEASON	Summer
INDUSTRY	Arts, Entertainment, and Recreation	COUNTY	Clackamas
OCCUPATION	Arts, Design, Entertainment, Sports, and Media Occupations	OR-FACE NUMBER	OR 2019-27-1,2

Two workers, ages 35 and 27, were removing rigging and dismantling a stage after a music festival. They were using a boom lift to access rigging in trees 40 feet above the ground. The boom lift was on an uneven grade and tipped over when extended. The workers were attached to the basket, and were crushed and killed by the collapsing boom lift.

DESCRIPTION	Struck by tree	SEASON	Summer
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Linn
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-26-1

A 62-year-old excavator operator died after sustaining compression asphyxia while removing trees. The employee was clearing trees from a lot using an excavator when a tree fell on the cab of the excavator. He was pronounced dead on the scene.

DESCRIPTION	Caught in machinery	SEASON	Summer
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Malheur
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-35-1

A 29-year-old agricultural worker was operating a tractor towing a tape drip line puller when he stopped the tractor to perform maintenance on the tape. He left the tractor engaged when he exited, and while performing the maintenance, became entangled between the drive roller and idler roller. He died at the scene of crushing injuries.

DESCRIPTION	Caught in machinery	SEASON	Autumn
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Malheur
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-36-1

A 42-year-old agricultural worker was working behind a disengaged onion harvester. The harvester operator, unaware that the worker was close by, engaged the harvester. The worker was pulled into the harvester and died of crush injuries.

DESCRIPTION	Struck by tree	SEASON	Autumn
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Douglas
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-39-1

A 71-year-old tree feller was boring (cutting into the side) a tree to control the direction of its fall. The tree delaminated vertically (“barber-chaired”) and struck the worker, causing traumatic chest and head injuries, killing him.

EXPOSURE TO HARMFUL SUBSTANCES OR ENVIRONMENTS

DESCRIPTION	Snow immersion suffocation	SEASON	Winter
INDUSTRY	Arts, Entertainment, and Recreation	COUNTY	Jackson
OCCUPATION	Protective Service Occupations	OR-FACE NUMBER	OR 2019-05-1

A 23-year-old ski patrol employee was skiing when he fell head first downhill and slid into a tree well. He was entrapped in the tree well, and subsequently suffocated due to snow immersion. He was found dead at the scene when members of his group found him and tried to extricate him from the tree well. It was a heavily treed backcountry area, with heavy fresh snow on a steep slope.

DESCRIPTION	Heat exhaustion	SEASON	Summer
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Douglas
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-48-1

A 21-year-old choker setter was setting chokers on a log, when he collapsed. Nearby workers called for medical help and the employee was transported to a hospital, where he died the following day of heat exhaustion.

DESCRIPTION	Lack of Oxygen	SEASON	Spring
INDUSTRY	Construction	COUNTY	Washington
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-49-1

A 42-year-old painter was using a pressure washer with a combustion engine inside a garage with the door closed. He suffered a cardiac arrest and possible carbon monoxide poisoning, and was transported to a hospital by emergency responders. He died the following day due to lack of oxygen and blood to the brain.

FALLS, SLIPS, AND TRIPS

DESCRIPTION	Fall to lower level	SEASON	Winter
INDUSTRY	Construction	COUNTY	Multnomah
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-01-1

A 46-year-old construction laborer sustained brain trauma after striking his head in an unwitnessed fall to a lower level. He was transported to a hospital and died shortly thereafter.

DESCRIPTION	Fall from roof	SEASON	Spring
INDUSTRY	Construction	COUNTY	Marion
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-09-1

A 27-year-old construction laborer died of traumatic head, neck, and chest injuries after falling from a roof. He was working on a roof, when he fell through a skylight and landed 42-feet below onto a concrete floor. The employee was pronounced dead at the scene.

DESCRIPTION	Fall from roof	SEASON	Spring
INDUSTRY	Construction	COUNTY	Yamhill
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-08-1

A 60-year-old concrete layer was working on a roof of a new construction pole barn, when he fell approximately 20-feet onto hard compact rock. He was transported to a local hospital via ambulance where he later passed away from multiple blunt force injuries of the neck and torso.

DESCRIPTION	Fall to lower level	SEASON	Spring
INDUSTRY	Construction	COUNTY	Washington
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-12-1

A 28-year-old temporary construction laborer died of craniocerebral trauma after a fall to a lower level. The employee was on a five-foot mobile ladder removing brackets from an overhead raceway between print lines of a solar panel. Another employee heard a hard hat hit the cement floor and found the construction laborer on the floor. 911 was called and the employee was transported to the hospital where he was later pronounced dead.

DESCRIPTION	Fall to lower level	SEASON	Spring
INDUSTRY	Accommodation and Food Services	COUNTY	Lane
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2019-16-1

A 72-year-old maintenance supervisor was carrying a wheelchair down the stairs to a lower-level storage room when she fell and hit her head onto a concrete floor. The employee was transported to the hospital where she later died due to blunt force head trauma.

DESCRIPTION	Fall to lower level	SEASON	Spring
INDUSTRY	Wholesale Trade	COUNTY	Clatsop
OCCUPATION	Production Occupations	OR-FACE NUMBER	OR 2019-21-1

A 63-year-old fish packer was attempting to push stuck fish inside a way hopper. The employee was standing outside on the platform to shovel and push the few leftover fish. When she went to the west way hopper, she lost her balance and fell through a gap in the guardrails (where the ladder attached), approximately seven-feet onto the concrete dock floor. She was transported to the hospital where she later passed away.

DESCRIPTION	Fall to lower level	SEASON	Summer
INDUSTRY	Manufacturing	COUNTY	Klamath
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2019-24-1

A 53-year-old oiler was working at a sawmill when he fell through a floor opening 12 feet to a lower level when the steel floor hold cover failed. He sustained a severe closed head injury with temporal bone fractures and intracerebral hemorrhage and was taken via Life Flight to a hospital where he was in a medically induced coma. He died several days later.

DESCRIPTION	Scissor lift overturn	SEASON	Summer
INDUSTRY	Educational Services	COUNTY	Washington
OCCUPATION	Installation, Maintenance, and Repair Occupations	OR-FACE NUMBER	OR 2019-30-1

A 47-year-old school maintenance worker was painting while on a scissor lift, when for unknown reasons the lift tipped over and the employee fell. The worker fell at least 20 feet, and died at the scene of blunt force chest injuries.

DESCRIPTION	Fall from same level	SEASON	Spring
INDUSTRY	Retail Trade	COUNTY	Deschutes
OCCUPATION	Management Occupations	OR-FACE NUMBER	OR 2019-18-1

An 87-year-old appliance manager, for unknown reasons, fell while standing at work. The employee hit his head and sustained a severe closed head injury hemorrhage. He was transported to the hospital where he died several days later.

DESCRIPTION	Fall to lower level	SEASON	Spring
INDUSTRY	Construction	COUNTY	Lane
OCCUPATION	Building and Grounds Cleaning and Maintenance Occupations	OR-FACE NUMBER	OR 2019-19-1

A 61-year-old certified contractor died after sustaining multiple blunt force injuries. The employee was attempting to cut tree limbs on a ladder when, for unknown reasons, fell from the ladder. He was pronounced dead several hours later.

DESCRIPTION	Fall to lower level	SEASON	Autumn
INDUSTRY	Construction	COUNTY	Washington
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-43-1

A 42-year-old construction worker was performing roofing work, when he fell to a lower level approximately 13 feet below. He died at the scene of hemorrhagic shock.

FIRES AND EXPLOSIONS

DESCRIPTION	Propane tank explosion	SEASON	Spring
INDUSTRY	Manufacturing	COUNTY	Clackamas
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-10-1

A 49-year-old truck driver died of thermal injuries after an explosion. The employee was attempting to back a truck into the depot when he bumped into a pole once, and then backed into the pole again. Then, he “floored” the truck into a propane tank, resulting in a fire. Employee was pronounced dead on the scene.

TRANSPORTATION INCIDENTS

DESCRIPTION	Motor Vehicle Accident	SEASON	Winter
INDUSTRY	Transportation and Warehousing	COUNTY	Yamhill
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-02-1,2

Two semi-truck drivers, a 52-year-old driving with two empty tanks, and 45-year-old driving with two trailers loaded with poultry cages, collided due to icy conditions. The 52-year-old driver was driving eastbound and the 45-year-old driver was driving westbound, when they collided and immediately the two semi-trucks were incinerated.

DESCRIPTION	Capsized fishing vessel	SEASON	Winter
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	NA (Open Water)
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-03-1,2,3

A crew of three commercial crab fishermen died after their boat capsized in rough waters off the Oregon Coast. Despite poor weather conditions and heavy seas, the crew stayed out until after dark. On their return the Coast Guard, which had already escorted other vessels, attempted to guide them using illumination flares. As they were being escorted, 12- to 14-foot waves washed over the pilot house, swamping the boat. The boat was cut in two and the deck sheared off. One crew member was pulled from the water but later died, and the other crew member was found dead on the beach. The captain of the vessel was found dead in the pilot house, with traces of alcohol, methamphetamine, and amphetamine in his blood stream. Cause of death for the three deceased crew members was reported as asphyxia by drowning, and there was no report of personal floatation device use.

DESCRIPTION	Struck by vehicle	SEASON	Winter
INDUSTRY	Health Care and Social Assistance	COUNTY	Jackson
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-04-1

A 69-year-old retirement center transportation employee died of blunt trauma and compressive asphyxia while transporting residents to the bank. The employee pulled the vehicle into a parking space, opened the door, and stepped out. The employee did not place the vehicle in a park position and subsequently the vehicle started to move. The transportation employee attempted to reach into the vehicle and was pinned under the wheel. Witnesses called emergency services and the employee was transported to the hospital and died shortly thereafter.

DESCRIPTION	Motor vehicle accident	SEASON	Winter
INDUSTRY	Public Administration	COUNTY	Umatilla
OCCUPATION	Community and Social Services Occupations	OR-FACE NUMBER	OR 2019-06-1

A 52-year-old government employee was driving home in a state passenger vehicle when she died of injuries sustained in a motor vehicle accident. The employee was suddenly hit by another driver of a passenger vehicle in a head-on collision. The driver of the other vehicle was later arrested and found to be driving under the influence of intoxicants. The employee was pronounced dead on the scene.

DESCRIPTION	Motor vehicle accident	SEASON	Spring
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Douglas
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-07-1

A 55-year-old log truck driver sustained blunt force injuries to the abdomen after crashing into a tree. He was driving a loaded truck down a hill on a graveled road when, for unknown reasons, the truck flipped onto its side and slid into the tree. Subsequently the cab of the truck was crushed and dislodged due to the impact. The driver died on the scene.

DESCRIPTION	Motor vehicle accident	SEASON	Spring
INDUSTRY	Transportation and Warehousing	COUNTY	Umatilla
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-13-1

A 57-year-old semi-truck driver died of asphyxiation after the vehicle overturned. The truck driver was driving at night when he failed to negotiate a curve and subsequently the vehicle drifted off the road, onto the shoulder and rolled onto its side. The driver was found to not be wearing a seatbelt and the impact of the crash ejected him from his vehicle. The truck driver was pronounced dead on the scene. According to the State Police report, alcohol use and speed of the vehicle may have been contributing factors to the crash.

DESCRIPTION	Motor vehicle accident	SEASON	Spring
INDUSTRY	Manufacturing	COUNTY	Marion
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-14-1

A 29-year-old delivery truck driver was driving with his niece in the passenger seat when he crashed into a utility pole. According to reports, the truck driver failed to negotiate a curve, drifted off the roadway, and crashed into the utility pole. Both the driver and passenger were found dead on the scene.

DESCRIPTION	Struck by vehicle	SEASON	Spring
INDUSTRY	Transportation and Warehousing	COUNTY	Multnomah
OCCUPATION	Office and Administrative Support Occupations	OR-FACE NUMBER	OR 2019-15-1

A 77-year-old contracted mail carrier (non-USPS) died after he was struck by a taxi vehicle. The employee parked his vehicle and crossed the street when he was struck by a taxi, resulting in a fatal injury.

DESCRIPTION	Struck by vehicle	SEASON	Spring
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Douglas
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-20-1

A 63-year-old log truck driver died after sustaining crushing blunt force chest and abdominal injuries. The log truck driver was driving a loaded truck when he stopped at a wide spot along the road. He got out of the truck and was standing at/between the tag axle when the truck rolled forward, crushing him. He was pronounced dead on the scene.

DESCRIPTION	Struck by vehicle	SEASON	Spring
INDUSTRY	Construction	COUNTY	Klamath
OCCUPATION	Protective Service Occupations	OR-FACE NUMBER	OR 2019-22-1

A 45-year-old flagger died after sustaining multiple blunt force injuries. The flagger was working on an active work site when a passenger vehicle struck the flagger. He was pronounced dead on the scene by medical crew.

DESCRIPTION	Crushed by vehicle	SEASON	Spring
INDUSTRY	Construction	COUNTY	Douglas
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-23-1

A 65-year-old flooring installer died after sustaining crush injuries of the torso. The flooring installer was caught between a loading dock and the trailer of a semi-truck that was backing up.

DESCRIPTION	Skidder overturn	SEASON	Summer
INDUSTRY	Public Administration	COUNTY	Benton
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-28-1

A 59-year-old public works employee was operating a skidder during road construction, when for unknown reasons it overturned and rolled 300-400 feet down a hill. The skidder landed on the decedent, who died of multiple traumatic injuries.

DESCRIPTION	Struck by vehicle	SEASON	Summer
INDUSTRY	Transportation and Warehousing	COUNTY	Jefferson
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-29-1

A 66-year-old semi-truck driver attempted to cross a highway on foot after stopping on the shoulder, and was struck by a passenger vehicle. The semi-truck driver died at the scene; the driver of the passenger vehicle was released after being taken to a local hospital.

DESCRIPTION	Motor vehicle accident	SEASON	Summer
INDUSTRY	Transportation and Warehousing	COUNTY	Multnomah
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-31-1

A 50-year-old semi-truck driver crashed into a freeway sign while driving under wet conditions. The truck and trailer both caught fire, and the cause of death was ruled as smoke and soot inhalation.

DESCRIPTION	Motor vehicle accident	SEASON	Summer
INDUSTRY	Arts, Entertainment, and Recreation	COUNTY	Harney
OCCUPATION	Arts, Design, Entertainment, Sports, and Media Occupations	OR-FACE NUMBER	OR 2019-32-1

A 39-year-old race-car/stunt driver was attempting to break a land speed record in a jet-powered car in a desert setting. A mechanical problem with the front wheel occurred at high speeds, collapsing the wheel assembly and crashing the car. The driver died at the scene.

DESCRIPTION	Airplane crash	SEASON	Summer
INDUSTRY	Arts, Entertainment, and Recreation	COUNTY	Hood River
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-33-1

A 55-year-old pilot was taking off from an airfield in a single-engine plane, when the engine cut out at approximately 100 ft off the ground. The plane crashed and the pilot died on the scene.

DESCRIPTION	Motor vehicle accident	SEASON	Summer
INDUSTRY	Transportation and Warehousing	COUNTY	Jackson
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-34-1

A 21-year-old truck driver was traveling on a highway bridge when for unknown reasons, the truck drifted right and went through the guardrail and landed on the roadway below. The driver was traveling after midnight, and fatigue was considered a possible contributing factor. He died at the scene of multiple blunt force injuries.

DESCRIPTION	Crushed by vehicle	SEASON	Autumn
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Klamath
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-37-1

A 57-year-old agricultural worker attempted to jump-start a tractor while standing by the steps of the tractor. The tractor started, and ran over the worker, crushing him.

DESCRIPTION	Skidder overturn	SEASON	Autumn
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Jackson
OCCUPATION	Farming, Fishing, and Forestry Occupations	OR-FACE NUMBER	OR 2019-38-1

An 89-year-old forestry worker was operating a rubber tire steer skidder loaded with a 55 ft tree in its grapple. The skidder lost balance and rolled over down a hill. The worker died at the scene of blunt neck trauma.

DESCRIPTION	Motor vehicle accident	SEASON	Autumn
INDUSTRY	Agriculture, Forestry, Fishing and Hunting	COUNTY	Josephine
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-40-1

A 51-year-old truck driver was driving a truck loaded with logs, when she lost control at a corner turn. The load shifted forward, crushing the truck cab and the driver.

DESCRIPTION	Motor vehicle accident	SEASON	Autumn
INDUSTRY	Administrative and Support and Waste Management and Remediation Services	COUNTY	Multnomah
OCCUPATION	Transportation and Material Moving Occupations	OR-FACE NUMBER	OR 2019-42-1

A 43-year-old truck driver had stopped his truck at the side of a road. While checking his load, he was struck by a passenger vehicle, and died of blunt force trauma.

DESCRIPTION	Crushed by vehicle	SEASON	Autumn
INDUSTRY	Construction	COUNTY	Benton
OCCUPATION	Construction and Extraction Occupations	OR-FACE NUMBER	OR 2019-45-1

A 47-year-old tradesmen was crushed between a backhoe and a dump truck. He was transported to a nearby hospital, where he died of blunt force traumatic injuries.

DESCRIPTION	Motor vehicle accident	SEASON	Autumn
INDUSTRY	Health Care and Social Assistance	COUNTY	Lane
OCCUPATION	Healthcare Support Occupations	OR-FACE NUMBER	OR 2019-46-1

A 40-year-old social assistance employee was walking next to a street with a client, when a passenger vehicle jumped the curb and struck the employee. The employee was transported to a hospital where he died the next day of blunt force head trauma. The driver of the vehicle was charged with driving under the influence.

VIOLENCE AND OTHER INJURIES BY PERSONS OR ANIMALS

DESCRIPTION	Gunshot wound	SEASON	Autumn
INDUSTRY	Manufacturing	COUNTY	Clackamas
OCCUPATION	Management Occupations	OR-FACE NUMBER	OR 2019-41-1

A 36-year-old manager at a food production company was intentionally and fatally shot by a former employee.

DESCRIPTION	Gunshot wound	SEASON	Autumn
INDUSTRY	Retail Trade	COUNTY	Washington
OCCUPATION	Sales and Related Occupations	OR-FACE NUMBER	OR 2019-44-1

A 22-year-old retail worker died of a self-inflicted gunshot wound while at the workplace.

DESCRIPTION	Gunshot wound	SEASON	Winter
INDUSTRY	Health Care and Social Assistance	COUNTY	Klamath
OCCUPATION	Healthcare Support Occupations	OR-FACE NUMBER	OR 2019-47-1

A 53-year-old live-in caregiver was found dead from multiple gunshot wounds by Oregon State Police, inside the home of her client. The client appeared to have shot the caregiver, and then committed suicide.

DELAYED CASES

Worker fatalities with delayed death from date of injury (over 48 hours), 2019.

EVENT	CAUSE OF DEATH	INTERVAL	FACE ID
FALL	Intracerebral hemorrhage	3 days	OR 2019-18-1
FALL	Blunt force head trauma	2 days	OR 2019-21-1
FALL	Intracerebral hemorrhage	6 days	OR 2019-24-1

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 2019, the following three cases are considered undetermined, pending additional information.

EVENT	DESCRIPTION	SEX	SEASON	NAICS CODE
TRANSPORTATION INCIDENT	Plane crash	Male	Winter	Transportation and Warehousing
TRANSPORTATION INCIDENT	Snowplow and truck collision	Male	Autumn	Transportation and Warehousing
UNKNOWN	Found prone with face bloody	Male	Autumn	Health Care and Social Assistance

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 (July 2021): https://www.bls.gov/iif/osh_oiiics_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.

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.

Other Events or Exposures

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



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