

The background of the cover is a green-tinted photograph. It shows a person, likely a tree trimmer or arborist, working high up in a large, leafy tree. The person is wearing a harness and appears to be using a chainsaw or similar tool. In the lower portion of the image, the roof and upper walls of a house are visible, partially obscured by the tree branches. The overall scene is set in a residential area with mature trees.

Occupational Fatalities in Oregon Annual Report 2010

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

Annual Report 2010

Fatality Assessment and Control Evaluation

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

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(Jae Douglas, PhD MSW, Principal Investigator).*

FACE Definitions

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

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

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

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

In Scope

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

Out of Scope

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

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

Acronyms

| | |
|-------------|---|
| BLS | U.S. Bureau of Labor Statistics |
| CDC | Centers for Disease Control and Prevention |
| CFOI | U.S. Census of Fatal Occupational Injuries |
| NAICS | North American Industry Classification System |
| NTSB | National Transportation Safety Board |
| NVDRS | National Violent Death Reporting System |
| OIICS | Occupational Injury and Illness Classification System |
| Oregon OSHA | Oregon Occupational Safety and Health Division |
| SOC | Standard Occupational Classification |

Summary

REPORT HIGHLIGHTS

- OR-FACE conducts surveillance, investigation, assessment, and outreach related to traumatic occupational fatalities in Oregon (see p. 5).
- OR-FACE produced the hazard alert *Knowing the Hazards of Driver Distraction* based on *State Regulation of Cell Phone Use While Driving and the Risks of Driver Distraction* (see p. 6).
- Additional publications for 2010 include a fatality investigation report and the 2007 annual OR-FACE report (see p. 6).
- Basic characteristics of fatal events and the workers involved are quantified in charts (see pp. 7-12).
- An abstract for each incident provides a brief description of each event (see pp. 13-22).
- Contact OR-FACE to request more information or to offer feedback via our website survey (see back cover).

INTRODUCTION

In 2010, Oregon Fatality Assessment and Control Evaluation recorded 49 fatal occupational incidents, with 51 worker deaths. The number represents a rate of 2.88 fatalities per 100,000 employed workers in the civilian labor force in Oregon. The national worker fatality rate in 2010 was 3.6 per 100,000 full-time equivalent workers, down from 3.5 in 2009 (CFOI).

The following notable trends occurred in 2010.

- Overall, the number of fatalities was lower compared to the last three years. In 2009, there were 64 worker deaths, 61 worker deaths in 2008, and 68 worker deaths in 2007.
- Consistent with previous trends, transportation remains the most common event, industry, and occupation to cause work-related fatalities in Oregon. The second most frequent cause of death was violence, with suicide being the most common (13 of the 16 violent incidents). Management occupations had the second highest occupational death rate, after transportation.
- Delayed deaths were limited to 2 cases in 2010, compared to 3 cases in 2009 and 5 cases in 2008. Delayed death is defined as death over 2 days following the date of injury. One delayed death in 2010 occurred 3 days after the original injury, the other death occurred 21 years after the original incident.

Core Activities

SURVEILLANCE

Similar to prior years, earliest first notification in 2010 for work-related fatalities came mostly from news reports and Oregon OSHA. The OR-FACE surveillance system consists of a Google alert keyword search, quarterly reports of death certificates marked “at work” from Oregon Vital Records, Oregon OSHA fatality notification reports, a daily scan of local news websites, and fatality reporting from the Oregon Emergency Response System (OERS). The use of the Google alert keyword search has improved first-notification system and significantly augmented the span of surveillance. Data sources include death certificates, Oregon OSHA investigation reports, Medical Examiner reports, police investigations, news reports, Workers’ Compensation records, and occasionally other records such as photo disks, business profiles, hospital or emergency response records, or investigation reports from other sources.

ASSESSMENT

When fatalities become a FACE case, sufficient data and information are collected about each incident to produce an abstract. OR-FACE analyzes incident data to identify and summarize trends, grouping incidents by coded industry (NAICS), occupation (SOC), and event (OIICS), and by demographic and other variables, such as the specific source or setting of the injury. Each OR-FACE incident is summarized with an abstract with the surveillance data. Abstracts illuminate each fatality with aim of preventing similar fatalities in the future.

INVESTIGATION

In-depth investigations are conducted for selected cases by contractors with relevant industry-specific expertise. Investigators work in conjunction with OR-FACE staff to produce reports, which are reviewed by a panel of professional safety experts prior to publication. Investigations reports seek to draw attention to urgent safety issues of fatality cases. One investigation report was published in 2010 for a case where a clean-up worker at a food mill was killed when he fell into a manlift shaft. He apparently tripped or misjudged the handhold on the continuously running manlift that carried workers up and down between floors. The OR-FACE investigation report *Shipyards Welder Ignites Hydraulic Fluid and Is Fatally Burned* (FACE case 2003-22), was featured in the February 2010 edition of *Safety + Health*. Subsequently, the Hydraulic Safety Authority of Canada notified OR-FACE that it reproduced the investigation report on a hydraulics safety training CD.

OUTREACH

OR-FACE outreach efforts include publications and their distributions, safety events and initiatives, posters, and presentations (see page 6 for 2010 OR-FACE publications). Published OR-FACE safety materials are distributed online, by email and direct mail, and through collaboration with target organizations. In 2010, OR-FACE distributed the *Fallers Logging Safety* booklet to 250 saw shops and equipment dealers in Oregon and Washington State. Approximately 5,000 of these booklets have been distributed to date. In August, OR-FACE partnered with several Oregon Health & Science University and governmental safety centers at the Safety Streets event, where over 1,700 attendees learned about injury prevention. In October, Safety initiative efforts produced the Oregon OSHA-funded *Yarding Logging Safety Handbook*. The handbook tells the stories of 18 fatal incidents in yarding operations in Oregon over 2003-2008 with accompanying safety recommendations. The handbook is currently used to instruct fieldwork operations in the Oregon State University Forest Engineering Program. In September, OR-FACE staff presented Tree Fallers Point-of-View Video Observation Study at the Oregon Program Evaluators Network 2010 Conference.

Recent Publications

Investigation Report

- Temporary mill worker killed in fall down manlift shaft

Annual Report

- Oregon Fatality Assessment and Control Evaluation Annual Report 2007

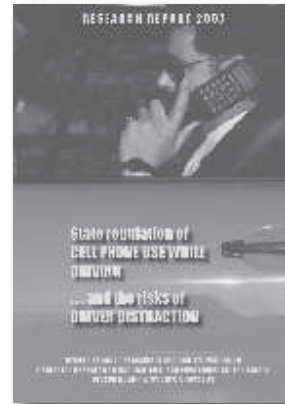
Hazard Alert

- Know the Hazards of Driver Distraction (HA8)
- Yarding Logging Safety Handbook (HA9)

Knowing the Hazards of Driver Distraction

In 2010, the OR-FACE team produced a hazard alert based on the 2007 safety booklet, *State Regulation of Cell Phone Use While Driving and the Risks of Driver Distraction*. The hazard alert includes narratives of three fatal injuries resulting from distracted driving, and offers general safety tips and recommendations to help drivers avoid distractions and stay safe on the road.

The hazard alert includes the following driver safety recommendations. Turn off your cell phone when you drive or minimize the temptation to reach for it by placing it in an inaccessible location. Place your hands-free device in a holder before you begin driving. Do not text while driving. Additionally, keep your eyes on the road, always wear your safety belt, and never drive while intoxicated.



Find the alert online at the OR-FACE website: www.ohsu.edu/croet/face.

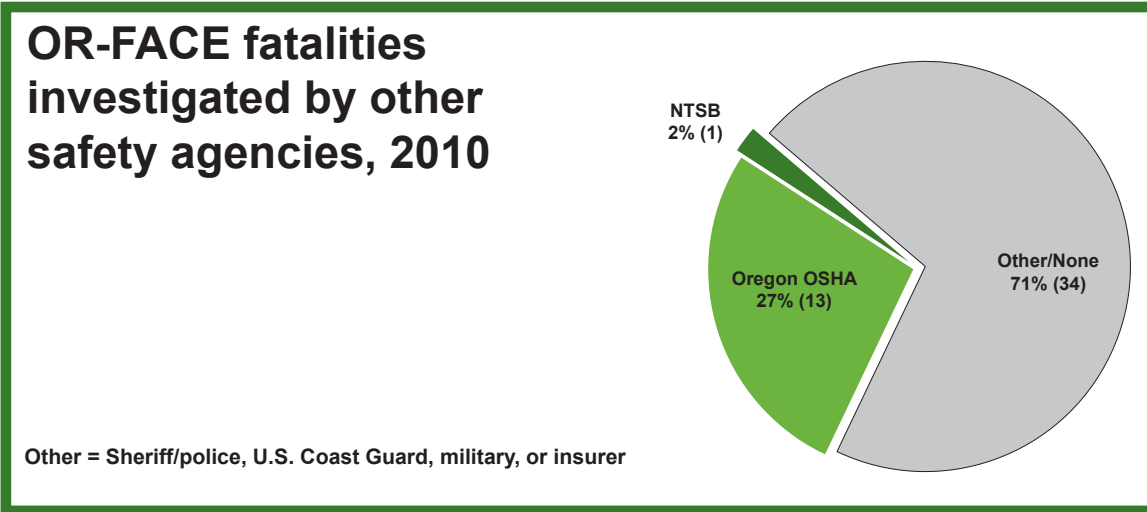
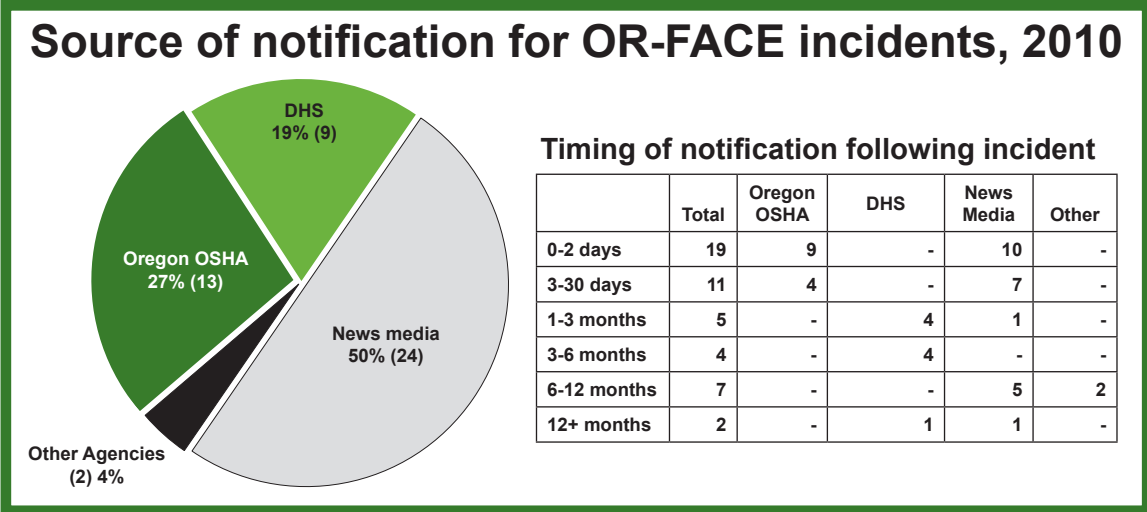
Find published safety booklets, reports, and other information at the OR-FACE website at www.ohsu.edu/croet/face.

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

Charts

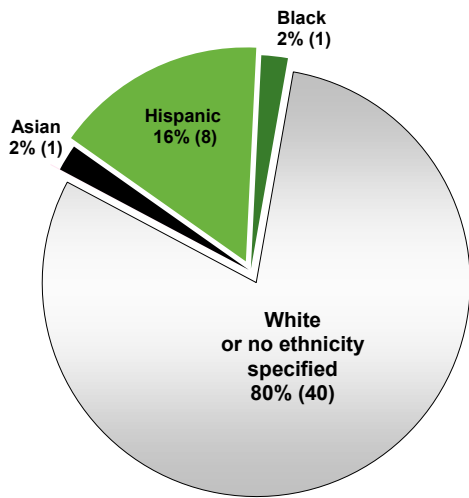
In 2010, as in 2009, there was observed continued elevation in Hispanic worker deaths (16%, compared to 14%). Historically (2003-2009), work-related deaths among Hispanic workers averaged 8.4% of total cases. Transportation was the deadliest industry, occupation, and event in 2010. The second most prevalent industry for fatalities was agriculture. Occupationally, management positions were the second deadliest profession in 2010, which was associated with violence rising to the second most frequent type of fatal event. There were no documented fatalities caused by water transportation, fire, or exposure in 2010, nor were there any recorded deaths among the occupations of fishing or the combinations of religious organizations, general automotive repair, and personal care services (defined by NAICS as “other services”).

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

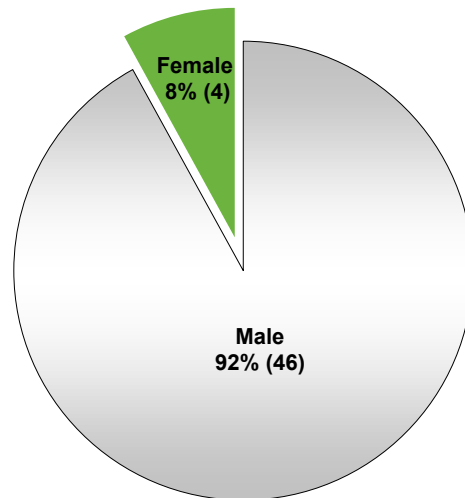


Charts

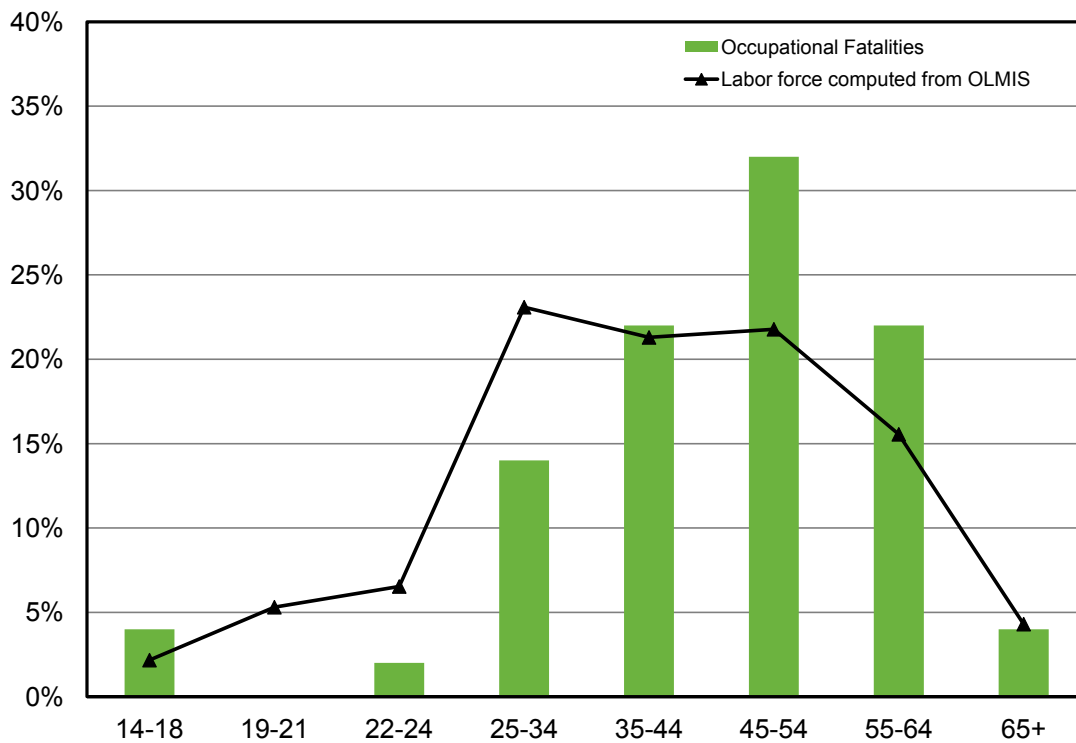
Worker Fatalities by Race/Ethnicity, 2010



Worker Fatalities by Gender, 2010



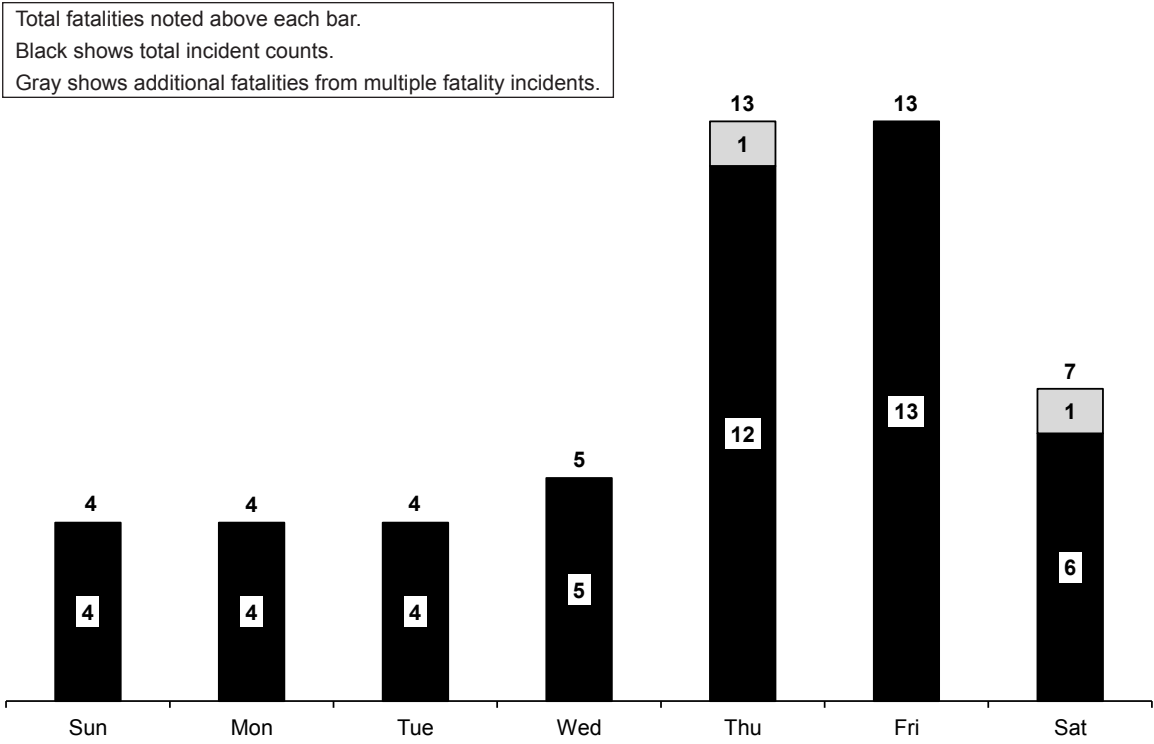
Occupational Fatalities in Oregon by Age, Compared to Age Distribution of Civilian Labor Force in Oregon, 2010



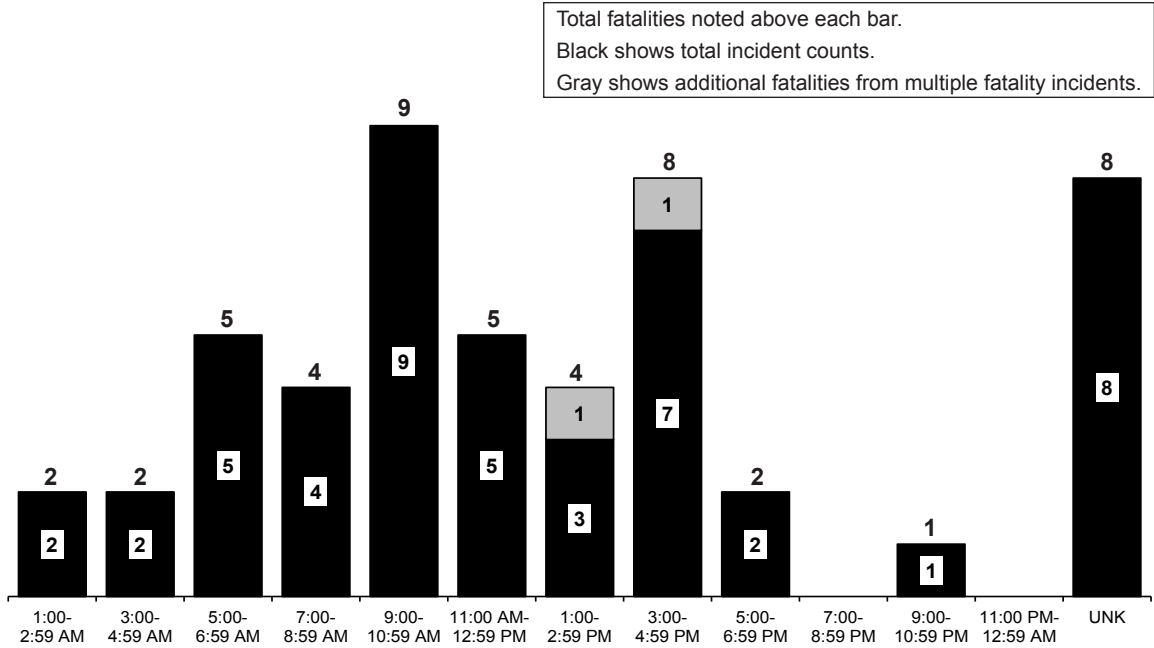
Source: OLMIS (OREGON LABOR MARKET INFORMATION SYSTEM), <http://www.qualityinfo.org/olmisj/qwi>
Retrieved: March 2013

Charts

Worker Fatal Incidents and Total Fatalities by Day, 2010

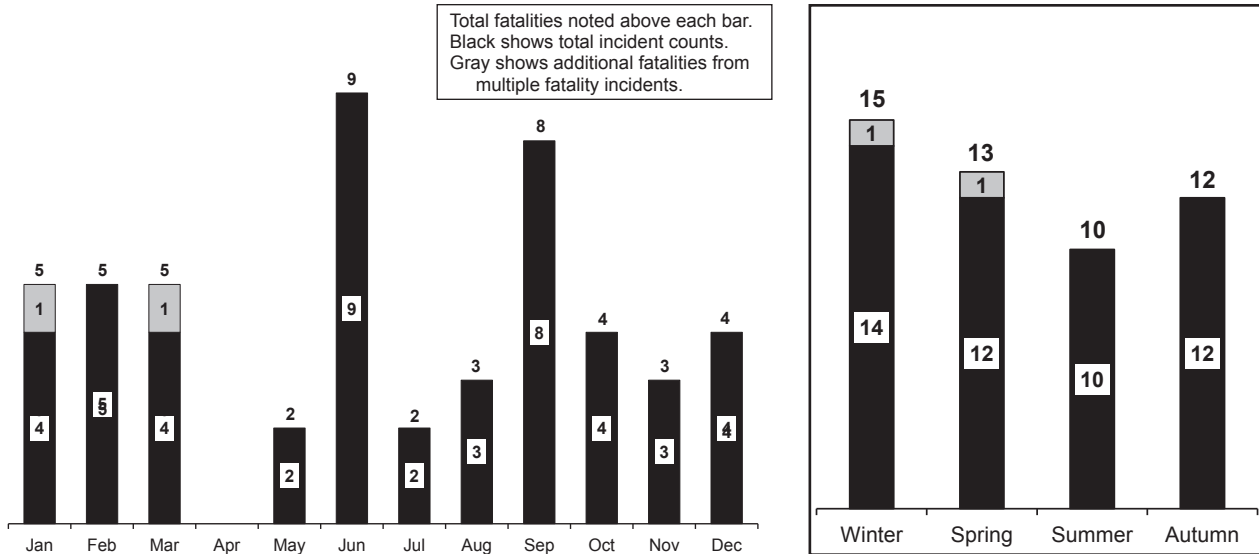


Worker Fatal Incidents and Total Fatalities by Time of Incident, 2010

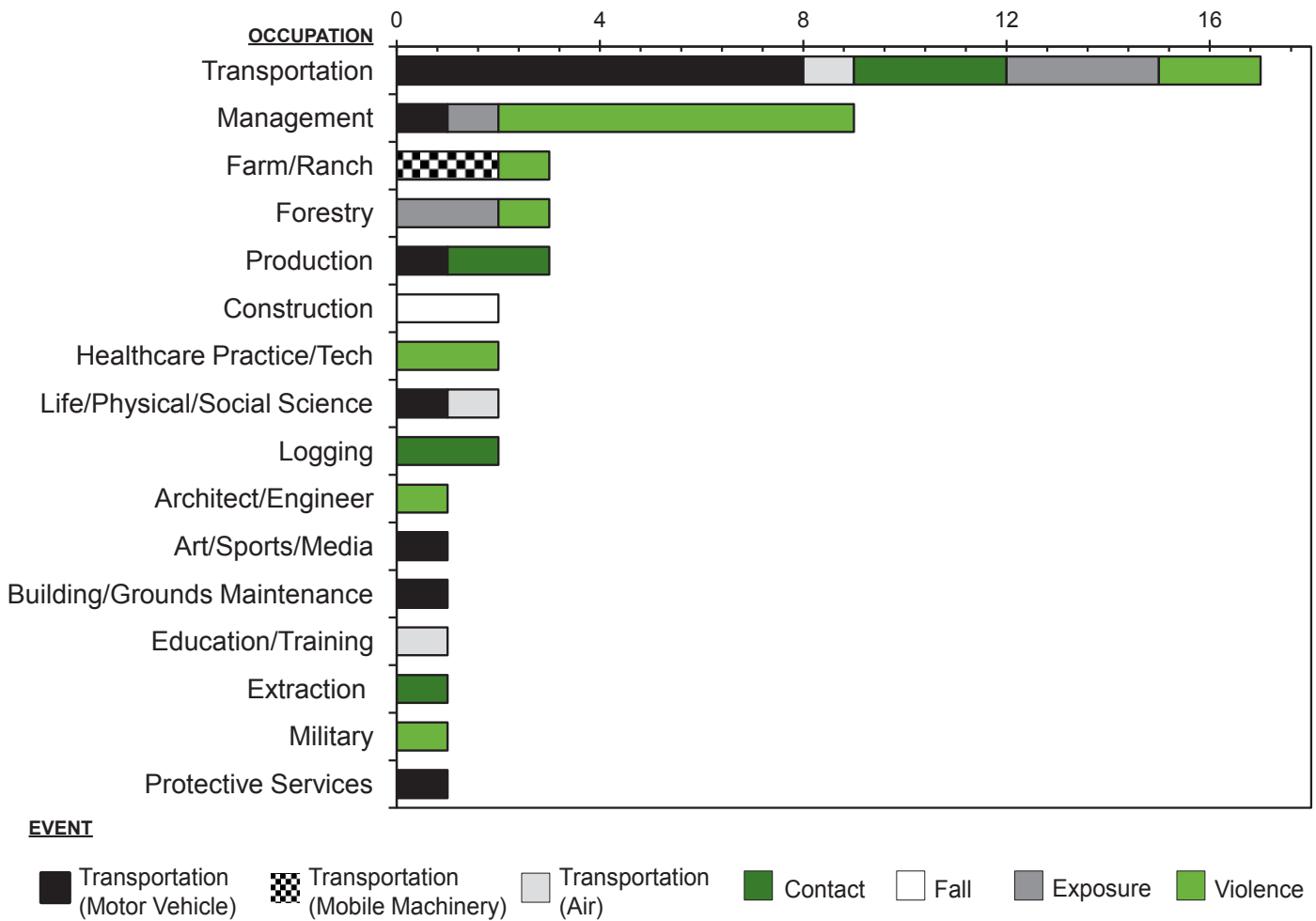


Charts

Worker Fatal Incidents and Total Fatalities by Month and Season, 2010

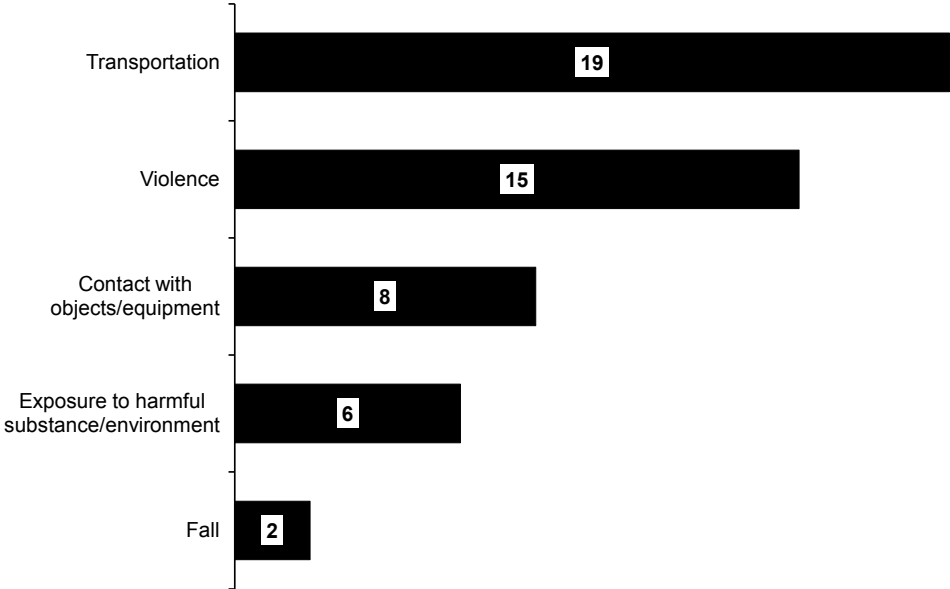


Worker Fatalities in Oregon by Occupation and Event, 2010

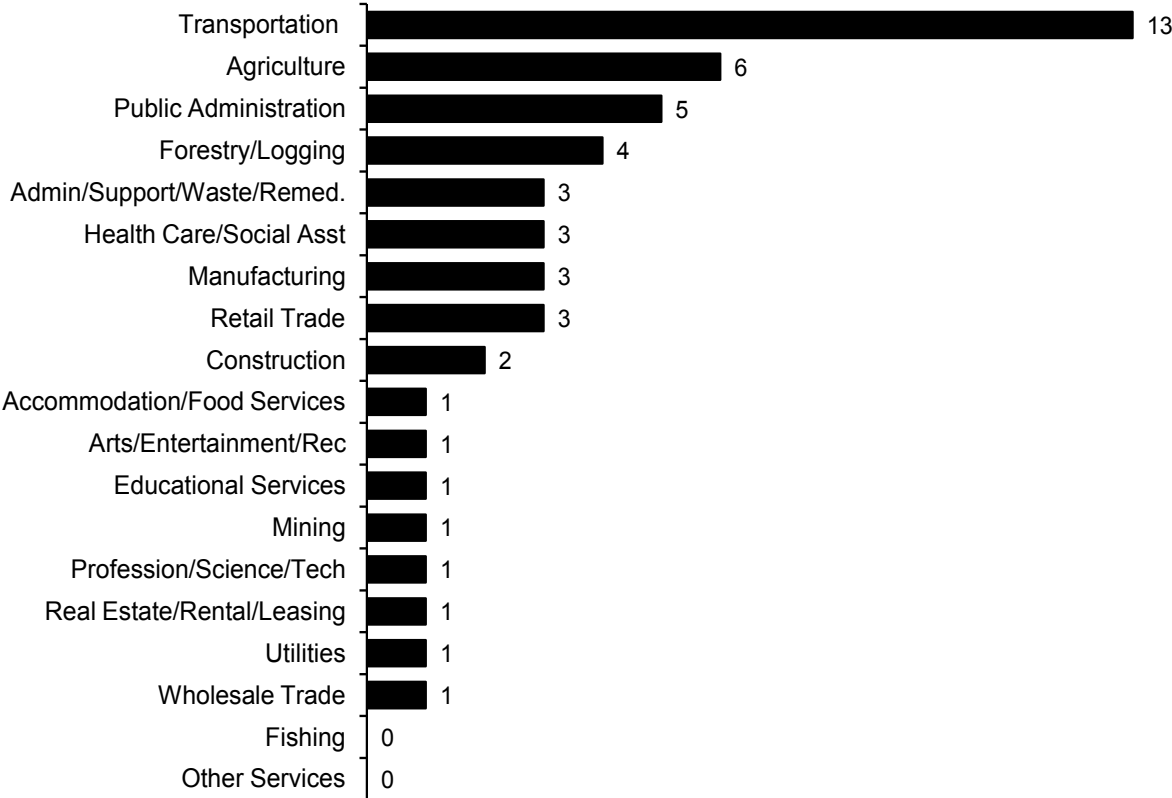


Charts

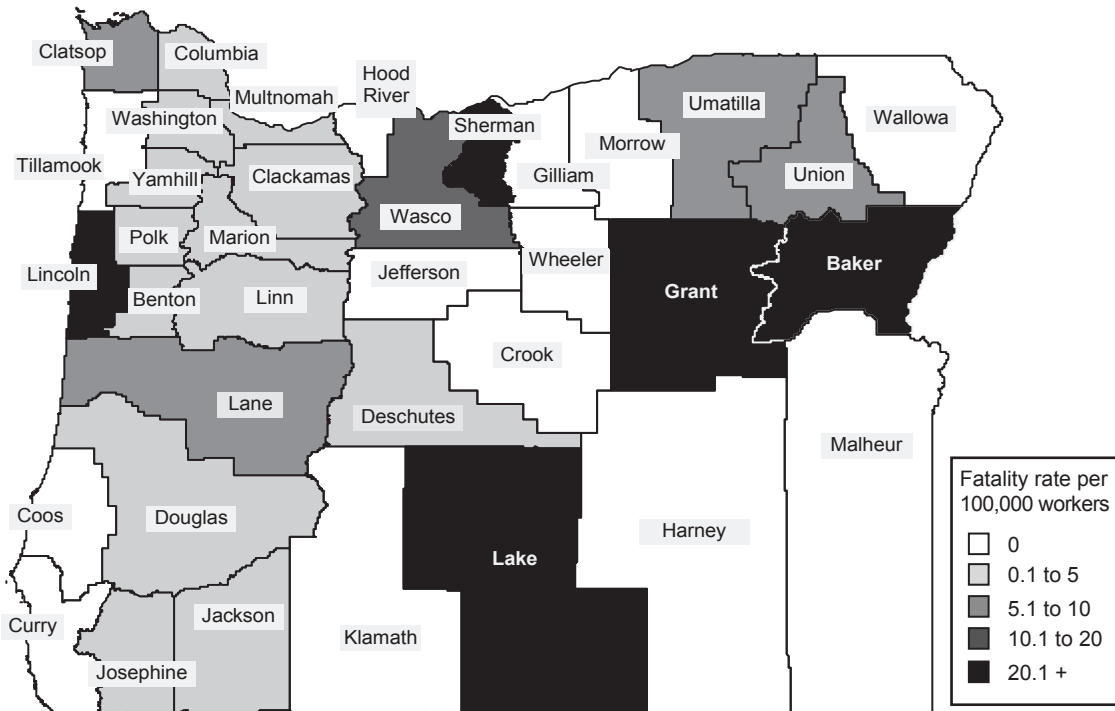
Worker Fatalities by Type of Event, 2010



Worker Fatalities in Oregon by Industry, 2010



Oregon Counties



Oregon Population, Employed Labor Force, and Fatalities by County, 2010

| | Total population | Employed labor force | Worker fatalities | | Total population | Employed labor force | Worker fatalities |
|---------------|------------------|----------------------|-------------------|------------|------------------|----------------------|-------------------|
| OREGON | 3,837,300 | 1,772,217 | 50 | | | | |
| BAKER | 16,440 | 6,893 | 2 | LAKE | 7,570 | 3,273 | 1 |
| BENTON | 87,000 | 40,915 | 2 | LANE | 348,550 | 162,668 | 9 |
| CLACKAMAS | 381,775 | 179,827 | 2 | LINCOLN | 44,620 | 20,859 | 5 |
| CLATSOP | 37,860 | 19,127 | 1 | LINN | 111,355 | 49,028 | 1 |
| COLUMBIA | 48,620 | 21,653 | 1 | MALHEUR | 31,865 | 12,155 | 0 |
| COOS | 62,930 | 25,086 | 0 | MARION | 320,640 | 141,848 | 2 |
| CROOK | 27,280 | 7,603 | 0 | MORROW | 12,595 | 5,025 | 0 |
| CURRY | 21,160 | 8,274 | 0 | MULTNOMAH | 730,140 | 362,732 | 5 |
| DESCHUTES | 172,050 | 69,492 | 1 | POLK | 69,145 | 35,756 | 1 |
| DOUGLAS | 105,240 | 39,856 | 1 | SHERMAN | 1,825 | 964 | 1 |
| GILLIAM | 1,885 | 1,148 | 0 | TILLAMOOK | 26,170 | 11,858 | 0 |
| GRANT | 7,510 | 3,050 | 1 | UMATILLA | 72,720 | 35,655 | 2 |
| HARNEY | 7,720 | 3,016 | 0 | UNION | 25,495 | 11,348 | 1 |
| HOOD RIVER | 21,850 | 13,274 | 0 | WALLOWA | 7,085 | 3,360 | 0 |
| JACKSON | 207,745 | 89,702 | 2 | WASCO | 24,280 | 13,001 | 2 |
| JEFFERSON | 22,865 | 8,098 | 0 | WASHINGTON | 532,620 | 264,494 | 5 |
| JOSEPHINE | 83,600 | 30,024 | 1 | WHEELER | 1,590 | 637 | 0 |
| KLAMATH | 66,475 | 26,877 | 0 | YAMHILL | 95,925 | 43,641 | 1 |

Sources: Portland State University Population Research Center and BLS Local Area Unemployments Statistics
Retrieved: March 2013

Worker Fatalities

INFORMATION KEY

Description

Industry
Occupation

Date of Incident
County of Incident
OR-FACE Number

Abstracts

of fatal occupational incidents in Oregon by type of event

2010

Transportation – Violence – Contact

Falls – Exposure

Transportation (Motor Vehicle)

| | |
|-------------------------------------|--|
| <i>Log truck off road</i> | A 51-year-old log truck driver was killed after his truck left the roadway when negotiating a curve, traveled into a ditch, and then struck an embankment. The crash caused the loaded logs on the trailer to shift forward into the cab and crush the victim's chest. Skid marks were not present at the crash site, which suggest that the driver was distracted and veered gradually off the road. The victim's dog was in the cab with him. The driver died of traumatic asphyxia. |
| Transportation Transportation | |
| February 4 Lane OR 2010-04-1 | |
| <i>Semi struck by hay</i> | A 37-year-old truck driver was killed when several 1,100-pound hay bales from an oncoming tractor-trailer fell on his truck on the highway. The victim was driving toward the truck loaded with hay when a bale fell off the oncoming vehicle and demolished the victim's cab, which then caused the truck to roll to its side onto the shoulder of the road. The victim died from severe head, chest, and abdominal injuries. |
| Retail Trade Transportation | |
| March 4 Lane OR 2010-07-1 | |
| <i>Semi trucks collide</i> | A 48-year-old truck driver was killed after his loaded, westbound semi negotiated a corner too fast and hit a concrete barrier that divided the east and westbound lanes. The truck and attached trailer collided with both a railroad trestle and an oncoming, eastbound commercial truck. The victim was ejected from the cab and died from multiple blunt force injuries. The passenger, in the truck's sleeper berth at the time of the crash, survived. The victim's toxicology report was positive for methamphetamine use. It is unknown if the victim was wearing a safety belt at the time of the incident. |
| Transportation Transportation | |
| March 26 Lane OR 2010-08-1 | |
| <i>Tanker explosion</i> | A 58-year-old driver of a tanker truck was killed after his truck drifted off the highway, rolled over, and then exploded into flames. He was hauling 11,000 gallons of diesel and gasoline fuel. Reports indicated that the victim was new to driving that type of tanker truck. A witness stated they saw the truck traveling at a high speed before the crash occurred. |
| Transportation Transportation | |
| May 12 Deschutes OR 2010-09-1 | |

Worker Fatalities – Transportation

| | |
|---|--|
| <i>Father-son log truck crash</i> | A 33-year-old driver of a loaded log truck was killed after his truck traveled off the highway shoulder and struck a tree. The impact from the crash sent the load of logs through the rear windshield and into the truck cab. The driver died instantly. His 10-year-old son, who was riding in the truck at the time of the crash, survived. The victim died of head trauma. |
| Forestry/Logging Transportation | |
| July 22 Columbia OR 2010-12-1 | |
| <i>Rock band van crash</i> | A 28-year-old lead singer for a band was killed after the vehicle he was riding in rolled and ejected him. The victim was sleeping in the cargo area of a van en route to Nevada from Oregon and was not wearing a safety belt. At approximately 5:30 in the morning, the driver of the van fell asleep; this caused him to veer off the highway, and flipped the van in the process. The band had been touring for nearly two months had been experiencing inconsistent sleep. |
| Arts/Entertainment/Rec Art/Sports/Media | |
| August Jackson OR 2010-16-1 | |
| <i>Meat truck struck cow</i> | A 54-year-old commercial truck driver was killed after his truck hit a black cow in the roadway during the dark early morning hours. After the truck struck the cow, it veered off the road, struck a group of trees, rolled, and caught fire. The stretch of highway runs through an open range where livestock are lawfully permitted to run at large. |
| Wholesale Trade Transportation | |
| September 23 Wasco OR 2010-23-1 | |
| <i>Biologist pickup crash</i> | A 52-year-old wildlife biologist was killed after the work pickup truck she was driving from a worksite was hit by a semi-truck. A car entering the highway from an intersection pulled directly into the path of the semi. The truck driver pulled into the center lane to avoid the collision, which caused the empty trailer to jackknife, flip, and land on the roof of the victim's pick-up. The victim died at the scene. |
| Public Administration Life/Physical/Social Science | |
| October 25 Lincoln OR 2010-28-1 | |
| <i>Van off cliff</i> | A 40-year-old tree trimmer was killed while he was traveling as a passenger with nine other workers in a cargo van on a snowy, gravel forest service road in order to cut tree boughs at a worksite. The driver of the van lost control after the rear tires slid on the snow, and the van fell approximately 100 feet down an embankment. The van was retrofitted with two bench seats that were not equipped with safety belts. The victim was not wearing a safety belt and was ejected from the van. The victim died from head and chest trauma. None of the other passengers were killed. |
| Admin/Support/Waste/ Remed. Building/Grounds Maint. | |
| November 1 Linn OR 2010-29-1 | |

Worker Fatalities – Transportation

| | |
|---|--|
| <p><i>Armored truck crash</i></p> <p>Admin/Support/Waste/ Remed. Protective Services</p> <p>November 24 Polk OR 2010-32-1</p> | <p>A 24-year-old security guard was killed after the armored truck he was riding in struck a tree and rolled several times. He was riding unrestrained in the rear of the armored truck. The driver of the armored truck lost control, overcorrected, and veered off the highway. The driver was reportedly cited by police for careless driving in the incident. The victim was transported to the hospital and died from a traumatic brain injury one day later.</p> |
| <p><i>Run over by truck</i></p> <p>Transportation Transportation</p> <p>June 4 Multnomah OR 2010-33-1</p> | <p>A 44-year-old commercial truck driver was killed after he was run over by a semi-truck in the loading yard of the company where he was working as a subcontractor. The victim drove his truck into the yard and exited his vehicle to go into the office for his daily dispatch. On his way to the office, he stepped on an orange cone, tripped, and fell over. He got up and kicked the cone into the air near another employee who retrieved the cone and threw it back toward the victim. As the victim went to get the cone, which landed by the rear chassis of a nearby semi between two tires, the truck's driver entered the cab and drove forward, crushing the victim under the rear tires. The driver stated that he did not see the victim bent down next to his vehicle. Company policy prohibited more than one driver being out of their truck at a time.</p> |
| <p><i>Icy MVC</i></p> <p>Utilities Production</p> <p>December 10 Sherman OR 2010-37-1</p> | <p>A 50-year-old manager of a renewable energy plant was killed after the work pickup truck he was driving crossed into the oncoming lane of traffic and collided head-on with a semi-truck hauling lumber. Road conditions were icy at the time of the crash.</p> |
| <p><i>Food truck crash</i></p> <p>Transportation Transportation</p> <p>December 4 Baker OR 2010-40-1</p> | <p>A 45-year-old team driver was killed when the semi-truck she was in crashed. At the time of the incident, she was off-duty in the sleeper berth. Her partner was driving the truck, which was carrying 40,000 pounds of frozen food. Her partner lost control of the truck while they were traveling on an icy stretch of the highway, when it slid on a curve, hit the center barrier, and moved back through the road lanes. It then crashed through a guardrail and rolled down an embankment. The sleeper berth was crushed by the trailer, killing the victim. The driver of the truck survived.</p> |
| <p><i>Janitor crash</i></p> <p>Admin/Support/Waste/ Remed. Management</p> <p>March 19 Jackson OR 2010-46-1</p> | <p>A 32-year-old owner of a janitorial business was killed when the van he was operating struck the rear of a semitrailer. According to reports, the victim likely fell asleep while traveling through Oregon to his home in California. He was traveling with his wife and an employee, cleaning in either Washington or Oregon. Industrial cleaning supplies were present in the van and all appeared to have been recently used. The passengers in the van were not fatally injured.</p> |

Worker Fatalities – Transportation

Transportation (Mobile Machinery)

| | |
|---|---|
| <i>Teenager ATV rollover</i> | A 16-year-old farm worker was killed after he flipped an ATV while spraying weeds on a farm owned by his extended family. Apparently, the victim was operating the ATV with excessive speed and when he attempted to turn, he struck a rut in the field. The victim was not wearing the provided safety belt, and was ejected and crushed by the overturned ATV. The vehicle had a built-in roll cage, but he slipped through as the ATV was rolling. He died of chest trauma and compression asphyxia. |
| Agriculture Farm/Ranch | |
| August 21 Washington OR 2010-18-1 | |
| <i>Tractor dragging log</i> | A 67-year-old farmer was killed when the tractor he was driving flipped and crushed him. He was attempting to drag a large tree behind his tractor with a logging chain on his farm. It appears the victim released the clutch too quickly, which caused the front tires to lift off the ground and flipped the tractor over backwards. He died of compression asphyxia. |
| Agriculture Farm/Ranch | |
| June 29 Marion OR 2010-22-1 | |

Transportation (Air)

| | |
|--|--|
| <i>Fish and wildlife plane crash</i> | Two wildlife biologists, ages 52 and 49, were killed when their small plane crashed into mountainous terrain. One victim was working as the pilot and biologist, and the other was working as a contract biologist. |
| Public Administration Transportation | Both were involved in the annual midwinter count of migratory birds and spent the day flying over estuaries along the Oregon/Washington coast. Their plane crashed on the return flight home. According to investigation reports, it is likely the pilot failed to maintain sufficient altitude above the clearance from terrain, which was an area where mountains were often obscured by low clouds, precipitation, and mist. |
| January 17 Benton OR 2010-03-2 | |
| <i>Skydiver</i> | A 36-year-old skydiving instructor was killed while performing a high-performance maneuver. The victim was an experienced skydiver with more than 15 years experience and was living in Oregon for the summer to teach skydiving lessons. The victim was taking a “fun run” at work before his workday started and was performing a maneuver called a “swoop.” Toward the end of the maneuver, the victim was making a right hand turn to complete the landing, but was too low during the turn and landed hard on the ground. He died from head and chest injuries. |
| Educational Services Education/Training | |
| August 6 Clackamas OR 2010-48-1 | |

Worker Fatalities – Violence

Violence

| | |
|------------------------------------|---|
| <i>Train engineer suicide</i> | A 44-year-old train engineer died from a self-inflicted gunshot wound to the chest. A coworker discovered his body near railroad tracks where they worked. According to several sources, he was stressed over financial and marital problems. |
| Transportation Transportation | |
| February 6 Lane OR 2010-05-1 | |

| | |
|--|---|
| <i>Trucking business owner suicide</i> | A 51-year-old owner and operator of a log-trucking firm shot himself in the chest while at work. He later died at the hospital. The victim was depressed and suicidal regarding the finances of his company and family relationships. He had threatened suicide on multiple occasions prior to his death. |
| Transportation Management | |
| January 15 Lane OR 2010-10-1 | |

| | |
|--|--|
| <i>Restaurant stabbing</i> | A 46-year-old co-owner/operator of a restaurant was killed by her husband/co-owner after he repeatedly stabbed her at their restaurant. At some point during the altercation, 911 was called and police responded to the scene. Police found the victim dead and shot the assailant after he took aggressive action toward them. He later died on the way to the hospital. Reports indicated that the victim wanted a divorce, but the assailant did not. There was no recorded history of domestic violence between the couple. |
| Accommodation/Food Services Management | |
| June 17 Washington OR 2010-14-1 | |

| | |
|-------------------------------------|---|
| <i>Welder suicide</i> | A 59-year-old owner and operator of a welding business died after he hung himself off the frame of a forklift at work. According to reports, the victim was distressed about the finances of his business and had expressed suicidal thoughts for several months. |
| Manufacturing Management | |
| June 2 Multnomah OR 2010-17-1 | |

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| <i>Military suicide</i> | A 42-year-old member of the National Guard died after he shot himself in the chest in his car. The victim was stationed at an armory preparing for a second deployment to Iraq. He killed himself on a farm road five miles from the armory. According to reports, the victim was having financial and family problems at the time of his death. |
| Public Administration Military | |
| February 25 Umatilla OR 2010-21-1 | |

Worker Fatalities – Violence

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| <i>Strychnine ingestion</i> | A 40-year-old cattle ranch hand was killed after he intentionally ingested rodent poison at work. According to reports, he had a history of depression. |
| Agriculture Farm/Ranch | |
| September 30 Lake OR 2010-26-1 | |

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| <i>Homicide in forest</i> | A 28-year-old forest worker was killed after he was shot and killed by another person on private forestland. The victim was gathering plants, used in floral arrangements, to sell. The person who shot the gun was in the woods hunting and reportedly thought the victim was a deer. |
| Agriculture Forestry | |
| November 2 Marion OR 2010-30-1 | |

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| <i>Truck driver suicide</i> | A 47-year-old commercial truck driver died from a self-inflicted gunshot wound to the head. He drove to a highway truck pullout at the beginning of his shift and shot himself on the side of the road. Reports indicate that the victim had made suicidal comments as far back as two and a half years prior to the incident, and had a number of personal problems including financial stressors and health issues. |
| Transportation Transportation | |
| October 9 Lincoln OR 2010-31-1 | |

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| <i>Construction suicide</i> | A 62-year-old owner of a construction company died of a self-inflicted gunshot wound in the office of his business. The victim reportedly had financial problems. |
| Construction Management | |
| July 1 Multnomah OR 2010-34-1 | |

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| <i>Physician methadone overdose</i> | A 63-year-old physician died after he overdosed on methadone and other sedative drugs at work. The victim had extreme financial stressors, a history of depression, and a previous suicide attempt. He was found by coworkers in his office. |
| Healthcare/Social Asst Healthcare Practice/ Tech | |
| September 17 Washington OR 2010-36-1 | |

Worker Fatalities – Violence

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| <i>Butcher suicide</i> | A 57-year-old owner of a butcher and meat storage business died from a self-inflicted gunshot wound to the head. The victim had a fight the previous night with his spouse and threatened suicide. He shot himself inside his business the following day. |
| Retail Trade Management | |
| October 29 Yamhill OR 2010-38-1 | |

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| <i>Chiropractor suicide</i> | A 39-year-old chiropractor died from a self-inflicted gunshot wound to the chest. A note at the scene indicated that he felt the expectations of being a chiropractor and a business owner were “just too much...” |
| Health Care/Social Asst Healthcare Practice/ Tech | |
| June 3 Josephine OR 2010-41-1 | |

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| <i>Appliance store suicide</i> | A 47-year-old owner of a household appliance store died from a self-inflicted gunshot wound to the head. He was found in his vehicle in the parking lot of the store. Reportedly, he was distraught over a pending corporate take-back of the business due to financial issues. |
| Retail Trade Management | |
| September 24 Lincoln OR 2010-44-1 | |

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| <i>Landlord homicide</i> | A 55-year-old property owner was found dead in the backyard of the residence she owned and rented out. The suspect in the victim’s murder was the man who rented a bedroom from her. The victim posted an advertisement on an Internet classified site and the two had lived together for about eight months. The assailant pleaded guilty to the murder. Reports indicated that the day of the murder, the victim rebuffed sexual advances made by the murderer. |
| Real Estate/Rental/ Leasing Management | |
| December 3 Lane OR 2010-45-1 | |

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| <i>Architect suicide</i> | A 55-year-old architect died after he committed suicide by carbon monoxide exposure at his home. The victim connected a hose to his truck’s tailpipe, led it through the passenger side window of his vehicle, and sealed the space between the window and hose with a towel. According to reports, the victim had expressed to family that he was stressed because of the economic downturn and the impact it was having on his architecture business and other investments. He was also in the process of a difficult divorce. He had a previous suicide attempt several months before his death. |
| Profession/Science/ Tech Architect/Engineer | |
| June 13 Washington OR 2010-47-1 | |

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| <i>Handyman Suicide</i> | A 52-year-old handyman died after he hung himself at his workplace. The victim was found hanging from a rafter in a barn behind a home that the property management company he worked for was renovating. |
| Real Estate/Rental/ Leasing Construction | |
| November 5 Polk OR 2010-49-1 | |

This abstract is an addendum to the original publication and is not reflected in the summary and charts above.

Worker Fatalities – Contact

Contact with objects/equipment

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| <i>Crushed by steel plates</i> | A 40-year-old shift supervisor at a steel manufacturing plant was killed after he was crushed between several tons of stacked steel plates and a moving gantry crane. The victim and a coworker were not within sight of the crane operator and both had their backs turned to the moving crane. The victim was bent down inside a pinch point next to the stacking post when the crane hit and pinned him between the crane and the steel plates. The victim was transported to the hospital where he died two hours later. He died of traumatic crushing asphyxia. |
| Manufacturing Production | |
| January 7 Multnomah OR 2010-01-1 | |

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| <i>Crushed courier</i> | A 62-year-old driver for a courier service was killed after he was pinned between the back of a semi-trailer and a loading dock. The driver had just delivered his load, and as he started to drive away from the dock, he remembered he left some tie-down straps inside the warehouse. The victim stopped his truck on the sloped loading ramp and exited the cab to get his straps at the dock. While the loading dock manager was getting the straps, the truck and trailer moved backward toward the driver and the dock. The victim attempted to get out of the way but was crushed against the dock by the trailer. He died of crushing abdominal and pelvic injuries. |
| Transportation Transportation | |
| February 8 Washington OR 2010-06-1 | |

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| <i>Gold mining cave-in</i> | A 42-year-old novice miner was killed after the walls of a mining cave collapsed while he was prospecting for gold. He was reportedly digging inside a small mining cave about 20 feet from the entrance, when the rock and dirt wall caved in on top of him. Three other people who were with the victim were uninjured in the incident. The victim died of head trauma. |
| Mining Extraction | |
| June 19 Baker OR 2010-15-1 | |

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| <i>Falling snag</i> | A 51-year-old logger was killed after he was struck by falling snag that was caught in the tree he was cutting. He was working on a steep hillside, and his partner was 250-300 yards away. His partner searched for the victim after he had not heard the victim's saw in 40 minutes. He found the victim dead with a tree on top of him. The victim had 25 years of logging experience. |
| Forestry/Logging Logging | |
| September 3 Clatsop OR 2010-19-1 | |

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| <i>Trucker crushed between trailers</i> | A 53-year-old commercial truck driver was killed while he and another driver were connecting a second trailer to their tractor-trailer combination. As the victim lowered the second trailer onto the dolly, the tractor-trailer combination rolled backwards toward the second trailer. The victim was caught between the two trailers. The parking area was on a slight grade, and the tractor/trailer parking brakes had not been set. The victim died from crushing chest injuries and compression asphyxia. The other driver was uninjured. |
| Transportation Transportation | |
| September 10 Multnomah OR 2010-20-1 | |

Worker Fatalities – Contact, Falls

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| <i>Cutter struck by tree</i> | A 28-year-old self-employed tree cutter was killed after he was struck by a dislodged treetop and crushed between previously felled logs and underbrush. The victim had cut a small second growth tree, but it had hung up in another tree as it fell. He was attempting to fall another larger tree when the hung tree broke free and fell on him. |
| Forestry/Logging Logging | |
| October 8 Lane OR 2010-25-1 | |
| <i>Van crushed by tree</i> | A 57-year-old worker at a facility that manufactures prefabricated shelters and restrooms was killed after a large tree fell on his van during a rainy windstorm. The victim worked at a factory roughly 200 miles from his home and would often sleep in his vehicle if he were too tired to drive the rest of the way home. The victim parked in a pullout off the highway that was surrounded by trees. A tree with a three-foot diameter at the base toppled during the storm and fell across the rear of the van. The victim died from crushing injuries. |
| Manufacturing Production | |
| December 14 Douglas OR 2010-39-1 | |
| <i>Struck by a water pipe</i> | A 65-year-old truck driver was killed after a pipe fell off his truck and struck him on the head. The victim was delivering water pipes to a work site and was standing next to the trailer during the off-loading process. Only one side of the truck was guarded by a piece of heavy equipment. No one at the work site saw the victim standing next to the trailer so the boom operator began to off-load the pipes. A pipe then rolled off the side of the trailer and hit the victim. He died from head injuries three days later. |
| Transportation Transportation | |
| June 12 Union OR 2010-42-1 | |

Falls

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| <i>Fall through bridge opening</i> | A 55-year-old highway maintenance coordinator on a bridge construction project was killed after he fell through a gap between a newly constructed bridge and a temporary bridge. The reason for the fall was unknown, but reports suggested the victim exited his vehicle to check on a roadway hazard and hopped over the roadway barrier as traffic approached. Apparently, the victim misjudged the location of the jersey barrier system and fell approximately 36 feet into a creek below the bridge. Suggested contributing factors include the early morning time of the incident (2 A.M.) and rainy weather conditions. He died from head and chest trauma. |
| Public Administration Construction | |
| January 16 Wasco OR 2010-02-1 | |
| <i>1989 scaffolding fall</i> | A 47-year-old former sandblaster died from infectious complications as a result of a cervical fracture and quadriplegia. The cervical fracture and quadriplegia were caused 21 years prior when he fell from scaffolding while sandblasting a water tower in 1989. |
| Construction Construction | |
| June 11, 1989 Clackamas OR 2010-35-1 | |

Worker Fatalities – Exposure

Exposure to harmful substance/environment

Recovery worker OD A 47-year-old live-in manager at a residential drug and alcohol recovery center died from a methadone overdose at the worksite. The victim's Health Care/Social Asst Management toxicology report was positive for methadone and at least five other drugs.

February 17
Lane
OR 2010-11-1

Meth-related heart attack A 55-year-old log truck driver experienced a heart attack while driving his truck. His loaded log truck veered off the roadway at a low speed and struck a tree. The crash itself caused minimal damage to the truck cab. The cause of the heart attack was the result of recent methamphetamine use as concluded by the medical examiner.

Forestry/Logging
Transportation

May 6
Deschutes
OR 2010-13-01

Loader boom shock A 53-year-old truck driver was killed after he was electrocuted. The victim had finished receiving logs from a loader. The loader operator was in the process of moving his vehicle to a nearby landing when the loader boom came into contact with a live overhead power line. The victim, who was outside of his truck and in contact with the surface of the loader, received an estimated 15,000-volt shock. He died immediately.

Transportation
Transportation

September 29
Grant
OR 2010-24-1

CO exposure Two foreign-born workers, ages 17 and 25, were killed from carbon monoxide exposure after using a charcoal grill inside a van. Both were living in the van while working in the forest to collect salal to sell. Salal is a plant used in floral arrangements and native plant gardens in the Pacific Northwest. The victims appeared to have died in their sleep.

Agriculture
Forestry

March 25
Lincoln
OR 2010-27-2

Trucker OD A 37-year-old truck driver died from an apparent overdose of methamphetamine and heroin. His body was found at a truck stop. He was overdue to check in with the trucking company by two days. The medical examiner confirmed the presence of alcohol, methamphetamine, and heroin.

Transportation
Transportation

September 14
Umatilla
OR 2010-43-1

Event Definitions

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

CONTACT WITH OBJECTS AND EQUIPMENT

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

FALLS

Falls are events in which the injury was produced by impact between the injured person and the source of injury when the motion producing contact was generated by gravity.

BODILY REACTION AND EXERTION

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

EXPOSURE TO HARMFUL SUBSTANCES OR ENVIRONMENTS

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

TRANSPORTATION ACCIDENTS

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

FIRES AND EXPLOSIONS

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

ASSAULTS AND VIOLENT ACTS

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

OTHER EVENTS OR EXPOSURES

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

Adapted from US Bureau of Labor Statistics (2012), *Occupational Injury and Illness Classification Manual*. US Department of Labor. Available online (December 28, 2012): http://www.bls.gov/iif/osh_oiccs_2_4.pdf.

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

About the Center for Research on Occupational and Environmental Toxicology at Oregon Health & Science University

The Center for Research on Occupational and Environmental Toxicology is dedicated to health and safety in the workforce. CROET's mission is to promote health, and prevent disease and disability among working Oregonians and their families during their employment years and through retirement. CROET does so through basic and applied research, outreach, and education.

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

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