

Health and Safety

RESOURCE

Oregon OSHA • August-September 2017

Volume 54 — online

Getting unleaded:

The dangers of lead p. 6

Oregon SHARP Alliance:

Sharing best practices p. 12

Going the Distance

Meet Gary Boswell,
senior safety consultant at PGE p. 23





On the cover: Lead exposure can occur in many different occupations including auto repair. Lead might be found in radiators, batteries and other car parts.

RESOURCE

Oregon Health and Safety Resource is published every other month by the Oregon Occupational Safety and Health Division of the Department of Consumer and Business Services.

Department of Consumer and Business Services – *Pat Allen, Director*

Oregon OSHA – *Michael Wood, Administrator*

Resource editor – *Aaron Corvin*

Design and illustration – *Patricia Young*

DCBS editor – *Mark Peterson*

Reprinting, excerpting, or plagiarizing any part of this publication is fine with us. Please send us a copy of your publication or inform the Resource editor as a courtesy.

If you have questions about the information in Resource, please call **503-947-7428**.

For general information, technical answers, or information about Oregon OSHA services, please call **503-378-3272** or toll-free within Oregon, **800-922-2689**.

Administrator's Message

- 3** The true value of VPP is the example we set

Don't miss out

- 4** Upcoming events

Did you know?

- 5** Lead contamination in the U.S.



Features

- 6** Getting unleaded
- 8** Childhood lead poisoning in Oregon



- 11** Oregon OSHA's key lead rules
- 12** Oregon SHARP Alliance

Short takes

- 14** Ross Island Bridge contractor cited



- 15** Workplace safety, health training grants available

- 16** Consultant wins Blue Star Award



- 17** Prevent heat illness

- 18** Stayton facility earns safety recognition



- 19** Path to retirement savings

Safety notes

- 20** Metal pole falls on power lines

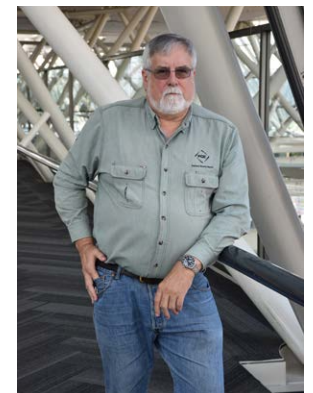
Ask Technical

- 22** Who can take minutes at safety committee meetings?



Going the Distance

- 23** Meet Gary Boswell, senior safety consultant at PGE



The true value of VPP is not recognition, but the example we can set

By Michael Wood

In July, I had the opportunity to participate in a stakeholder meeting hosted by federal OSHA in Washington, D.C. The topic of the meeting was the Voluntary Protection Program, and it was part of federal OSHA's effort "to solicit suggestions for growing and strengthening the Voluntary Protection Programs."

Somewhat predictably, much of the discussion was about the need to provide more resources for site evaluation and to eliminate administrative barriers (real and perceived) to the inclusion of new sites. Pretty much everyone acknowledged the need to "keep the bar high," although the emphasis placed on that point varied considerably – anyone who has ever heard me talk about VPP and its value and purpose can probably guess that my primary message was about the importance of not lowering the bar in any way. My message was simple: Our goal needs to be to encourage more employers to be VPP-ready. If they decide to join the program, that's great! But the real value comes in the sort of workplace safety and health climate that makes them eligible to join, whether they choose to do so or not.

VPP's value as a recognition program depends upon our commitment to never growing the program at the expense of its commitment to excellence in safety and health. Oregon did not have the dramatic growth in VPP that many programs did a decade ago – and we do



Oregon OSHA Administrator



“But the real value comes in the sort of workplace safety and health climate that makes them eligible to join, whether they choose to do so or not.”

not apologize for that. Instead, we see our reluctance to lower our standards or to provide additional incentives to encourage participation as one of the fundamental strengths of our program. A VPP Star really means something in the state of Oregon, and it always will.

Critics of the program – and they were represented (although in the minority) at the D.C. meeting – generally focus not only on concerns about reducing the program's standards, but also on the resources diverted to the program from other purposes, primarily enforcement (at least in the federal context). The availability of resources and the impact on our enforcement capability have never been a particular issue with Oregon's program, partly because we have not experienced the dramatic expansion some federal programs have and partly because we are able to bring other resources (from consultation and elsewhere) to bear on the issue. But during the discussion, the program's critics raise an important point: Why should federal OSHA – or Oregon OSHA, for that matter – expend relatively scarce resources to recognize a good employer rather than focus those resources on the employers who truly need our attention?

For me, the answer to that question has always been in the mentorship that we expect – and demand – of VPP participants. We expect them to make their expertise and example available to other workplaces through conferences, participation in the SHARP alliance, and a number of other venues. Mark Hurliman, who manages Oregon OSHA's recognition programs, makes that expectation clear both in his public presentations and in his individual conversations with VPP participants and those pursuing that status. Without the resource leverage that we get from VPP employers in the form of health and safety leadership, I would not be able to justify what it takes Oregon OSHA to run the program. But that leadership is a reality, at least in Oregon. And that's what makes VPP a strong value not only for its participants, but also for those of us charged with promoting workplace health and safety throughout the state.

Don't miss out



Education: August/September workshops

- 8/16/17 8am Wilsonville Accident Investigation
- 8/16/17 1pm Wilsonville Forklift Safety
- 8/23/17 8am Eugene Accident Investigation
- 8/23/17 1pm Eugene Safety Meetings and Committees
- 9/7/17 8am Klamath Falls... Worker Protection Standard
- 9/7/17 1pm Klamath Falls... Hazard Communication Program – Aligned with GHS
- 9/12/17 8am Medford Fall Protection
- 9/12/17 1pm Medford Lockout/Tagout and Machine Safeguarding
- 9/21/17 8am Salem Excavation Safety
- 9/21/17 1pm Salem Lockout/Tagout and Machine Safeguarding



For more information: osha.oregon.gov/edu/Pages/index.aspx
 For the most recent public education schedule updates:
osha.oregon.gov/edu/Pages/workshops.aspx



SAVE THE DATE!

September 19 & 20, 2017
Riverhouse on the Deschutes
Bend, Oregon

osha.oregon.gov/conferences
 Questions? Contact the Conference Section, 503-947-7411

This conference is a joint effort of the Central Oregon Safety & Health Association (COSHA) and Oregon OSHA.



27th Annual
Southern Oregon Occupational Safety & Health Conference
October 17-19, 2017
Ashland Hills Hotel & Suites

Exhibits • Awards • Workshops

Questions? or to receive registration materials, contact the Conference Section, **503-947-7411** or toll-free in Oregon at **888-292-5247, option 1**

www.asse-southernoregon.org
osha.oregon.gov/conferences

Did you know?



Oregon OSHA's construction industry rule for controlling exposure to lead covers the following activities in which employees may be exposed to lead:

- Disturbing paint on structures built before 1978
- Doing demolition and salvage work
- Removing or encapsulating materials containing lead
- Renovating structures that contain lead
- Installing products that contain lead
- Emergency cleanup of lead-contaminated materials
- Transporting, storing, or disposing of lead-containing materials where construction work is performed
- Doing maintenance work involving these activities

Who could be exposed?

- Carpenters
- Contractors
- Demolition workers
- Drywallers
- Electricians
- Handymen
- Heating/air conditioning installers
- Maintenance workers
- Painters
- Plumbers
- Wallpaperers
- Window replacement installers

For more information about Oregon OSHA's construction-industry rules for controlling lead hazards, visit <http://osha.oregon.gov/OSHPubs/4907.pdf>

datapoints:

- Five lead mines in Missouri – plus lead-producing mines in Alaska, Idaho, Montana, and Washington – produce most of the primary lead in the U.S., according to the Agency for Toxic Substances and Disease Registry.
- The U.S. is third in the world in lead production after Australia and China. Together with Peru, Canada, and Mexico, these six countries account for 82 percent of the world's mine production.
- In adults, about 94 percent of the total amount of lead in the body is contained in the bones and teeth. About 73 percent of the lead in children's bodies is stored in their bones.
- About 99 percent of the amount of lead taken into the body of an adult will leave in the waste within a couple of weeks, but only about 32 percent of the lead taken into the body of a child will leave in the waste.
- Blood lead levels in the general population of the U.S. have been decreasing over the past three decades as regulations for lead paint, leaded fuels, and lead-containing plumbing materials have reduced exposure.



Quotable:

"Every article I wrote in those days, every speech I made, is full of pleading for the recognition of lead poisoning as a real and serious medical problem."

– Alice Hamilton, American physician, research scientist, and author (1869 – 1970)."

Getting unleaded

By Ellis Brasch

Greek poet and physician Nicander of Colophon isn't a household name today, but his interest in poisons in the mid-second century B.C. inspired him to write two poems on the subject: *Theriaca* and *Alexipharmaca*. These two poems also happen to be the oldest existing works available to us on substances that can make us sick or kill us.

Theriaca covers venomous snakes (including the elusive amphisbaena, which had a head at both ends of its body), spiders, and scorpions. Nicander's remedy for snake bite, incidentally, was a balsam of the flesh of mating snakes, stag's marrow, wax, rose, and olive oil applied to the skin.

Alexipharmaca leans more toward the vegetable and mineral poisons, but it also includes the earliest written observation of acute lead poisoning. Nicander described the effect as a frothing of the mouth, asperity of the tongue, and a dry throat accompanied by dry retching, chills, delusions, and overwhelming fatigue. The treatment? Nicander suggested various herbs and olive oil as an emetic to induce vomiting.



Today, we know more about lead's etiology than we did two millennia ago, but, like the ancient Romans, who were the first people to use lead widely, we have a history of thinking that exposure to small doses of the metal poses no harm. The Roman Empire produced more than 80,000 metric tons of lead annually at its height and used the

substance for everything from cooking utensils to plumbing. (By comparison, the U.S. produced 1.6 million metric tons of lead in 2012.) However, there is no concrete evidence that the effects of lead poisoning caused the fall of the Roman Empire.

Speaking of plumbing, lead pipes were also used throughout the United States in 1800s for making drinking water available; by 1900, more than 70 percent



of cities with 30,000 or more residents were using lead-based products for conveying water because they were relatively cheap and easy to work with. Although the toxic effects of lead were known at the time, there was no concerted effort to ban lead plumbing until the 1920s.

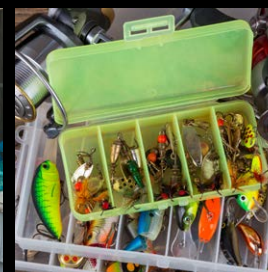
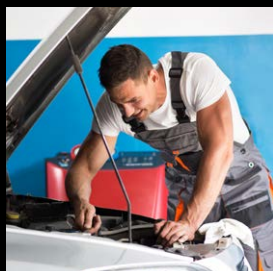
Lead may not have been the healthiest choice for conveying water, but it had many other consumer applications. The early 1920s also happened to mark the peak in sales of white lead pigments for interiors of American homes and the first commercial sales of leaded gasoline.

Of course, as we know now, those products proved to be unhealthful, too. Thanks, in part, to epidemiologist and pediatrician Philip J. Landrigan's detailed studies of lead poisoning in children near ASARCO's El Paso, Texas, smelting plant in the 1970s, the federal government enacted a number of laws that banned lead from gasoline, paint, water pipes, and food cans, and set exposure limits for workers. Average blood lead levels among U.S. adults fell from 13.1 micrograms per deciliter ($\mu\text{g}/\text{dL}$) between 1976 and 1980 to 1.09 micrograms per deciliter in 2012; there was a corresponding drop in blood lead levels of American children as well. The result was one of this country's most significant public health achievements in the past 50 years.

Possible Sources of

LEAD

For more on sources of lead or preventing lead poisoning www.healthoregon.org/lead



Occupational

- Painters
- Home remodelers/renovators
- Construction/demolition workers
- Bridge maintenance/repair
- Auto body repairers/painters
- Battery manufacturers/recyclers
- Radiator repairers/manufacturing
- Furniture refinishers
- Plumbers, pipe fitters
- Roofers
- Lead miners, smelters, and refiners
- Glass, copper, and brass manufacturers
- Boat builders/painters/repair/maintenance
- Ceramics making /glaze mixing
- Printers (ink)
- Plastic and rubber manufacturers
- Police officers
- Firing range instructors
- Steel welders or cutters
- Jewelry-making
- Gas station attendants
- Aircraft repair
- X-ray shielding/film radiology

Hobbies and related activities

- Home remodeling/renovation
- Car or boat repair
- Glazing/making pottery
- Reloading/target shooting at firing ranges
- Furniture refinishing
- Making/handling lead shot and fishing weights/sinkers
- Using lead soldering/welding
- Oil painting (artistic)
- Using pastel art pencils
- Making stained glass
- Jewelry making
- Using/making diving and exercise weights
- Repairing old painted wooden or metal toys

Ingested sources

- Traditional/home remedies such as Azarcon, Greta, Pay-loo-ah, Kohl, Ayurvedic; see our website for a listing of other home remedies that may contain lead.
- Imported candy and candy wrappers
- Supplements (calcium)

Environmental/other

- Lead-based paint (pre-1978)
- Soil/dust near lead industries, roadways, lead-painted houses
- Plumbing and solder
- Cosmetics and hair dye
- Imported vinyl mini-blinds
- Imported ceramic tiles for the kitchen/bathroom
- Building materials: Gutters, flashing, tile, window glazing
- Ceramicware/glazed pottery
- Porcelain bathtubs
- Leaded glass/pewter
- Leaded gasoline (race, collector cars)
- Soldered seams-imported canned food
- Soldered copper pipes
- Submersible pumps in wells
- Brass plumbing fixtures
- Bronze, pewter, leaded crystal
- Electronics manufacturers
- Pesticides
- Imported crayons
- Storage batteries
- Plastic insulation on electrical wiring and old telephone wiring
- Candle wicks



Even with that good news, however, lead has become entrenched in our infrastructure and virtually every other aspect of our – and our children’s – lives. Lead’s legacy will remain with us for some time to come, even if we eliminated all of our possible exposure sources today.

Among children, lead poisoning is still a chronic environmental hazard. The Centers for Disease Control and Prevention [estimates](#) that at least 4 million households have children ages 1 to 5 with blood lead levels above five micrograms per deciliter, the reference level that the CDC recommends public health actions be initiated. And serious cases of lead poisoning still appear in hospital emergency rooms, clinics, and physicians’ offices. In children, no developing organ is immune to the effects of lead poisoning.

Childhood lead poisoning in Oregon

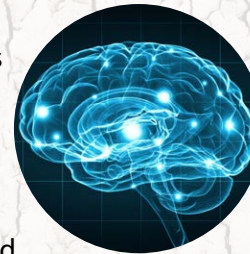
The primary source of lead exposure for most Oregon children is lead-based paint particles inside or outside of older homes where lead-based paint is chipping or where renovation leaves lead-based paint dust.

Lead affects almost all systems of a child’s body, particularly the nervous system.

An average of six IQ points may be lost due to lead poisoning when children’s blood lead levels in the range of 1 to 9.9 micrograms per deciliter.

From \$552 to \$878 million in lifetime earnings are lost for children born each year due to decreased IQ from lead exposure in Oregon.

Oregon has a relatively low overall prevalence of lead poisoning, but 1,000 to 2,000 children have blood lead levels of 10 micrograms per deciliter or higher.



Only about 4 percent of Oregon children under the age of 6 are tested for lead poisoning although many more children are still at risk.

Among Oregon’s children living at or below the poverty level, one-third live in areas where 22 percent or more of the housing units were built before 1950.



The average cost of remediation of a lead hazard is \$10,000 per housing unit. Multnomah, Washington, and Clackamas counties have funding through a grant from the Department of Housing and Urban Development to offset costs for lead abatement for homeowners who meet certain financial need requirements. There is no available assistance for the rest of the state.

Source: Oregon Public Health Division, Office of Environmental Public Health. “Impact of environmental exposures in Oregon: Childhood lead poisoning.”



Those potential exposures could be the source of long-term medical issues ranging from an increased risk of high blood pressure and heart disease to kidney and immune system disorders among those who were exposed to the lead on the job or to lead in the soil, air, and buildings that were constructed when lead paint was still in use. And lead absorbed in human bones for years can leak back into the blood in small increments as people age and lose bone density.

Those currently working in such industries as metal smelting, lead-battery manufacturing, and building renovation are likely absorbing too much lead unless they are protecting themselves.

According to the National Institute for Occupation Safety and Health, blood lead levels as low as five micrograms per deciliter are associated with decreased renal function and blood lead levels at 10 micrograms per deciliter are associated

At the nation's workplaces, federal OSHA estimates that

804,000 workers

in general industry and an additional

838,000 workers

in construction are potentially exposed to lead.

with an increased risk of hypertension, yet many thousands of workers still have levels exceeding 10 micrograms per deciliter. (Infographic 2, Blood lead levels.) Although the exposure limits in federal OSHA's lead rules are not

likely to change in the near future, Oregon OSHA, Washington, and California are considering state-initiated rules that would set lower limits on occupational exposures.

Why is lead so bad?

When lead gets into your body, it generates a free radical called reactive oxygen species (ROS); it's an unstable molecule that contains oxygen and that easily reacts with other molecules in a cell. A buildup of ROS in your cells can damage your DNA and RNA and may cause cell death.

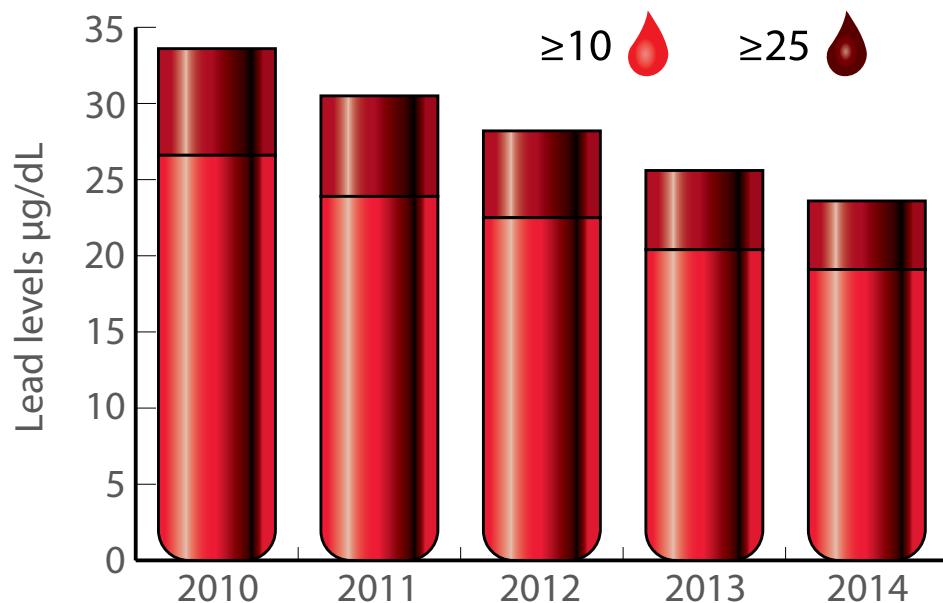
Lead also disarms glutathione, which is a simple molecule that is critical in helping your body prevent disease and fight infections.

Lead follows a path through your blood vessels and quickly binds to red blood cells and diffuses into your soft tissues, including the kidneys, brain, liver, bone marrow, and bone, where it is stored for decades. That's why you can be exposed to lead for years and not have any symptoms. But the more you are exposed, the greater your risk of eventually showing symptoms and being poisoned.

Lead also affects the developing brain in many ways, all of which are bad, including delayed or reversed development, permanent learning disabilities, seizures, coma, and even death. Children who are exposed to lead during their first two or three years of life are the most likely to suffer long-term learning and cognitive damage. That's why lead exposure is most dangerous for children younger than 6 years old.

Workers who are exposed to high levels of lead risk long-term health problems and must be carefully monitored. Symptoms usually build up slowly from repeated exposure to small amounts of lead.

Estimated prevalence rates (per 100,000 workers, aged 16 or older) for workers with elevated blood lead levels.





How to know if you are exposed to lead

There are essentially two ways you can be exposed to lead. You can breathe lead dust or fumes or you can swallow lead if it gets on your hands or face or in your food. You can also contaminate your children if you are exposed to lead dust at work and you don't wash or change your clothes before you come home.

Lead (II,IV) oxide, or red lead – used as a pigment primer for iron and is a component of lead glass – can be absorbed through the skin in high concentrations.

Symptoms of lead exposure include tiredness, irritability, nausea, headache, stomach aches or pains, and loss of appetite, but many people who have been exposed show no symptoms at all. If you think you have been exposed to lead, the best way to find out is to have your blood tested; tell your doctor, even if you don't have symptoms.

Does your employer have to protect you from lead?

Your employer is responsible for determining if you are overexposed to lead at your workplace and for protecting you. If your exposure is more than what is called the action level – 30 micrograms per cubic meter of air (30 $\mu\text{g}/\text{m}^3$) averaged over an eight-hour period – your employer must comply with specific Oregon OSHA requirements to limit your exposure. Current Oregon OSHA rules prohibit workers from being exposed to more than 50 micrograms of lead per cubic meter of air (50 $\mu\text{g}/\text{m}^3$) averaged over an eight-hour period – called the permissible exposure limit or PEL. (Infographic 3 – Rule violations)

Where to find more information about lead

Lead as a public health issue

- [Lead poisoning in Oregon](#)
- [Signs and symptoms of lead poisoning](#)
- [Information about lead paint dust](#)

Lead in the workplace

- [A quick guide to 1926.62 – Oregon OSHA's construction industry rule for controlling exposure to lead](#)
- [Oregon OSHA fact sheet – Lead in construction](#)
- [Oregon OSHA quick facts – Don't take lead home!](#)
- [Oregon Health Authority – Work-related lead poisoning](#)
- [Oregon Health Authority – Information for contractors and painters](#)

Oregon OSHA's key lead rules

Oregon OSHA's two main lead rules are 1910.1025, Lead (Division 2, Subdivision Z) and 1926.62, Lead (Division 3, Subdivision D). Rule 1910.1025 sets Oregon OSHA's requirements for all occupational exposures to lead in all workplaces, except construction. Rule 1926.62 sets Oregon OSHA's requirements for all construction work where an employee may be exposed to lead. ●

Where are violations of Oregon OSHA's lead rules occurring?

Violations of 1910.1025 (October 2015 through September 2016).

| Citations | Inspections | Penalty | Industry* |
|-----------|-------------|----------------|--|
| 6 | 3 | \$270 | Semiconductor and Other Electronic Component Manufacturing |
| 3 | 1 | \$200 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing |
| 3 | 1 | \$120 | Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing |
| 2 | 1 | \$360 | Sawmill and Woodworking Machinery Manufacturing |
| 2 | 1 | \$250 | Recyclable Material Merchant Wholesalers |
| 2 | 1 | \$240 | Executive and Legislative Offices, Combined |
| 2 | 1 | \$210 | Industrial Machinery and Equipment Merchant Wholesalers |
| 2 | 1 | \$200 | Plate Work and Fabricated Structural Product Manufacturing |
| 2 | 1 | \$180 | Glass and Glass Product Manufacturing |
| 2 | 1 | \$120 | Sporting and Athletic Goods Manufacturing |
| 1 | 1 | \$270 | Computer and Peripheral Equipment Manufacturing |
| 1 | 1 | \$100 | Machine Shops |
| 1 | 1 | \$100 | Automotive Body, Paint, Interior, and Glass Repair |
| 1 | 1 | \$0 | Other Industrial Machinery Manufacturing |
| 1 | 1 | \$0 | All Other Fabricated Metal Product Manufacturing |
| 1 | 1 | \$0 | Offices of Dentists |
| 1 | 1 | \$0 | Painting and Wall Covering Contractors |
| 33 | 19 | \$2,620 | Total for All Industries |

Violations of 1926.62 (October 2015 through September 2016).

| Citations | Inspections | Penalty | Industry* |
|------------|-------------|-----------------|---|
| 61 | 9 | \$2,080 | Residential Building Construction |
| 12 | 2 | \$120 | Site Preparation Contractors |
| 11 | 3 | \$1,880 | Painting and Wall Covering Contractors |
| 8 | 1 | \$200 | Finish Carpentry Contractors |
| 6 | 2 | \$200 | Remediation Services |
| 5 | 1 | \$600 | Other Building Finishing Contractors |
| 5 | 1 | \$240 | Framing Contractors |
| 1 | 1 | \$12,500 | Administration of Conservation Programs |
| 1 | 1 | \$300 | Vocational Rehabilitation Services |
| 1 | 1 | \$0 | Drywall and Insulation Contractors |
| 111 | 22 | \$18,120 | Total for All Industries |

*Based on 5-digit NAICS classifications. Source: OSHA, "Frequently cited OSHA standards" for Oregon.



Oregon SHARP Alliance

By Aaron Corvin

Improving workplace safety and health isn't the kind of project you want to shoulder alone.

It's an ongoing endeavor that calls for teamwork.

Just ask the [Oregon SHARP Alliance](#).

The nonprofit group understands the value of bringing people, employers, and organizations together to share knowledge and offer guidance – all in the name of making job sites safer and healthier for workers.

"It comes down to mentoring and networking," said Mark Hurliman, VPP/SHARP program manager for Oregon OSHA, who serves as OSHA's liaison to the alliance. "It's an opportunity for companies to get together and meet other likeminded companies and start sharing ideas."

Launched in 2000, the alliance encompasses employers who hold Safety and Health Achievement Recognition Program (SHARP) status or [Voluntary Protection Program](#) (VPP) status, as well as companies working to achieve SHARP or VPP certification.

But you don't have to be involved in either of those Oregon OSHA programs to participate in alliance activities and to benefit from the knowledge and training the group offers.

The nonprofit's services are open to any person, employer, or government looking for best practices to improve on-the-job safety and health for workers.

What's more, the alliance, which is organized into eight regions across Oregon, is branching out by intensifying its training efforts in the Portland area, adding videos to its website, and cultivating connections through social media.

Meanwhile, the alliance will tackle an emerging topic in workplace safety and health during its next general meeting: "Medical and Recreational Marijuana and Changes to the Rules." The meeting is from 9 a.m. to noon on Thursday, Sept. 14, at the Chemeketa Brooks Regional Training Center, 4910 Brooklake Road NE in Brooks.

The meeting, open to alliance members and nonmembers alike, is free. Just RSVP by Thursday, Sept. 7, to Eileen Tanner, 503-393-0890, ext. 254, or etanner@covanta.com.

The meeting in September is just one example of the alliance's work to meet its goals. Those include:

- Promote the achievement of SHARP and VPP recognition
- Help Oregon companies who are in the process of becoming SHARP or VPP
- Assist all companies in Oregon with safety and health management
- Make recommendations to Oregon OSHA on activities, rules, best practices, and strategic planning
- Serve as a resource to all Oregon workplaces



Promoting Safety & Health

The group convenes quarterly three-hour training sessions at various locations across the state on the second Thursday of March, September, and December. The June quarterly meeting is held the day before the Blue Mountain Conference in Pendleton each year.

A closer look at the alliance's calendar is [available online](#).

These days, the alliance is particularly focused on finding ways to expand training and networking opportunities.

Take, for instance, its growing presence in the Portland metro area, also known as Region 1. The Region 1 group is now convening monthly luncheon



meetings on the second Tuesday in February, March, May, June, August, September, November, and December. The Region 1 group also is convening quarterly training sessions on the second Tuesday in January, April, July, and October.

Topics covered during the Portland group's recent quarterly trainings include "SHARP Alliance Programs, Resources, and Opportunities," and "SHARP/VPP Quality Industrial Hygiene Program." On Oct. 10, the Region 1 group will take up another topic: "Maintaining Momentum."

Moreover, the Region 1 group has established a LinkedIn Group, dubbed The Oregon SHARP Alliance – Region One. It serves as an open forum for LinkedIn members to share ideas, successes, and best practices.

Cliff Butler, the environmental, health, and safety manager for Sherwin-Williams, Purdy in Portland, volunteers as an alliance delegate who manages Region 1. He encourages those who are interested in joining the LinkedIn Group to contact him at cliff.l.butler@sherwin.com.

Butler said the alliance's goals and work are all about moving "further down the road of protection for workers." He added, "Worker safety isn't just good business, it's the right thing to do."

As the alliance expands in-person training opportunities and takes a page from social media, it's also making online training videos available to anyone.

"The intent and hope is to have a video library," Hurliman said. Up and running on the group's website is "[Safety Leadership at All Levels](#)," a video that delves into the issue of what makes a leader effective at influencing safety.

Jennifer Olson-Morzenti, the alliance's board chairwoman who directs product stewardship at Thermo Fisher Scientific, said the group strives to stay on top of emerging workplace safety and health topics.

A big part of how it does that, she said, is promoting better connections and communications through a variety of online and in-person training and networking opportunities.

And as the alliance adapts to changing times and needs, it stays focused on its core mission. "The alliance will continue to focus on best practices for workplace safety," Olson-Morzenti said. ●



Short takes

Ross Island Bridge contractor cited for safety violations

Oregon OSHA has fined Abhe & Svoboda Inc. \$189,000 for nine safety violations – two of them willful – that exposed employees to death or serious injury as they worked on a project to restore the Ross Island Bridge in Portland.

Oregon OSHA cited the violations as the result of an investigation of a Feb. 8, 2017, accident.

The accident happened underneath the bridge, where a suspended scaffolding system was installed. An employee was working on an upper deck, 37 feet above a lower platform. He fell through a ladder opening, landing on an employee who was working directly below on the lower platform. Both employees survived the accident, suffering multiple injuries.

The employee who fell was not protected by a fall protection system, per Oregon OSHA's rules. In fact, an estimated eight employees were exposed to this hazard when the accident occurred, according to the investigation.

The investigation also found:

- The company failed to provide proper access to work areas, forcing employees to climb up or down the scaffolding and bridge structure, and to sidestep or step over holes ranging in size from three inches to 24 inches

- The company failed to construct and install the scaffolding system according to the minimum bracing requirements, as outlined by professional specifications
- Scaffolds and related components were not set up, dismantled, and moved under the direction of a competent person
- Employees lacked rest platforms while climbing 37-foot ladders
- The company failed to ensure that employees had a work platform that was at least 18 inches wide
- Anchorages for fall protection equipment were not installed or used under the supervision of a competent person
- Scaffolds were not inspected for visible defects before each work shift by a competent person
- A makeshift device – a wooden step stool – was used on platforms to increase the working height of employees

Oregon OSHA cited two of the nine safety violations as willful: the failure to provide proper access to work areas, which forced employees to climb structures and step over holes, and the failure to follow bracing requirements for the scaffolding.




A worker who fell from an upper platform underneath the Ross Island Bridge was not protected by a fall protection system.

Each willful violation carries the legal maximum penalty of \$70,000.

Seven of the nine violations were cited as serious, each with the maximum penalty of \$7,000.

Workplace safety, health training grants available



Oregon OSHA is accepting grant applications for the development of innovative workplace safety and health training programs. Applications are due Friday, Oct. 6.

The agency encourages unique projects such as mobile apps, videos, or online educational games to engage workers.

The training grants will focus on programs that target a high-hazard Oregon industry, such as construction or agriculture, or a specific work process to reduce or eliminate hazards. Any employer, labor group, school affiliated with a labor group, or nonprofit organization may apply. Applicants may request up to \$40,000 per grant project.

Employers are not allowed to use grants to pay for training for their employees. Materials are housed in the Oregon OSHA Resource Center and are available to the public for checkout from the library.

Some examples of past grant projects include:

- Development of safe-lifting guidelines
- Spanish-language flip charts designed to help prevent heat-related illness among forest workers
- An educational program for nurses to prevent ergonomic-related injuries

The Oregon Legislature launched the Occupational Safety and Health Education and Training Grant Program in 1990. Award recommendations are made by Oregon OSHA's Safe Employment Education and Training Advisory Committee, a group with members from business, labor, and government.

For more information, contact Teri Watson at 503-947-7406 or teri.a.watson@oregon.gov.



START
GAME

Oregon OSHA consultant wins 2017 Blue Star Award



Promoting Safety & Health

The Oregon SHARP Alliance presented Oregon OSHA consultant George Vorhauer with the organization's 2017 Blue Star Award at the Blue Mountain Safety and Health Conference on June 6.

The Blue Star award recognizes Oregon individuals for their outstanding dedication to and impact on workplace safety and health in Oregon.

The annual award is presented at the SHARP Alliance's Blue Mountain Safety and Health Conference in June.

Vorhauer started with Oregon OSHA in 1989 as a compliance officer in the Portland area and worked for several years on Oregon OSHA's Fatality Investigation Team before becoming a consultant in northeast Oregon. He was the chairperson for the Governor's Occupational Safety and Health Conference in 1997 and past president of the American Society of Safety Engineers (Cascade Chapter).

As a safety consultant, Vorhauer spends much of his time teaching employers to think beyond basic hazard recognition and how to look for the underlying causes of hazards.

Vorhauer has also served as a SHARP team leader or team member for 10 eastern Oregon companies as they worked through the SHARP process, and assisted in 11 audits of companies that are participating in the Voluntary Protection Program.



Prevent heat illness for workers in hot weather

As temperatures rise this – and every – summer, Oregon OSHA encourages employers and workers in construction, agriculture and other labor-intensive activities to learn the signs of heat illness and focus on prevention.

The call to address the hazards of working in high heat is part of a larger heat stress prevention program recently launched by Oregon OSHA. Under the program, the agency's enforcement and consultation activities will include a review of employers' plans to deal with heat exposure, especially from June 15 through Oct. 1 of each year.

The prevention program applies to both outdoor job sites and indoor workplaces where potential heat-related hazards may exist.

Exposure to heat can lead to headaches, cramps, dizziness, fatigue, nausea or vomiting, and even seizures or death. From 2011 to 2016, 36 people received benefits through Oregon's workers' compensation system for heat-related illnesses.

Here are some tips for preventing a heat-related illness:

- Perform the heaviest, most labor-intensive work during the coolest part of the day.
- Use the buddy system (work in pairs) to monitor the heat.
- Drink plenty of cool water (one small cup every 15 to 20 minutes).



- Wear light, loose-fitting, and breathable clothing (such as cotton).
- Take frequent short breaks in cool, shaded areas – allow your body to cool down.
- Avoid eating large meals before working in hot environments.
- Avoid caffeine and alcoholic beverages (these make the body lose water and increase the risk of heat illnesses).

Employers can calculate the heat index for their worksite with the [heat stress app](#) for mobile phones. Oregon OSHA has a booklet available in both [English](#) and [Spanish](#) with tips for working in the heat.



Stayton facility earns safety recognition

RedBuilt LLC in Stayton has received an award for completing its first year of involvement in the Safety and Health Achievement Recognition Program (SHARP).

SHARP, a program through Oregon OSHA's [consultation services](#), provides an incentive for Oregon employers to work with their employees to find and correct hazards, develop and implement effective safety and health programs, and continuously improve. The program aims to encourage employers to become self-sufficient in managing workplace safety and health issues. Currently, 26 employer locations in Oregon

participate in SHARP. That's in addition to about 152 employers that have graduated from the program. An employer graduates when it completes five years of SHARP.

With 120 employees at the Stayton facility, RedBuilt LLC is a leader in the design, manufacture, and support of proprietary engineered structural wood products for commercial applications. Headquartered in Boise, Idaho, RedBuilt operates four manufacturing plants and four design and sales offices in the United States.

The SHARP program helped the company generate new ways to improve safety awareness and helped

confirm the company's safety program is on the right track, according to Brian Cowan and Dan Rowell, the Stayton facility's plant manager and safety manager, respectively.

Oregon employers that have been in business for more than one year are eligible to apply for SHARP, regardless of size or type of business, although the program is primarily designed to help small and mid-size businesses.



Program offers workers path to retirement savings

The Oregon State Treasury is launching a new program, OregonSaves, offering workers a convenient way to save for retirement.

The program allows them to save a part of each paycheck through payroll deductions facilitated by their employer and to invest their savings in professionally managed investment options in a Roth individual retirement account.

The account is portable, allowing workers to take it with them from job to job.

Any business with employees that does not sponsor a qualified retirement plan will need to register to facilitate OregonSaves for its employees.

The registration process is designed to be simple in order to limit any burden on employers. Employers can choose to offer their own retirement plans to some or all of their employees instead of participating in the program.

The deadlines for employers to register are as follows:

- An employer with 100 or more employees: Nov. 15, 2017
- An employer with 50 to 99 employees: May 15, 2018

- An employer with 20 to 49 employees: Dec. 15, 2018
- An employer with 10 to 19 employees: May 15, 2019
- An employer with five to nine employees: Nov. 15, 2019
- An employer with four or fewer employees: May 15, 2020

The state will send a notice about the program to employers about six months before their registration deadline. The state will send another notice to employers one month before the deadline with instructions about how to register.

For more information, including answers to frequently asked questions, visit www.oregonsaves.com or call 844-661-1256. ●



Safety Notes

What happened?

Two workers were attempting to erect a 36-foot, seven-inch aluminum scaffold pole when the pole fell onto energized power lines.

How did it happen?

Two workers started to set up a pump jack scaffold that they were going to use to install siding on a new two-story garage. They had been working at the site for a few weeks, installing siding on the other sides of the garage and expected this day to be just like the others.

The two workers stood on the concrete driveway and began to raise the first of two aluminum 36-foot, seven-inch aluminum scaffold poles while a third worker stood about 25 feet above them on the garage roof and guided the pole with a rope. One of the workers on the ground secured the pole's rubber base plate while the other worker walked the pole up to a vertical position about three feet from the front of the garage.

After they successfully set up the first pole, they started to erect the second pole the same way.

However, as the two workers walked the pole up to a 45-degree angle, it slipped and tipped away from the garage toward a set of 20,800-volt power lines about 23 feet away. The worker on the roof was unable to stop the pole and let go of the rope just before the pole tipped into the power lines.

The two workers on the ground were still holding onto the pole as it slid along the energized lines and dropped into nearby trees. One of the workers was severely burned on his hands and feet. The other worker was electrocuted.

Findings

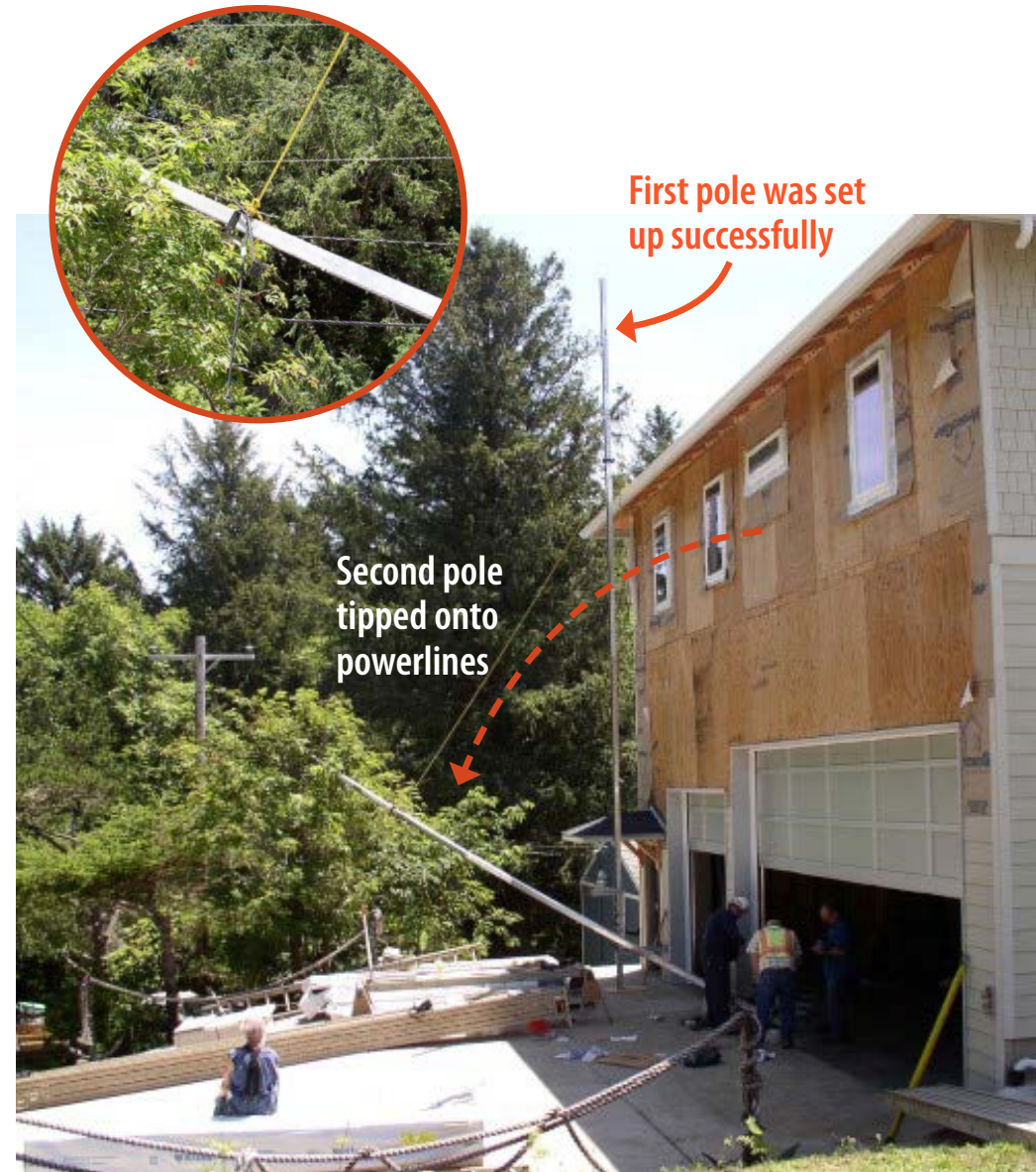
The foreman on site that day explained that he knew about the Oregon OSHA rule that required the workers to keep the scaffolding 10 feet away from power lines – but he thought that that the lines were at least 20 feet away. (The power lines were, in fact, 23 feet from the front of the garage, but each scaffold pole was 36 feet, seven inches long.)

Accident Report

Event: Electrical shock, electrocution

Industry: Residential construction

Worker: Siding installers



The scaffold manufacturer's instructions warned: "Watch For Wires," "ALUMINUM CONDUCTS ELECTRICITY," and "This product will conduct electricity, stay clear of all power lines or other sources of electricity."

The business owner said he did not train his crew how to erect scaffolds. He explained that he relied on the past experience of his employees and that he had watched them erecting and using the scaffold and felt confident that they could work safely.

The workers did not use fall protection when they were on the scaffold and on the roof. The business owner explained that when his employees were installing the siding from the scaffold, they used a workbench that came with the scaffold as a guardrail. He said he didn't know that a mid-rail and toe board were also required; however, the scaffold the manufacturer's instructions said: "Do not use without guardrails, mid-rails, toe-boards and or fall-arrest system" and "Do not use a workbench as a substitute for ... a guardrail system."

Violations

- 1926.451(f)(6) – Scaffolding, use: Scaffolds were erected, used, dismantled, altered, or moved such that they or any conductive material handled on them could come closer to exposed and energized power lines.
- 1926.454(a)(2) – Scaffolding, Training requirements: Training did not include the correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling fall protection systems.
- 437-003-1501 – Fall protection: The employer did not ensure that fall protection systems were provided, installed, and implemented according to the criteria in 1926.502 – Fall protection systems criteria and practices. ●



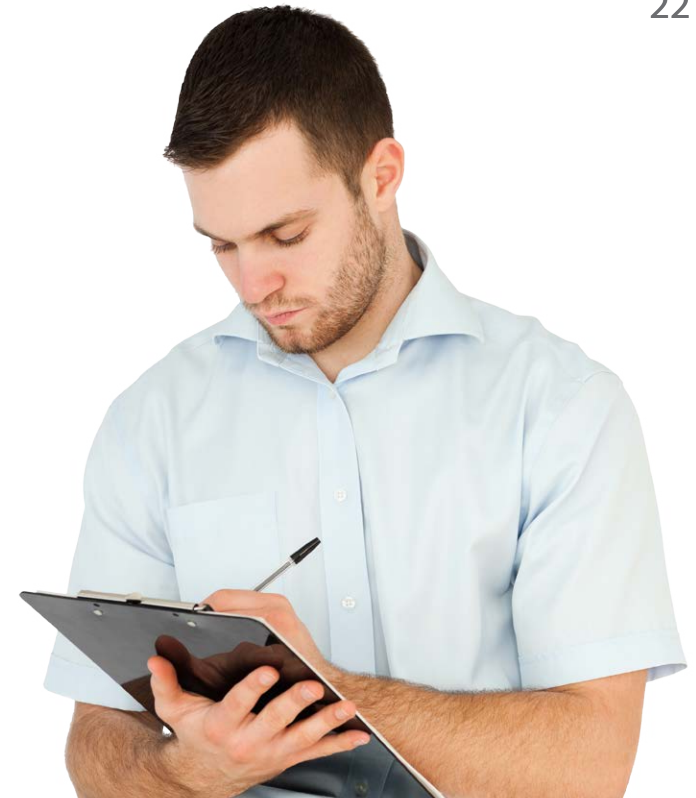
Ask Technical

Q: *The person who takes the minutes at our safety committee meetings is responsible only for that task and has no other involvement in the committee. Is that person required to take accident investigation and hazard identification training that is required for the active members?*

A: Oregon OSHA's [safety committee](#) rules do not specifically require people to be an active safety committee member if their only duty is to take minutes. If your committee has the appropriate number of active and properly trained members, another person can take the minutes. Your safety committee charter can state that another employee will take minutes each meeting. This person would not be a voting member and could be a different person each month.

Safety committee minutes must be kept for three years and include:

- The meeting date
- The names of attendees
- All safety and health issues discussed
- Recommendations for corrective action and a reasonable date by which management agrees to respond
- The person responsible for follow up on any recommended corrective actions
- All reports, evaluations, and recommendations made by the committee ●



Going the Distance

How have things changed in terms of safety in your line of work?

The biggest changes are in our safety culture at PGE. Employees are developing an ownership view of our shared safety journey. Having strong support at the top – from our CEO and President Jim Piro – has made having conversations about safety a lot easier.

Today, we want everyone to feel safe about speaking up, and empowered to stand up for safety. If you look back – say 15 years ago – that wasn't always the case.

In the past, a common perspective was "safety is the responsibility of the safety department." At PGE, we've shifted dramatically to a new understanding: "Everyone has a role in achieving our goal of zero injuries." Having the support of an Executive Safety Council – made up of executives, managers, and union leadership – is a big help. The members are engaged in our safety journey and that reinforces the commitment to improve among our safety professionals and every employee.

Company: Portland General Electric

Senior Safety Consultant: Gary Boswell

Responsibilities: As a senior safety consultant, I'm responsible for ensuring the different work groups at PGE are aware of changes in safety regulations, and I assist in scoping out the impact of any new regulations on our operations. I participate in Oregon OSHA advisory work groups and Edison Electric Institute (EEI) Safety and Health conferences. Because EEI focuses on federal safety rules, our work with them benefits PGE and the entire electric utility industry.



When it comes to keeping workers safe, how do you measure success?

I look at the willingness to share information after an incident occurs. In the past, events were internalized by work groups, but that reduced our ability for others – who could face the same safety challenges – to learn from an event. Today, incidents are openly discussed and corrective actions shared. Weekly in-house phone conferences, in which we review safety incidents, provide an open forum for discussion which can then be shared with all PGE employees.

The willingness to report near misses is another important way to measure success. With near-miss reports, every work group can determine if they could be susceptible to the same at-risk behavior. Open communication in all of these areas is critical to reducing injuries and eliminating at-risk behavior.

What are some important things you've learned about safety over the years?

First and foremost, to make a difference with safety, you've got to be willing to get personally involved. During my first 20 years of working in PGE's line operations, I learned that just talking about safety was not enough. You have to make it part of every job, every day. My favorite saying taught to me by a long-time crew foreman was "No one gets hurt on my watch." I have tried to live that throughout my whole career – whether I was running crews, being a supervisor, or in my role today as a safety professional.

Another theme I like to share with our newer employees is to come to work every day with the idea you're going to learn something. Safety is nothing more than lifelong learning and a continuous improvement journey. It's up to each individual to set the bar higher and look for ways to motivate their peers.

What is some advice you'd give to those looking to keep their workplaces safe or to those who are seeking a career in this field?

Get to know your fellow employees. Having a personal relationship promotes a more caring environment.

“Everyone has a role in achieving our goal of zero injuries.”



Gary Boswell helps lead a tabletop exercise at the 2017 PGE Safety Summit. This year's Safety Summit, held in collaboration with IBEW local 125, drew more than 400 employees from across the company to the Portland Expo Center. This year, the theme was STAR - Stop, Think, Act, Review.

Next, share your knowledge. No matter what your position is, everyone has the ability to teach and reinforce safe behavior with their peers. Take advantage of those times when you can talk about safety with other people – inside or outside of the company. You'll find that others in safety are more than willing to share their ideas. There are no trade secrets when it comes to sharing safety experiences. ●



