Health and Safety

October- November 2017 Oregon OSHA •

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RESOURCE

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Workers' compensation premiums show one measure of Oregon's success

By Michael Wood

ast month, the Department of Consumer and Business Services, of which Oregon OSHA is a part, announced that the average pure premium rate for Oregon workers' compensation would see yet another meaningful reduction in January 2018. The 14 percent decrease in the average rate represents the fifth consecutive drop – and a total 33 percent decrease since 2013. Oregon will see its average rates drop to the seventh lowest in the country, in spite of having better than average benefits.

But those numbers, as encouraging as they are, do not tell the complete story. Since the workers' compensation reforms of the late 1980s – reforms that also focused on injury prevention and that included the creation of Oregon OSHA in its current form – the average premiums have dropped year after year. For two decades, Oregon's rates decreased steadily – with only four years in which they saw no change. Finally, in 2012 and 2013, the average pure premium rate rose slightly (by 1.9 percent and 1.7 percent). But even those modest increases were almost immediately overcome with a 7.6 percent decline in 2014.



Oregon OSHA Administrator A Division of the Department of Consumer and Business Services "The least expensive claim is the one that is never filed because the injury or illness never occurs."

Those who keep an eye on national trends know that Oregon has for years been bucking those trends when it comes to workers' compensation costs. Part of that success is the result of effective return-towork efforts, as well as success in keeping medical costs under control. But a continuing part of Oregon's success is the result of our early recognition of a simple principle: The least expensive claim is the one that is never filed because the injury or illness never occurs. Primary prevention works. And that's the goal that workplace health and safety professionals, workers, and employers throughout Oregon have pursued.

Oregon has taken a comprehensive approach to workplace health and safety for years. And we have relied upon effective partnerships between employers, their workers, the insurance carriers, and government to make safer workplaces a reality. That comprehensive approach has paid off. It continues to pay dividends in decreasing the cost of doing business in the state. And it pays even more important dividends every time an Oregon worker finishes the day – or completes a working career – whole and healthy and able to enjoy all that life has to offer.

Oregon

That's a job well done. And it's a job worth celebrating!

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Education:

DON'T MISS OUT



October-December workshops

10/18/2017.... 8 a.m. EugeneHazard Identification and Control 10/18/2017 1 p.m. EugeneJob Hazard Analysis 10/31/2017.... 8 a.m. SalemWorker Protection Standard

11/21/2017.... 8 a.m. RoseburgSafety and the Supervisor 11/21/2017 1 p.m. Roseburg Safety Meetings and Committees

12/6/2017...... 8 a.m. Bend......Worker Protection Standard 12/6/2017...... 1 p.m. Bend.......Hazard Communication - Aligned with GHS 12/13/2017.... 8 a.m. Milwaukie....Safety Meetings and Committees 12/13/2017.... 1 p.m. Milwaukie....Job Hazard Analysis

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Dig you know?

When it comes to excavations and the potential hazards of underground utilities, Oregon OSHA's specific requirements are:

- The location of utilities must be determined before opening an excavation
- The exact location of the installations must be determined by safe and acceptable means
- While excavations are open, underground installations must be protected, supported, or removed as necessary to safeguard employees

Of course, there are other excavation rules that go beyond underground utilities. They include specific excavation requirements and requirements for protective systems. It's all spelled out in Oregon OSHA's Division 3/Subdivision P/Excavations

Planning before you dig reduces the chance that something will go wrong when you start a job. Consider the following before you start excavating:

- Debris near the excavation site that could create a hazard
- How employees will get in and out of the excavation
- How to protect people from falling into the excavation
- How to respond to emergencies
- Location of overhead power lines and underground utility lines (Call 811 from anywhere in Oregon for help in locating underground utility lines)
- Possibility of atmospheric hazards in the excavation
- Possibility of water in the excavation
- Stability of soil at the excavation site
- Stability of structures adjacent to the excavation site
- Vehicles and other mobile equipment that will operate near the excavation
 Weather conditions

datapoints:

- Dig a hole in the ground and you've made an excavation. Excavations can be any size: wide, narrow, deep, or shallow. A trench is a narrow excavation, not more than 15 feet wide at the bottom.
- If you install forms or other structures in an excavation that reduce its width to less than 15 feet, measured at the bottom, the excavation is also considered a trench.
- If you work in an excavation that's five feet deep (or deeper), you must be protected from a cave-in. If a competent person determines that there's a potential for an excavation to cave in, you must be protected, regardless of its depth.
- A cave-in can trap you within seconds and kill you within minutes.
- Two cubic yards of soil weigh about 6,000 pounds. If you're buried, you'll suffocate in less than three minutes. Even if you survive, the weight of the soil is likely to cause serious internal injuries.

AQuotable:

"Error is pervasive. The unexpected is pervasive ... What is not pervasive are well-developed skills to detect and contain these errors at their early stages."

– Karl E. Weick, co-author of "Managing the Unexpected: Sustained Performance in a Complex World."



Call before you dig

By Aaron Corvin and Kandi Young

For the construction and utility industries, using the Oregon Utility Notification Center's 811 service – perhaps better known for its tagline "Call before you dig" – is critical.

After all, the potential ripple effects of failing to take that crucial step before breaking ground in an area that may contain buried water, electricity, or natural gas lines include lives injured or lost, buildings damaged or destroyed, and financial costs that only pile up.

So far this year, Oregon OSHA, whose jurisdiction is worker safety, has issued seven citations to companies for failing to secure locations of underground lines before opening excavations. Those citations have totaled more than \$13,000 in initial penalties. Four other investigations of such incidents remain active.

Meanwhile, Oregon experienced more than 2,000 line strikes in 2016 alone, according to the Oregon Public Utility Commission, whose program includes enforcement of utility safety standards. Nationwide, a line strike occurs every six minutes.

All of which is to say that, while using the 811 service is common practice for certain industries, its importance is sometimes lost in the rush to move dirt. What's more, calling before you dig isn't the only requirement that must be followed in accounting for the potential hazards of underground utilities.

Employers need to familiarize themselves with Oregon OSHA's rules – spelled out in Division 3/Subdivision P/Excavations – and the state Utility Notification Center's rules and requirements.

More than 2,000 utility line strikes occurred in Oregon in 2016. In this image, a landscaper hit a gas line while digging a trench.





Oregon OSHA's specific requirements are:

- The location of utilities must be determined before opening an excavation
- The exact location of the installations must be determined by safe and acceptable means
- While excavations are open, underground installations must be protected, supported, or removed as necessary to safeguard employees

Altogether, it's a situation that calls for a fresh reminder of best practices, as well as a renewed commitment to safety.

A step in the right direction

The Oregon Utility Notification Center (OUNC) administers the statewide One Call system. When you call the nationwide 811 number, your call is routed to the Oregon One Call Center.

So, here's what to do. Call 811 at least two business days and no more than 10 days before planning to dig. Tell the operator where you are planning to dig and what type of work you will be doing. The OUNC will notify the affected local utility companies about your intent to dig.

Within two business days, the utility will send a locator to mark the approximate location of the underground lines, pipes, and cables with color-coded paint so you will know where they are.

The color codes indicate what is buried below:

- Red Electrical
- Orange Communications, telephone, and cable TV
- Blue Potable water
- Green Sewer and drainage
- Yellow Gas and petroleum pipeline
- Purple Reclaimed water
- White Indicates the site of your intended excavation

Calling the One Call Center gives you crucial information about buried utility lines and protects you from liability if a utility line is damaged. The program provides a critical communication link between those planning to dig – whether a large construction contractor or a property owner installing a fence – with service providers that may have underground facilities in a proposed excavation area.

Remember: Do not rely on old drawings or maps to locate buried utility lines. They may not be reliable.

Likewise, do not guess the location of a natural gas pipeline. Permanent pipeline markers, which are located along roads, railways, and other public rights of way, show the approximate location of the buried pipelines. However, the depth and location of the pipelines vary within the right of way, and the markers are not located precisely over a line. Nor do the markers indicate the depth of the line.



In this image, a work crew failed to identify all underground hazards - despite the presence of natural gas and electric service meters - before beginning a fence-building project.

Your responsibility for safety doesn't end there. You need to implement best practices and follow the rules as you approach your excavation project.

For example, use only hand tools – or other noninvasive methods –within 24 inches of each marked natural gas line to carefully expose the exact location before using power equipment. If you damage a pipe, immediately call the pipeline owner. Gouges, scrapes, or dents to a pipeline can lead to future problems. If there is an unintended release of natural gas, petroleum products, or other hazardous materials, immediately call 911.

You are not on your own as you approach an excavation project that may involve underground utilities. Help is available. To learn about training opportunities provided by OUNC on the 811 service or details on the process of submitting a locate request, visit digsafelyoregon.com. Oregon OSHA offers information about excavation safety, and technical and no-cost consultation services.

Ultimately, calling before you dig – and following related rules and best practices – is about doing the right thing. And doing the right thing

means keeping the public safe, sending workers home safely to their families at the end of the work day, and protecting property – all the while getting your project done.

Aaron Corvin is a public information officer for Oregon OSHA. Kandi Young is a public information officer for the Oregon Public Utility Commission.

Can you dig it? Call 811 and ask for locates.

Heads up:

New walking-working surfaces rules for general industry take effect Nov. 1

Oregon OSHA's entire set of general industry rules for walking-working surfaces will be changing next month.

The new rules – there are 18, not including historical notes, a table of figures, and a table of tables – are in Division 2, Subdivision D, of Oregon OSHA's occupational safety and health rules.

Many of the rules – which are intended to prevent slips, trips, falls, and protect from falling objects – are identical to those that federal OSHA adopted in November 2016; Oregon OSHA did not adopt all of OSHA's rules, however, and created a number of Oregon-initiated rules to replace them.

For many employers in general industry, two of the most significant new requirements cover rope descent and rope access systems – Oregon-initiated rule is *437-002-2027* – and the minimum height of guardrails; specifically, guardrails with a top edge height less than 39 inches will be out of compliance on Nov. 1, 2017.

Although the rules become effective Nov. 1, some have delayed effective dates – ranging from two months to 18 years – that are intended to give employers time to comply with the requirements. You might also want to note that Oregon OSHA's delayed effective dates are different than those set by federal OSHA. But don't worry. Read on to learn more about the new walking-working surfaces rules.

Important definitions (1910.21 and 437-002-2021)

- Walking-working surface: Any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area.
- **Rope descent system:** A suspension system that allows an employee to descend in a controlled manner and stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiners or shackles, and a chair or seatboard.
- Low-slope roof: A roof that has a slope less than or equal to a ratio of 2 in 12 (vertical to horizontal)





Stairways (1910.25)

A stairway consists of risers and treads that connect one level with another, including the landings and platforms in between those levels. The term "stairs" and "stairway" are

interchangeable. All stairways are covered by the requirements, except stairs on floating roof tanks and scaffolds, stairs designed into machines, and stairs on self-propelled motorized equipment.

Stairways must be fixed or permanently installed at an angle between 30 and 50 degrees from horizontal unless an employer can demonstrate that they are not feasible; then, spiral, ship, or alternating tread-type stairs are acceptable alternatives.

Stairways built on or after Jan. 1, 2018, must have a maximum riser height of 9.5 inches and a minimum tread depth of 9.5 inches.

When a door or a gate opens directly onto a stairway, a platform must be available and the swing of the door or gate must not reduce the platform's usable depth less than:

- 20 inches for platforms installed before Jan. 1, 2018.
- 22 inches for platforms installed on or after Jan. 1, 2018.

Dockboards (1910.26)

A dockboard is a device that spans a gap or compensates for the difference in elevation between a loading platform and a transport vehicle. Dockboards include bridge plates, dock plates, and dock levelers.

Dockboards must be able to support their maximum intended loads.

Dockboards used on or after Jan. 1, 2018, must prevent vehicles from running off the edge.



General requirements (1910.22 and 437-002-0022)

- Workplaces, including passageways, storerooms, service rooms, and other walking-working surfaces, must be clean, orderly, and sanitary.
- Employees must have a safe way to access and exit all walking-working surfaces.
- Walking-working surfaces must be inspected regularly and kept safe.
- Three new Oregon-initiated rules include additional Oregon general requirements, ramps and runways for vehicles, and piers and wharves.



Ladders (1910.23 and 437-002-0026)

Ladders covered include portable ladders, job-made ladders, fixed ladders, mobile ladder stands, and mobile ladder stand platforms. Not included are ladders used in emergencies (such as firefighting, rescue, and law enforcement activities) and ladders that are an integral part of machines or equipment.

A new Oregon-initiated rule applies to the selection and use of portable ladders, including job-made ladders, in addition to the requirements in Ladders, 1910.23.

Step bolts and manhole steps (1910.24)

A step bolt is a bolt or rung attached at intervals along a structural member used for climbing or standing and as a handhold when climbing or standing.

Step bolts installed before Jan. 1, 2018, must be capable of supporting their maximum intended loads.

Step bolts installed on or after Jan. 1, 2018:

- Must be constructed of or coated with corrosion-resistant material if they are in areas where corrosion may occur.
- Must be capable of supporting at least four times their maximum intended loads.

Manhole steps are steps that are individually attached to, or set into, the wall of a manhole. Manhole steps must be inspected at the start of each work shift.

Manhole steps installed on or after Jan. 1, 2018, must meet specific requirements for slip resistance, corrosion resistance, width, and vertical spacing.



Scaffolds and rope descent systems (1910.27)

Scaffolds must meet all of the construction industry requirements for scaffolds. (You'll find the requirements in Division 3, Subdivision L). Those who erect, dismantle, move, or work from a scaffold must be also trained according to the requirements in 1926.454, Training requirements.

Rope descent and rope access systems (437-002-2027)

This new Oregon-initiated rule establishes safety requirements for rope descent and rope access systems, which are used for tasks such as cleaning buildings, inspecting dams and bridges, and reaching difficult areas.

A rope descent system is a suspension system that allows a worker to descend in a controlled manner and stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiners or shackles, and a chair or seatboard.

A rope access system uses two ropes to reach a work area; one rope serves as the primary means of support and the second rope is used to stop a fall.

By Dec. 1, 2018:

- The building owner must inform the employer in writing that each permanent anchorage has been identified, tested, certified, and maintained so it can support at least 5,000 pounds.
- Employees must not use any permanent anchorage before the employer has obtained the written information from the building owner.

Duty to have fall protection and falling object protection (1910.28)

This rule requires employers to protect employees who are exposed to falls – generally four feet or more above a lower level – and falling objects. The rule identifies 15 walking-working surfaces where falls are possible. The table below summarizes the hazards and shows the options for protecting workers (which are covered in the subsequent walking-working surfaces rule: Fall protection systems and falling object protection, 1910.29).



Walking-working surfaces hazards and fall-protection options

Walking-working surface hazards (from 1910.28)	Fall protection options (from 1910.29, Fall protection systems – criteria and practices)							
	Guard rail	Safety net	Designated area	Cover	Handrail, stair rail	Cages, wells, platforms	Ladder safety system	Personal fall protection system*
Unprotected sides and edges	X	X						X
Hoist areas	Х							X
Holes	Х			Х				X
Dockboards	Х				X			
Runways	Х							
Dangerous equipment	Х	Х						X
Openings	Х	Х						X
Fixed ladders** before 11/1/19						X	X	X
Fixed ladders** on or after 11/1/19							X	X
Billboards*** before 11/1/19						X	X	X
Billboards on or after 11/1/19							X	X
Stairways	X				X			
Rope descent systems								X
Low-slope roofs	Х	X	X					X
Slaughtering facility platforms	X							X

The requirements in this rule do not apply to:

- Portable ladders
- Workers inspecting conditions at the start of a shift or after all work has been completed (workers must use fall protection if it is available) Exposed perimeters of stages and rail-station platforms
- Powered platforms
- Aerial lifts
- Telecommunications work
- Electrical power generation, transmission, and distribution work

SA SSA

*Personal fall protection systems must meet the requirements in 1910.140, (Division 2, Subdivision I, Personal protective equipment).

**Applies to fixed ladders more than 24 feet above a lower level

***Other requirements apply when an employee climbs a fixed ladder before Nov. 1, 2019, that is not equipped with a cage, well, personal fall arrest system, or a ladder safety system.

Fall protection systems and falling object protection – criteria and practices (1910.29)

This rule sets the requirements for the fall protection systems and protection from falling objects that employers can use to protect their employees. Those include:

- Guardrail systems
- Safety net systems
- Designated areas
- Covers for holes
- Handrail and stair rail systems
- Cages, wells, and platforms used with fixed ladders
- · Ladders used for outdoor advertising billboards
- Ladder safety systems
- Personal fall protection systems
- Protection from falling objects (including toeboards and canopies)
- Grab handles

Remember that guardrail systems, handrail systems, and stair rail systems serve different purposes.

A guardrail is a barrier erected along an unprotected or exposed side, edge, or other area of a walking-working surface to prevent employees from falling to a lower level. Regardless of its installation date, the top edge height of a guardrail must be 42 inches, plus or minus three inches high. *Guardrails with a top edge height less than 39 inches will be out of compliance on Nov. 1, 2017.*

- A handrail is a rail used to provide employees with a handhold for support.
- A stair rail or stair rail system is a barrier erected along the exposed or open side of stairways to prevent employees from falling to a lower level.

The height of stair rail systems installed before Jan. 1, 2018, must not be less than 30 inches from the leading edge of the stair tread to the top surface of the top rail.

The height of stair rail systems installed on or after Jan. 1, 2018, must not be less than 42 inches from the leading edge of the stair tread to the top surface of the top rail.



What are designated areas?

A designated area is a distinct portion of a walking-working surface delineated by a warning line; employees may work without additional fall protection in a designated area when they are on a low-slope roof – a roof that has a slope less than or equal to a ratio of 2 in 12 (vertical to horizontal). The warning line – a rope, wire, tape, or chain – warns the employees that they are approaching an unprotected side or edge.

Training requirements (1910.30)

Training in a language the employee understands is required for employees who use a personal fall protection system and any other equipment covered by the walking-working surfaces rules. Training must cover the manufacturer's instructions and proper care, storage, and use of the equipment.

Employees who use personal fall protection systems must be trained by a qualified person on or before May 17, 2018.

Have questions about the new walking-working surfaces rules?

Send Ken Langley in Oregon OSHA's Technical Section and email: ken.e.langley@oregon.gov

Walking-working surfaces requirements that have delayed effective dates

Before Jan. 1, 2018

- **Step bolts.** Each step bolt installed before Jan. 1, 2018, must be capable of supporting its maximum intended load. 1910.24(a)(6)
- **Stairways.** When a door or a gate opens directly on a stairway, a platform must be available and the swing of the door or gate must not reduce the platform's usable depth to less than 20 inches for platforms installed before Jan. 1, 2018. 1910.25(b)(5)(i)
- **Stairways.** The requirements of paragraphs 1910.25(c)(2) and 1910.25 (3) do not apply to a fixed or permanent stairway installed before Jan. 1, 2018. Those stairways are in compliance if they meet the dimensions in Table D–1, Stairway Rise and Tread Dimensions, or they are installed at angles between 30 to 50 degrees from the horizontal. 1910.25(c)(5)
- **Stair rail systems.** The height of stair rail systems installed before Jan. 1, 2018, must not be less than 30 inches from the leading edge of the stair tread to the top surface of the top rail. 1910.29(f)(1)(ii)(A)

On or after Jan. 1, 2018

- **Step bolts.** Each step bolt installed on or after Jan. 1, 2018, in an environment where corrosion may occur must be constructed of, or coated with, material that protects against corrosion. 1910.24(a)(1)
- **Step bolts.** Each step bolt installed on or after Jan. 1, 2018, must be capable of supporting at least four times its maximum intended load. 1910.24(a)(7)
- **Manhole steps.** Each manhole step installed on or after Jan. 1, 2018, must meet specific requirements for slip resistance, corrosion resistance, width, and vertical spacing. 1910.24(b)(2)
- **Stairways.** When a door or a gate opens directly on a stairway, a platform must be available and the swing of the door or gate must not reduce the platform's usable depth less than 22 inches. 1910.25(b)(5)(ii)
- **Dockboards.** Dockboards put into initial service on or after Jan. 1, 2018, must be designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge. 1910.26(b)(1)
- **Stair rail systems.** The height of stair rail systems installed on or after Jan. 1, 2018, must not be less than 42 inches from the leading edge of the stair tread to the top surface of the top rail. 1910.29(f)(1)(ii)(B)

Before May 1, 2018

- **Training.** Employers must provide training for each employee who uses a personal fall protection system. 1910.30(a)(1)
- **Training.** Employers must train employees in the proper care, inspection, storage, and use of their equipment before they use it. 1910.30(b)(1)

Before Nov. 1, 2019

- **Fixed ladders.** Each fixed ladder (that extends more than 24 feet above a lower level) installed before Nov. 1, 2019, must be equipped with a personal fall arrest system, ladder safety system, cage, or well. 1910.28(b)(9)(i)(A)
- **Outdoor advertising.** When an employee engaged in outdoor advertising climbs a fixed ladder before Nov. 1, 2019, that is not equipped with a cage, well, personal fall arrest system, or a ladder safety system the employer must ensure the employee is trained, wears a body harness, keeps hands on the ladder, and is protected by a personal fall arrest system upon reaching the work position. 1910.28(b)(10)(ii)

On or after Nov. 1, 2019

• **Fixed ladders.** Each fixed ladder (that extends more than 24 feet above a lower level) installed on and after Nov. 1, 2019, must be equipped with a personal fall arrest system or a ladder safety system. 1910.28(b)(9)(i)(B)

On and after Dec. 1, 2036

• **Fixed ladders.** On and after Dec. 1, 2036, all fixed ladders (that extends more than 24 feet above a lower level) must be equipped with a personal fall arrest system or a ladder safety system. 1910.28(b)(9)(i)(D)



Short takes

Oregon OSHA has named Bryon Snapp as its new statewide safety enforcement manager.

S napp, who has worked on workplace safety and health issues in both the public and private sectors, succeeds Gary Beck who retired at the end of June.

Snapp joined Oregon OSHA as a technical specialist in January 2014. Previously, he worked in the private sector as a field operations leader managing a team of environmental, health, and safety consultants.

As a technical specialist for Oregon OSHA, Snapp's areas of expertise included control of hazardous energy, machine guarding, cranes, walkingworking surfaces, ladders, and scaffolds. He also served as acting technical services manager during a management transition.

When it comes to his new leadership role, Snapp said, he will focus on "providing direction to those that I am responsible for in a way that they can clearly and confidently perform their duties."

As a husband and father of two children, Snapp said, he understands to his core the importance of keeping workers safe and, by extension, protecting their families from the devastation of on-the-job injuries or deaths.

I never want a son, daughter, sibling, spouse, or parent to have to endure such preventable situations, when their loved ones are simply working to provide for their families."



Scholarship awards boost student achievement

hey've faced the loss of loved ones and the challenges that brings. They've never given up on themselves or their educational goals. They will keep moving toward those goals with help from the State of Oregon.

Three Oregon high school graduates are recipients of the 2017 Workers' Memorial Scholarship awards, the Oregon Occupational Safety and Health Division (Oregon OSHA) has announced. The awards program helps family members of Oregon workers who have been fatally injured or permanently disabled to finance higher education.

The recipients are:

Dalton Lehnherr, Powers

Lehnherr graduated in 2017 from Powers High School. He plans to study web design and visual communications at Linn-Benton Community College.

His father was seriously injured in a logging truck accident. Lehnherr is receiving a \$1,000 award. "It means a lot to me," he said of the award. He'll always follow his dad's advice, he said, which is to keep trying, keep your head up, and to be as positive as you can.



Adelaine Prinz, Tigard

A 2015 graduate of St. Mary's Academy in Portland, Prinz is studying graphic design at Boise State University. After obtaining her undergraduate degree, she hopes to work at a marketing company and for a nonprofit, while studying architecture.

Prinz's father died in an airplane crash while doing his job as a corporate controller. She is receiving a \$1,500 award. Prinz's interest in working for a nonprofit was inspired by her volunteer work

for Holt International, a Christian adoption agency based in Eugene.

Prinz said the scholarship has made room in her finances to explore other areas of her life, including giving back to others through her work for Holt. "As I navigate the last few years of college, my hopes are to engage in activities that help me



Ston Yackamouih, Riddle

Yackamouih is a 2017 graduate of Riddle High School. He plans to study computer engineering at Oregon Institute of Technology.

His father died in a logging accident. Yackamouih is receiving a \$1,500 award. Yackamouih grew up fascinated by computers. He said he remembers his dad playing video games with him before heading to work. The father and son also took trips to a local

video game store to pick out new games. His dad, Yackamouih said, would be "very proud of me" to be headed to college.

The 1991 Legislature established the Workers' Memorial Scholarship at the request of the Oregon AFL-CIO, with support from Associated Oregon Industries.





Workers' compensation costs to drop for fifth-straight year

Oregon employers will see a key portion of their workers' compensation costs drop by an average of 14 percent in 2018, the Department of Consumer and Business Services (DCBS) has announced. This marks the fifth year in a row that businesses will experience an average decrease in the "pure premium." Altogether, the rate has declined by an average of 33 percent since 2013.

Next year's average decrease in pure premium – the portion of the premium employers pay insurers to cover claims costs for job-related injuries and deaths – is part of a package of rates designed to maintain workplace safety and health programs while preserving historically low costs.

The other rate changes include:

- An increase in the premium assessment, which funds state costs of running workers' compensation and workplace safety and health programs, from 6.8 percent to 7.4 percent. The increase is needed to support worker protection and related programs to keep pace with an expanding economy.
- No change in the payroll assessment, which supports the Workers' Benefit Fund. The fund pays for highly successful return-to-work and other special injured-worker programs. The assessment will remain unchanged at 2.8 cents per hour worked.

The combination of the changes in pure premium and assessment rates is a net reduction in costs for the average employer. The average employer would pay 90 cents per \$100 of payroll for claims costs and assessments, down from \$1.03 in 2017.

The decrease in pure premium is based on a recommendation from the Florida-based National

Oregon total pure premium, assessment, and contribution paid per \$100 of payroll



Total employer costs per \$100 payroll for pure premium, premium assessment, and Workers' Benefit Fund cents-per-hour assessment. This chart does not include insurer costs, known as expenses loading factors. With insurers' costs, the 2018 average employer cost would be \$1.13 per \$100 of payroll. Historic figures are adjusted to reflect the 2016 mix of employment and payroll.

Council on Compensation Insurance Inc. (NCCI), which analyzes industry trends and prepares rate recommendations for the majority of states. Pure premium reflects only a portion of workers' compensation costs, but is the key factor behind annual cost changes. The decrease is an average, so an individual employer may see a larger or smaller decrease, no change, or even an increase depending on the employer's own industry, claims experience, and payroll. Also, pure premium does not take into account the varying expenses and profit of insurance companies.

For more information about Oregon workers' compensation costs, visit oregon.gov/DCBS/cost/ Pages/index.aspx

Taylor NW receives AGC PRIDE Award

Bend construction firm Taylor NW received the Associated General Contractors PRIDE award at a lunch ceremony on Sept. 15 at the company's home office. The award – Program Recognition Indicating Dedication & Excellence – recognizes AGC contractor members with outstanding workplace safety and health programs.

Oregon OSHA also recognizes construction firms that receive the PRIDE award; enforcement visits typically result in focused safety inspections – limited to fall protection, electrical, struck-by, and caught-in hazards – rather than comprehensive inspections.

Established in 2006 by the AGC Oregon-Columbia Chapter Safety and Health Council, PRIDE's goals include:

- Publicly recognizing employers that maintain effective safety and health management programs.
- Increasing the number of employers with effective safety and health management programs.
- Assisting participating employers in establishing self-sufficient safety and health management programs.
- Increasing safe work environments for employees.
- Increasing employee safety awareness.

- Decreasing the number of injuries, illnesses, and fatalities among participating employers.
- Lowering incidence rates.
- Lowering experience modification rates.

Taylor NW president and CEO Todd Taylor and safety director Lindsey Wenick accepted the award from AGC safety management consultant Chris Miller.



Using compressed air for cleaning

sing compressed air for cleaning isn't difficult. However, many employers and their employees don't know how to do so safely. That's because compressed air used for cleaning [1910.242(b)] remains one of Oregon OSHA's most frequently violated general industry rules in manufacturing workplaces.

That sobering fact calls for a refresher on the rule. Its three key points are:

- The compressed air must be reduced to less than 30 psi at the discharge end of the nozzle.
- "Effective chip guarding" must prevent chips or other debris from being blown back on the worker.
- Personal protective equipment appropriate for the cleaning task is required.

The rule is there for a reason: Cleaning carelessly with compressed air can cause serious injuries, including eye damage, hearing loss, air embolisms, and severe infections.

Compressed air must be reduced to less than 30 psi at the discharge end of the nozzle.

Let's assume you are blowing filings off a bench grinder with an air gun, and the pressure at the nozzle is 90 psi. Some employers think that the only way to reduce the pressure to less than 30 psi is to lower the compressed air line pressure below 30 psi before it reaches the gun. That's an acceptable practice, but it's not effective for most cleaning tasks.



If the nozzle tip becomes blocked, all of the main air flow exits through the side ports and the nozzle pressure does not exceed 30 psi.

Today, most safety air gun nozzles have side ports that allow you to clean at higher pressures, such as 90 psi, but do not exceed 30 psi if the nozzle's discharge end is blocked (also called "dead ended"). The side ports prevent the full velocity and force of the compressed air from injuring you or another worker.

If the nozzle tip becomes blocked, all of the main air flow exits through the side ports and the nozzle pressure does not exceed 30 psi.

Never clean yourself or your clothes (while you are wearing them) with compressed air and never point an air nozzle at any part of your body or at anyone else – even when you're sure the pressure does not exceed 30 psi.

"Effective chip guarding" must prevent chips or other debris from being blown back on the worker.

The pressure necessary to remove the particles from machines and other surfaces is strong enough to blow them into your eyes, ears, or abrasions in your skin. Effective chip guarding prevents this from happening. The chip guard – such as a screen or other barrier – can be part of the air nozzle or a separate item. Some air guns are designed with nozzles that divert a small portion of air to form a protective air cone around the nozzle, reducing or eliminating the chance that particles could fly back toward you.



Nozzle designed with a built-in protective air cone.

Personal protective equipment appropriate for the cleaning task is required.

Safety goggles, gloves, and hearing protection are appropriate for any compressed-air cleaning task. Safety goggles prevent any stray particles from flying back into the user's eyes. A good pair of gloves makes any cleaning task easier, and hearing protection is important because cleaning with compressed air can exceed Oregon OSHA's noise limits. Low-noise safety air guns can also be effective in lowering noise levels.

Depending on the task, other PPE may also be necessary. It's a good idea to do a PPE hazard assessment to determine what other PPE you might need.

Illustrations courtesy of Guardair Corporation.

Phil Drew receives 2017 COSHA Juniper Award

The Central Oregon Safety and Health Association presented Phil Drew with the organization's 2017 Juniper Award at the Central Oregon Occupational Safety and Health Conference on Sept. 20.

The Juniper Award recognizes individuals who have demonstrated outstanding commitment to workplace safety and health through their company and the community.

Although Drew lives in Seaside and is now retired, he has had a lasting impact on workplace safety and health in central Oregon. He also played an important role in starting the Central Oregon Occupational Safety and Health Conference and still regularly commutes to Bend to take part in conference planning.

The Central Oregon Safety and Health Association is a nonprofit corporation established in 1998 in response to a need for networking opportunities and ongoing education for safety and health professionals in central Oregon.



Phil Drew (left) accepts the 2017 Juniper Award from Oregon OSHA consultant Cory Stengel.





What happened?

A worker's finger was amputated while he was troubleshooting a plastics dryer that he had not de-energized.

How did it happen?

Kevin Patterson (not his real name), was a temporary employee who had worked the night shift as an assistant material handler for five months. Patterson and another employee were operating a plastics dryer that sorted and dried a thermoplastic elastomer – a rubber-like material that can be formed into parts – before it was sent to an injection molder.

The elastomer was stored in a 55-gallon drum; a hose attached to the drum was connected to a hopper above the injection molder and a pneumatic hose was connected from the hopper to a vacuum under the dryer. A device on the dryer – called a programmable logic controller, or PLC – monitored how much of the elastomer entered the hopper from the 55-gallon drum.

Both Patterson and the other employee noticed that the vacuum was not drawing enough elastomer from the drum. They thought the problem might be due to a clog somewhere in the equipment.

Patterson opened a compartment under the dryer and felt for an obstruction with his finger. However, he didn't disconnect the pneumatic hose that triggered a piston under the dryer; the piston, which created the vacuum necessary to move the product into the hopper, suddenly sprung up and cut off the tip of his right index finger.

The other employee, who was standing nearby, helped wrap Patterson's finger and pulled the severed tip out of the compartment. Emergency responders arrived shortly after the incident and took Patterson and the severed finger tip to a nearby hospital, where he was admitted for treatment.

Accident Report

Event: Amputation **Industry:** Plastic injection molding **Worker:** Assistant material handler (a temporary employee)





However, the company waited more than 24 hours before reporting the accident to Oregon OSHA. A project engineer with the company said that when the accident happened, he was not in the plant and was unaware that anything had occurred. To complicate matters, the company president did not know whether it was his company's responsibility or the responsibility of the temporary employment agency that hired Patterson to report the overnight hospitalization.

Violations

- **1910.147(c)(4)(ii)(B)**: The energy control procedures did not clearly and specifically outline the steps for shutting down, isolating, blocking, and securing the equipment to control hazardous energy.
- **1910.147(c)(7)(i):** The company did not provide training to ensure that employees understood the purpose of the energy control program and how to use hazardous energy controls.
- **437-001-0704(4):** The company did not report the amputation and in-patient hospitalization to Oregon OSHA within 24 hours after the incident.

Ask Technical

Q: Are portable fire extinguishers required on forklifts? A: Oregon OSHA's workplace safety and health rules do not require forklifts to be equipped with portable fire extinguishers. However, if you decide to put a portable fire extinguisher on a forklift, Oregon OSHA's portable fire extinguisher rules for general industry apply.

Q. Does Oregon OSHA have a PPE dress code that requires journeyman electricians to wear long pants when they are working?

• Oregon OSHA does not establish dress codes. Long pants may be necessary to protect the employee, but generally the employer must make the decision based on the hazard. Two Oregon OSHA rules set the requirements:

- Oregon OSHA's Personal Protective Equipment rule 437-002-0134, Personal protective equipment requires employers to determine if "hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) or other protective equipment." If such hazards are present, then the employer must select the appropriate PPE and require the employee to use it.
- Oregon OSHA rules for electrical work see 1910.335 Safeguards for Personnel Protection require that when employees are working in areas where there are potential electrical hazards, they must be provided with and use PPE that is appropriate for the "specific parts of the body" and "the work to be performed."

Also, the National Fire Protection Association's National Electric Code – NFPA 70E – describes the PPE necessary when arc flash and arc blast hazards are possible.

It is the responsibility of the employer to make these determinations, train properly, and provide the proper PPE.







Going the Distance

Your commitment to reducing pesticide hazards is evident through all of your outreach work at OSU, including your state and national information and education efforts. It isn't easy work. What keeps you motivated and driving forward in promoting best practices?

Many pesticide applicators have shared their stories with me and asked questions, such as "I have been applying pesticides for over 30 years. If I had been more careful ... I mean, I have cancer, and I'm only 52." Sometimes, they ask about their children's diagnoses: "Could their disease or disorder have been caused by my exposure to pesticides?" The answer is not always clear. It's very hard to tell which exposure, if any, caused a disease. However, we know that the risk is lower when we minimize exposure and keep those pesticide residues from coming home with us. The links between cancer and pesticides are many, but they vary widely from pesticide to pesticide, and from person to person.

When I get out of bed every morning, I think about ways to make sure every pesticide applicator will come home safely every night. They do some dirty jobs protecting our food supply, our health, and our environment, and they deserve no less.

Employer: Oregon State University, College of Agricultural Sciences, Department of Environmental and Molecular Toxicology

Associate Professor of Practice: Kaci Buhl

Roles and responsibilities: Coordinator, Statewide Pesticide Safety Education Program; Deputy Director, Pesticide Educational Resources Collaborative (PERC); Co-Investigator, National Pesticide Information Center (NPIC)



When it comes to pesticide risks and how we deal with them, what have we learned and what do we do well?

Pesticide products go through an exhaustive battery of tests before they are registered (allowed) for use in the United States. That means we have data, lots of data, to inform our decision-making. The tests lead to specific label instructions that reduce identified risks. For example, if laboratory testing reveals that a pesticide is highly toxic to fish, then the label will prohibit application near water bodies.

We also have a strong system in place to train, certify, and re-train pesticide applicators who have access to the most dangerous pesticides (restricted-use pesticides). They have to take a test, register with the state, and continue their education in order to maintain their licenses. That means we have a highly competent and connected workforce that can respond to changing conditions.

When pesticides cause a problem in Oregon, any kind of problem, they can be reported 24/7 by calling 211. There is a board of state agencies and organizations that coordinate to make sure problems are investigated properly, and they make policy recommendations in response to incident trends.

Likewise, what can we do better?

Most Oregonians apply pesticides at some point, but most of us don't know that "the label is the law." Pesticide labels contain the keys to reducing risk, but they are too complicated for many readers, especially unlicensed applicators. A big part of my job is interpreting label statements and promoting label comprehension and compliance.

We also need to keep more pesticides from reaching our surface water and groundwater. Almost every time we look for pesticides in water samples, we find them, and we often find a mixture of pesticides. Those pesticides come from urban areas as much as rural areas, so we know we have a lot of work to do on outreach/education. We can prevent unnecessary pesticide use by promoting alternative pest control tactics and encouraging landscape/structural designs that discourage pests. We can prevent unnecessary water contamination by promoting good practices with pesticide selection, application, storage, transportation, and disposal.

...I think about ways to make sure every pesticide applicator will come home safely..."



A big part of Kaci Buhl's job is to interpret pesticide label statements, and to promote label comprehension and compliance.

In other states, pesticide applicators and beekeepers have done some great work on coordinating to prevent bee poisoning from pesticides. In Oregon, there is a lot of great work going on, but it all comes down to communication. If beekeepers and pesticide applicators talk to one another about where and when they're operating, we could protect more pollinators.



How do you measure success in your line of work?

I'm taking the long view. I will use every tool in my toolbox to make pesticide applicators more vigilant, precautionary, and thoughtful. I will be their partner in problem-solving, whatever challenges we face. I will document our wins and losses for future generations. At the end of my career, I hope to see fewer pesticides in our water, fewer pesticide-related health impacts, broader adoption of non-pesticide strategies, and a resilient workforce that knows how to protect itself and our state.

What do you see as an emerging issue?

Pesticide drift is in the national spotlight because of new herbicides that can damage soybean fields in very small doses. Just a little bit of dicamba floating on the breeze can tip the neighbor's bottom line from profitability to debt. Oregon has seen more drift complaints with the proliferation of new vineyards; grapevines are also very sensitive to certain herbicides. Now, we are seeing hazelnut orchards proliferate in the state. As those trees mature, more air-blast sprayers will be used, and the mist from air-blast applications is more prone to drifting than pesticides applied in other ways. We're going to have to work harder and harder to keep pesticides on target.

What's an especially important challenge in addressing the risks of pesticides?

With pesticides, we often have to weigh one health risk against another health risk, so there are no "safe" options. For example, in flood-ravaged communities, they are choosing between increases in mosquito-borne illness and increases in pesticide exposure due to mosquito control efforts. Communities have to decide on a strategy, and decide which risks are acceptable to them. I hope I can help communities in Oregon make pesticide-related decisions based on the best science available.

As part of her outreach and education efforts, Kaci Buhl uses a variety of presentation materials to bring home the risks and impacts of pesticide poisoning.