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RESOURCE

*Oregon*OSHA

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CONTENTS

The busy harvest season is under way for workers at Holiday Tree Farm at this site in Dallas.

On the cover: Trees are harvested by helicopter at the Holiday Tree Farm site near Sheridan.

RESOURCE

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DEPARTMENT OF CONSUMER & BUSINESS SERVICES
Oregon OSHA

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Revisiting the hierarchy of controls

By Michael Wood

In recent weeks, I have had several conversations that ended up hinging on the hierarchy of controls – in most cases, the issue was that the hierarchy was being overlooked in the discussion and controls (such as personal protective equipment) that relied upon a high level of worker "compliance" were being incorrectly treated as controls that largely eliminated the hazards in question.

I have written before that I believe the essence of the hierarchy of controls is less focused on a discussion of "engineering controls" versus "administrative controls" versus "work practice controls" and more focused on a simple set of principles:

- First, a control is preferred if it minimizes the need for the worker's active participation to ensure its effectiveness.

  For example, the reason that ventilation is superior to respirator use is not because respirators, *if properly used*, are inherently less effective. It is because they are more vulnerable to improper use by individual workers. In the same way, a guardrail system is superior to individual fall restraint systems not because the fall restraint systems do not work, but because the individual workers do not need to "hook up" the guardrail systems in order to make them work properly.

  Simply put, no hazard can be considered to be fully addressed as long as there is a possibility that the control can fail due to "worker error" (whether the result of poor training, poor work practices, contradictory expectations, inattention, or anything else).
- Second, a control is preferred if, to the degree it does rely upon active participation on the part of the worker, the worker's actions reflect natural and largely automatic actions.

  This principle is at play in having dials and valves turn the same direction and not using red for "on" and green for "off" on controls (you'd be surprised how often these simple approaches are overlooked for one reason or another). To take an extreme example, there is really no mechanical reason why turning the steering wheel of an automobile to the right also turns the car in that direction. But, if you reverse it, no amount of "worker training" is going to overcome the worker's natural and conditioned inclinations. I haven't run across a worksite that goes to that extreme – but I've encountered a few that have come close to it.
- Third, a control is preferred if it cannot be easily defeated without active and conscious participation on the part of the worker being protected.

  This is the principle at play in the use of interlocks and other "passive" guarding systems. It also is at play in covering a fixed ladder that should not normally be used with a screen making it impossible to climb rather than relying upon a "no unauthorized entry" sign The sign will be completely effective if it is followed. But, clearly, the screen over the ladder is a superior control – not because it works better when properly employed, but because it is much less likely to be actively subverted (and, therefore, much more likely to be properly employed).
- Finally, a control is preferred if it eliminates or at least minimizes injury to the employee if a failure does, in fact, occur.

  Substituting a less hazardous chemical for a more hazardous one will not eliminate the possibility of a spill. But it is clearly a good idea that reduces the inherent risk of the activity in question, because it reduces the consequences, even though it does not reduce the likelihood of a problem occurring.

As we design our workplace activities, these principles – especially if designed into the basic work processes – can reduce the need for enforcement and progressive discipline, as well as the need to focus excessive attention on shifting worker behavior. They can make our workplaces more intrinsically safe – and that's where we are likely to see the greatest benefits in the long run.

Christmas harvest blitz

Corvallis tree farm manages seasonal safety

By Melanie Mesaros

Not everyone can experience Christmas like an Oregonian, with a lush and sparkling Douglas or Noble fir as a holiday fixture. But an Oregon tree grower is working to bring some Northwest cheer to places as far away as Japan, Mexico, Puerto Rico, and Hawaii.

Holiday Tree Farms, Inc., a Corvallis-based family business, started shaking, bailing, and shipping trees in October, with the majority of the trees bound for locations outside the Northwest. Some 600 employees work the tree harvest, where sprains and strains are among the biggest source of claims. Earlier this year, a worker also jammed his finger while loading a tree.

Continued on page 5

Above: Holiday Tree Farms Manager Eugene Carson watches employees work during peak season.

Christmas harvest blitz continued

Above: Mark Arkills, production manager, stands among rows of Noble firs in farmland north of Sheridan.

"Trees are stacked by hand," said Mark Arkills, the production manager. "Our crews are also loading trees onto trucks and using chain saws to cut them one at a time. It's very physical work."

"We really pushed the whole idea of, 'I'll watch your back and you watch mine.' We have our crews do a five-minute safety meeting every morning." — Mark Arkills

Ahead of this year's production period, when 1 million trees in all will be harvested, Arkills said the company spent time focusing on safety training for its core employees and managers with the intent of bringing down claims.

"We really pushed the whole idea of, 'I'll watch your back and you watch mine,'" he said of the fast-paced season. "We have our crews do a five-minute safety meeting every morning."

The company instituted a new rule this year to help reduce back strains. Arkills said trees that are 7 to 8 feet in size must be lifted by two workers, instead of just one.

Continued on page 6

Above: Holiday Tree employees shake loose needles from trees before bailing and loading them.

1 Trees are harvested in a field north of Sheridan.

5 A conveyor belt helps transport the trees onto a truck, where they are stacked and ready to ship.

4 The company requires larger trees to be lifted by two people to reduce strains.

The life of a Christmas tree

2 Once trees are brought in from the farmland, loose needles are shaken off.

3 Christmas trees make their way through a bailing machine before being shipped out.

Continued on page 7

Above: Strains and sprains are one of the top sources of claims for the Christmas tree industry.

Holiday Tree Farms has about 100 returning workers, who are partnered with new, seasonal staff to ensure safe work practices are being followed.

"We really rely on the people who have been here forever to keep an eye on them," said Arkills.

It's also the more experienced workers who operate forklifts and chainsaws, and operate the hook during the helicopter field harvest. Arkills has worked in the Christmas tree business more than 25 years and said planning is the key.

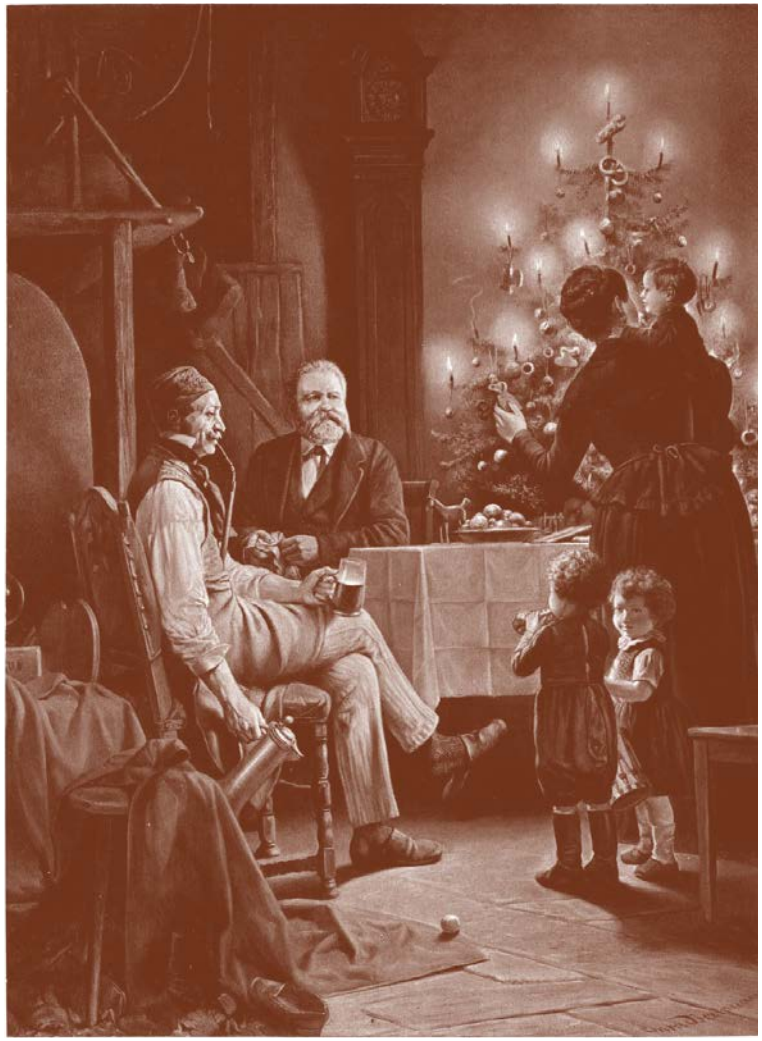
"Part of being safe is having a plan and having a program for everything." — Mark Arkills

"My job is almost harder the month before we start harvest because of all the planning involved," he said. "Part of being safe is having a plan and having a program for everything. It helps when you have plenty of manpower and extra equipment."

The peak time for shipping trees runs between Nov. 30 and Dec. 15, when trucks begin to carry loads bound for California, Texas, and Utah.

"In the end, someone's life or an injury is way more important than a load of Christmas trees," said Arkills. "You can't do it at the risk of suffering an injury."

"O Tannenbaum"



By Ellis Brasch

If the title has you thinking of a Christmas tree, that's perfect for this story, although "O Tannenbaum" – the traditional German folk song – refers to a fir tree and has nothing to do with the prodigiously decorated holiday tree.

Nevertheless, we can thank 16th Century Germans for the practice of bringing a tree indoors and decorating it for Christmas. It took a while for the idea to catch on in mainstream America, however. Even as late as the 1840s, Christmas trees were not accepted by most Americans, who perhaps still harbored stern Puritan suspicions that Christmas trees were pagan symbols.

But popular culture has a way of making even strange customs fashionable. After many Americans saw an illustration of Queen Victoria and her German Prince, Albert, standing with their children around a Christmas tree in 1846, they too had to have one.

Catskill farmer Mark Carr apparently established the market for Christmas trees when he hauled two ox sleds of evergreens into New York City in 1851 and sold all of them.

By 1900, one in five American families were bringing trees indoors for Christmas and embellishing them with almost anything that would hang from a bough.

Legend credits Martin Luther with the concept of decorating a Christmas tree with lights, which meant that candles were the only source of illumination until Edward Johnson, assistant to Thomas Edison, came up with the idea of electric lights in 1882. Soon, radiant Christmas trees became a common sight in town squares at the start of the holiday season and lighting ceremonies became an American tradition.

Continued on page 9

Holiday hazards

Of course, it takes workers to prepare real trees for their Christmas debut. What are the injury risks for those who do the work? Growing Christmas trees takes time (eight to 10 years for trees to be saleable) and the hazards on Christmas tree farms are similar to those on traditional farms: pesticides, dangerous equipment, and overexertion from hard labor. But work-related injuries are more likely to occur when trees are sheared, cut, bailed, and loaded for shipping. The most common are sprains, strains, cuts, and lacerations.

Getting a tree for public display has fewer risks for workers, but the consequences of an injury can be severe: falls and electrocutions.

Falls happen when workers slip while they are unloading trees from flatbed trailers after they arrive at sales lots. Falls also happen when workers slip or lose their balance and from ladders while they're decorating the trees.

Overhead power lines are hazards for window cleaners and roofers, but they're also dangerous for workers who decorate outdoor Christmas trees. Although no recent fatalities have occurred in Oregon, workers in other states have been electrocuted while they were stringing lights on trees and contacted high-voltage lines. Here is the deadly scenario: A worker climbs a ladder or uses an aerial lift to string lights on the upper parts of the tree and as the worker arranges the lights, a section of the light strand touches an overhead line.

If you're planning on decorating a tree this year – in your home or on a public square – do it safely so that you can enjoy the holidays.

These links offer tips to keep your holiday safe

Pull the plug on cord-related hazards:

http://esfi.org/index.cfm/cdid/13227/pid/10272

Christmas tree safety:

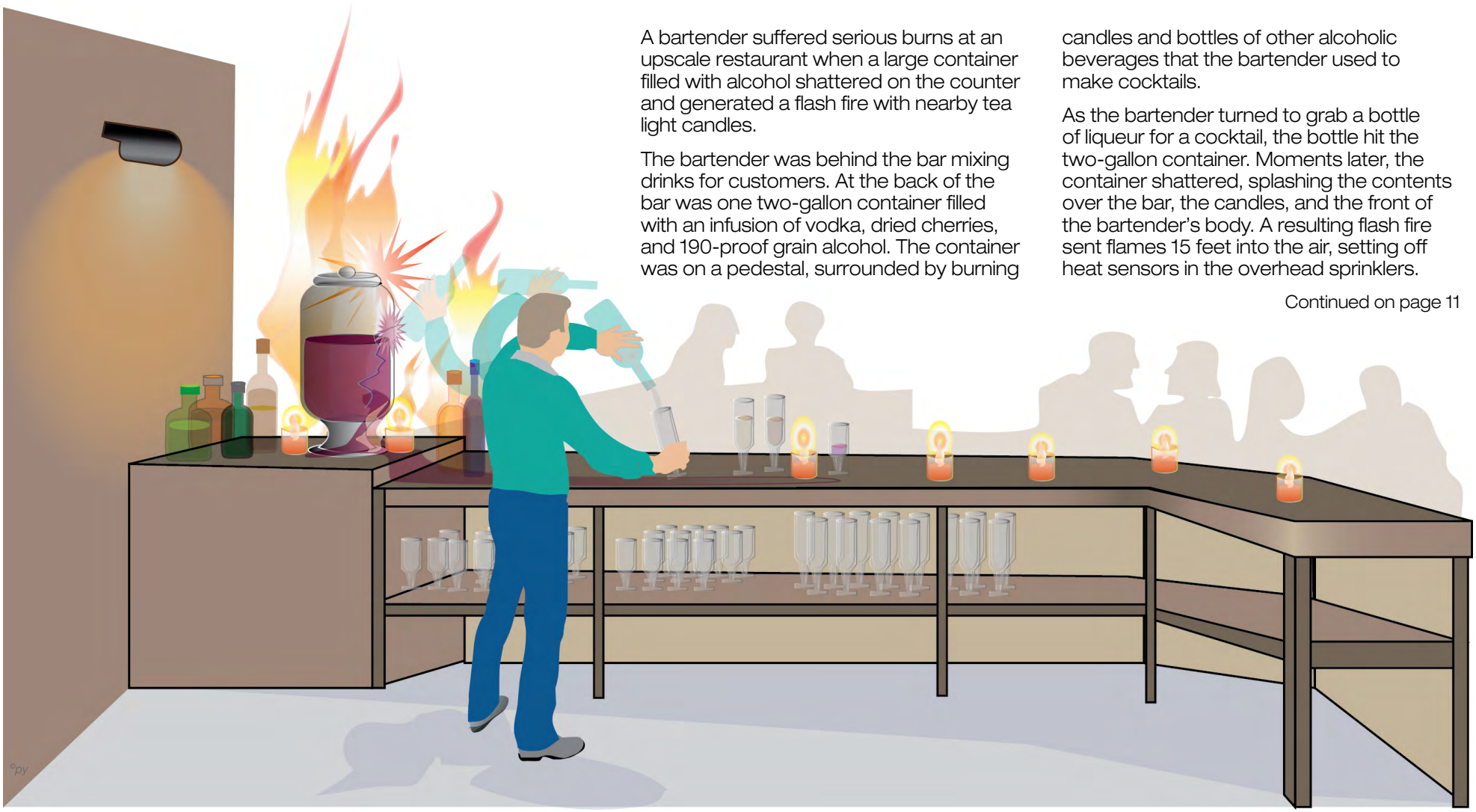
http://esfi.org/index.cfm/cdid/13223/pid/10272

Portable ladders – proper use and safety:

http://www.cbs.state.or.us/external/osha/pdf/pubs/3083.pdf

Accident Report

Incident | Second and third degree burns
Business | Restaurant
Employee | Bartender



A bartender suffered serious burns at an upscale restaurant when a large container filled with alcohol shattered on the counter and generated a flash fire with nearby tea light candles.

The bartender was behind the bar mixing drinks for customers. At the back of the bar was one two-gallon container filled with an infusion of vodka, dried cherries, and 190-proof grain alcohol. The container was on a pedestal, surrounded by burning candles and bottles of other alcoholic beverages that the bartender used to make cocktails.

As the bartender turned to grab a bottle of liqueur for a cocktail, the bottle hit the two-gallon container. Moments later, the container shattered, splashing the contents over the bar, the candles, and the front of the bartender's body. A resulting flash fire sent flames 15 feet into the air, setting off heat sensors in the overhead sprinklers.

Continued on page 11

When the bartender realized he was on fire, he tried to climb over the bar as another employee tried unsuccessfully to subdue the flames on his clothing. As the bartender ran toward a back stairway, two customers restrained him and used their coats to put out the fire.

The sprinkler system eventually suppressed the bar fire and the bartender was hospitalized with second- and third-degree burns over 18 percent of his body.

Applicable standards

1910.106(d)(2)(iii)(A): Flammable and combustible liquid containers shall be in accordance with Table H-12 (abbreviated). Table states that maximum allowable size of container should be one gallon for glass.

1910.106(d)(7)(iii): Open flames and smoking. Open flames and smoking shall not be permitted in flammable or combustible liquid storage areas.

437-001-0765(1): No safety committee, no monthly safety meetings, and no written records.

Photos: Chris Zimmer

Oregon OSHA reminds employers to prepare for winter hazards

Icy roads and freezing temperatures can make certain jobs even more dangerous if workers aren't prepared.

"Employees who drive as part of their job should receive training on how to handle the conditions," said Gary Beck, Oregon OSHA's safety enforcement manager. "Employers should cover how to steer out of skids, increase following distance, and emphasize the need to drive slower in bad weather."

For outdoor workers, Beck said it's important to wear proper clothing to stay dry and warm and take breaks to warm up. He also encourages employers to consider putting off a job if conditions are too severe.

"If it's really bad outside and a job can be postponed, then wait and don't put crews at risk," he said.

Another danger, specifically for workers in warehousing or any enclosed space, is carbon monoxide exposure. Penny Wolf-McCormick, Oregon OSHA's Portland health enforcement manager, said many gas or propane powered heaters aren't intended for indoor use.

"Check the piece of equipment for a sticker or the manual that will say whether it can be used indoors," said Wolf-McCormick. "Some require adequate ventilation and some will say they are not to be used indoors at all."

If the heater has an open flame, employers should consider whether flammable material such as chemicals or other combustibles are nearby, she said.

Find fact sheets for working in winter weather and other hazardous conditions online: http://orosha.org/winter_conditions.html.

Oregon OSHA cites Springfield meat company for willful safety violations

Oregon OSHA has fined Bright Oaks Meat, Inc., $7,850 after an employee's hand was pulled into a meat tenderizing machine. The fine, based on a willful violation, was the result of an inspection on Aug. 12, 2013.

The accident occurred on Aug. 3, 2013, when a female worker was feeding meat into the tenderizing machine. The investigation found her gloved right hand was pulled into the blades. Two fingers were severely fractured and cuts to her hand required 60 stitches. The report also showed the worker, who had been employed at Bright Oaks Meat for about a year, never used the machine with the guard.

Oregon OSHA cited the business for failing to guard the meat tenderizing machine, failing to report an overnight hospitalization to Oregon OSHA within 24 hours, and lack of a safety committee.

"This employer consciously neglected a safety measure that could have prevented the injury," said Oregon OSHA Administrator Michael Wood. "There is no reason for an employer to decide it can simply disregard the rules."

The inspection also revealed the guard had been missing for two years before the accident and no effort was made to replace it. A willful violation, where an employer intentionally or knowingly allows a violation to occur, can result in a $70,000 penalty. In this case, Oregon OSHA issued a lower penalty because the business is a small employer and the violation was unlikely to cause the death of a worker.

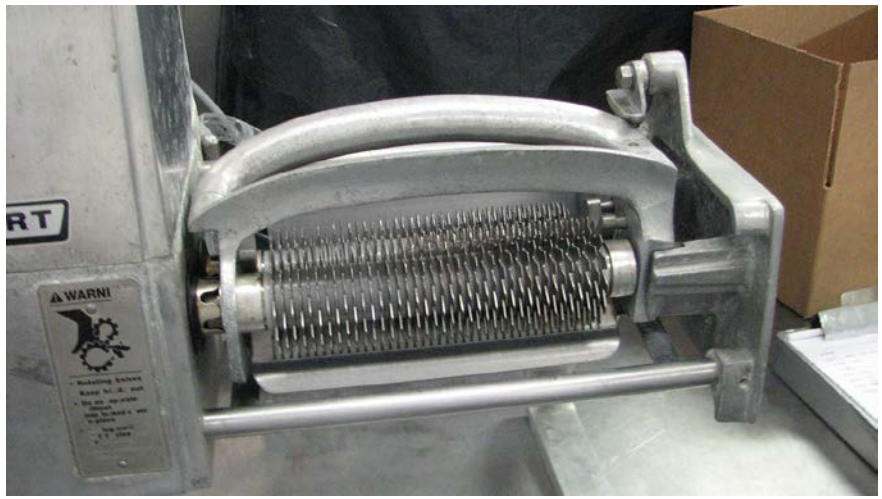


Photo: Mark Sullivan

Oregon students invited to enter safety video contest

High school students have used original music, special effects, and offbeat characters to promote young worker safety and health in Oregon. The annual "Speak up. Work safe." video contest is now open to teens across the state. The top three entries will take home cash prizes ranging from $300 to $500 and students will earn a matching amount for their school.

"There are fun ways to get teens thinking about safety on the job," said Austin Coburn, the 2013 contest winner. "I created a safety message around the theme of a musical and that made it memorable and entertaining."

The contest is designed to increase awareness about safety on the job for young people. Students must create a 90-second or less video with the overall theme of "Speak up. Work safe." Specific video guidelines are outlined in the contest rules. Participants are encouraged to use creative moviemaking techniques, while sharing the message "Work shouldn't cost you your future." In addition, the video should emphasize ways for young workers to protect themselves at work.

Submissions will be judged on the following:

- A teen worker health and safety message based on the concept of "Speak up. Work safe." and "Work shouldn't cost you your future." (See rules for more specific details.)
- Creativity and originality.
- Overall production value (video and audio quality).
- Youth appeal.

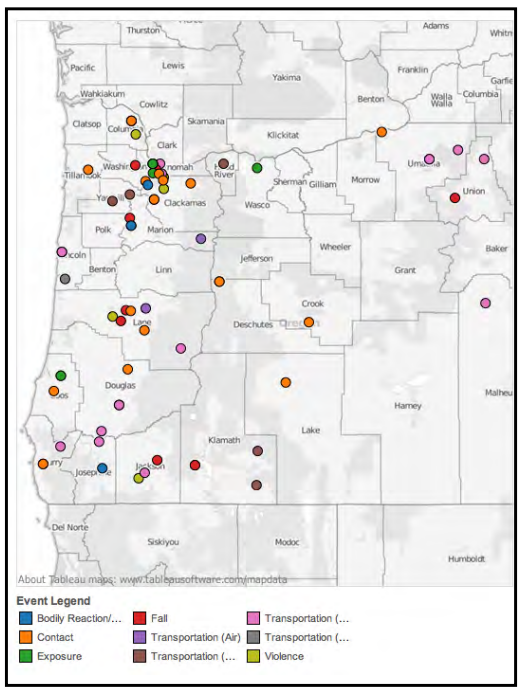
The deadline for submissions is Feb. 3, 2014.

The contest is organized by the Oregon Young Employee Safety Coalition (O[yes]. Oregon OSHA, SAIF Corporation, local chapters of the American Society of Safety Engineers, the Oregon Institute of Occupational Health Sciences (formerly CROET), Liberty Mutual, Hoffman Construction, Central Oregon Safety & Health Association, the Labor Education and Research Center, SHARP Alliance, Oregon Health Authority, Daily Journal of Commerce, and SafeBuild Alliance sponsor the contest.

www.youngemployeesafety.org/contest

Interactive maps pinpoint fatalities statewide

The Oregon Fatality Assessment and Control Evaluation program (OR-FACE) has recently published a series of interactive maps that show the location of more than 600 occupational fatalities in Oregon. Fatalities from 2003 to 2010 can be filtered by year and are coded by event, occupation, and industry. Current cases (2011 to present) can be filtered by event and year.



More information and abstracts covering the fatalities can be found on the OR-FACE website.

OR-FACE conducts surveillance, investigation, and assessment of traumatic occupational fatalities in Oregon and produces materials to promote worker safety. OR-FACE is part of the Oregon Institute of Occupational Health Sciences (formerly the Center for Research on Occupational and Environmental Toxicology) at Oregon Health and Science University. A cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH) supports OR-FACE.

Workers' Memorial Scholarship opens to students

Each year, children or the spouse of a worker must cope with their loss after a workplace death. It can have a profound effect on a family's ability to finance higher education. The Workers' Memorial Scholarship fund, established by the 1991 Legislature at the request of the Oregon AFL-CIO, is now accepting applications for the 2014-15 school year.

Students must meet certain criteria to apply and can find more information at http://www.oregonstudentaid.gov (scholarship code 113 in the catalogue). The deadline for applications is March 1, 2014.

Private donations to the fund can be accepted, but are not solicited by Oregon OSHA. Please make checks payable to "DCBS Workers' Memorial Scholarship Account" and mail your donation to Oregon OSHA, c/o Melanie Mesaros, P.O. Box 14480, Salem, OR 97309.

Scholarship recipients in 2011

'Lifesaving' acts honored at Southern Oregon Conference

More than 300 people attended the Southern Oregon Safety and Health Conference Oct. 16-17, 2013, in Medford.

State Sen. Alan Bates and the American Society of Safety Engineers (ASSE) – Southern chapter, honored the following with Lifesaving awards:

City of Medford Public Works crew members Lani Sang, Nate Warner, and Ryan Clark were at work on Laurel Street when they heard a cry for help from a nearby home. A man had collapsed and the workers performed CPR until emergency responders arrived. To honor their efforts, the ASSE chapter awarded the City of Medford Public Works Department an automated external defibrillator (AED).

Greg Johnson was on a routine bike ride on South Stage road in August 2013 and suffered a heart attack. Dr. John Bowling of Jacksonville happened to be driving by. He stopped and performed CPR for 10 minutes to save Greg's life. In honor of Bowling's act, the ASSE chapter is donating an AED to the Mt. Ashland Ski Area. Bowling learned CPR on the ski patrol at Mt. Ashland.

Conference keynote speaker Billy Robbins also motivated the audience to engage in safety practices and reconsider decisions to cut corners.

Congratulations to the new VPP company:

- **Roseburg Forest Products — Engineered Wood Product Division, Riddle**

Q:

Are there any Oregon OSHA requirements for protecting workers from pinch points on scissor lifts?

A:

Yes. The pinch points on the elevating assemblies of scissor lifts can cause serious injuries. Oregon OSHA's rules for scissor lifts require that operators are trained to follow the lift manufacturer's operating and maintenance instructions. [See ***437-002-0074 Scissor Lifts – Self-Propelled Elevating Work Platforms***.]

When employees do service work or maintenance on a scissor lift, they must also follow lockout/tagout procedures that cover pinch-point hazards. Lockout/tagout procedures are critical, especially when maintenance work requires that the platform to be elevated. ANSI/SIA A92.6 *(**Self-Propelled Elevating Work Platforms**)* also advises that workers who do maintenance work on scissor lifts fully lower or secure the elevating assembly by blocking or cribbing it to prevent it from dropping.

Although scissor lift operators are typically working on the platform and not exposed to the pinch points, they need to be aware of their surroundings and ensure that others stay away from the lifting assembly while it is being used. Operators also must ensure the lift's audible warning devices are working and that the warning signs are legible.

GOING THE DISTANCE – Meet a leading Oregon health and safety professional

Company: Key Knife

Safety and health manager: Shawna Bergeron

Workforce: (87 overall, 63 at the Tualatin plant)

Common Hazards: Strains and sprains, machine guarding, lockout/tagout, and cuts

What is your background and safety philosophy?

I started at Key Knife in November 2002 as an operations administrative assistant and, in March 2003, I was asked to take on safety. With very little knowledge of workplace safety, I started taking free OSHA courses and building my safety network. Over the past 11 years, we have gone from finding a place for safety to fit in, to putting safety first. It is important to Key Knife that our employees go home to their families the same as when they left.

Continued on page 19

What are some of the unique health and safety challenges your employees face?

Key Knife manufactures a variety of blades used in sawmills, pulp mills, and particleboard plants around the world. One of our biggest issues is muscle pain and strains due to the differences in the height of our employees and the height of the machines.

Do you have any specific examples of how you overcame a safety and health issue in your facility?

One safety issue we overcame was lower back pain in one of our manufacturing areas. We have operators who range in height from 5-foot-6 to 6-foot-1. The machines are at a set height, forcing the shorter employees to work above shoulder height, out of their safety zone. To ensure the operators could work safely, we engineered a platform for all Blohm machine workstations. This forced the taller employees to bend over their worktables, so we engineered the worktables to be hydraulic. Now employees can adjust the table to their own personal safety zone.

Top left: Workers participate in daily stretching before starting their shift. **Bottom left**: Destiney Sos sorts parts to prepare for grinding as Bergeron looks on. **Right:** Genie lifts in the Hard Surface work unit allow employees to adjust tables to suit them.

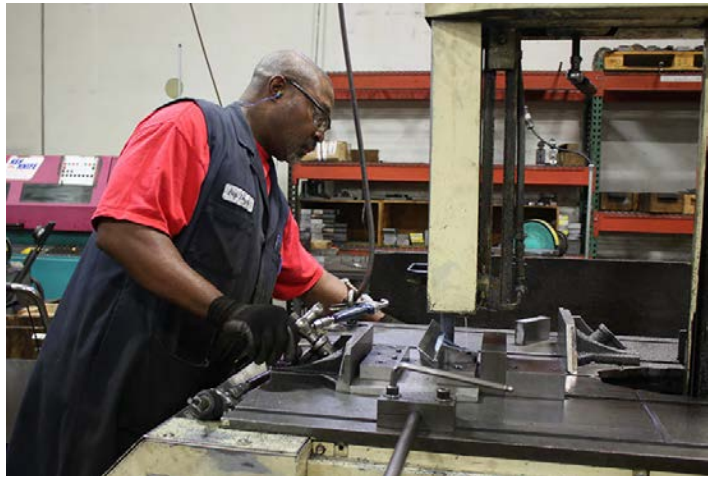
Another safety issue we overcame was elbow and shoulder pain in our Hard Surface work unit. In this area, a torch is used to put a hard coating on parts. While shooting parts, employees would sit on an adjustable chair and rest the butt of the torch on their shoulder, supporting the weight of the tip with their hand and guiding the torch with their opposite hand. The parts they were shooting sat on a two-foot-tall engineered table. One operator came up with the idea to attach a cord to the torch tip that would be hung on a horizontal rod hanging from the ceiling. This eliminated the weight on the shoulder and allows ease of movement with the tip of the torch. We then realized that while the employees were sitting to perform the work, they were resting their opposite elbow, the arm guiding the tip, on their knee. This forced them to stoop over. We removed the chairs and put down ergo mats. With them standing, the work tables were too short, so we engineered genie lifts to lift the work tables, allowing employees to adjust their work to a height within their safety zone.

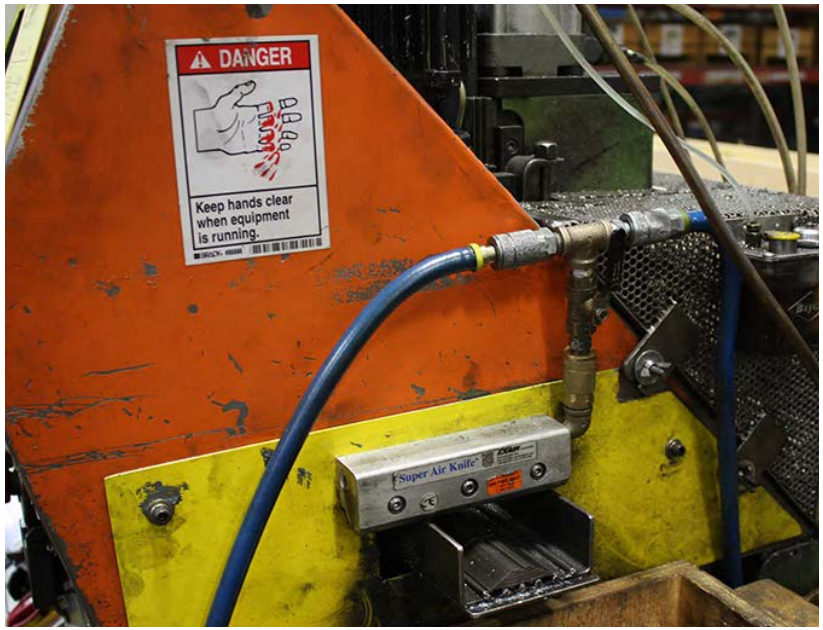
Continued on page 20

How do you keep staff engaged in safety issues day to day?

We keep our employees engaged through communication, verbal and visual. Each manufacturing shift starts the day with stretching exercises. I perform a daily walk through, monthly ergonomic assessments, and toolbox talks. We also have a lot of visual signage. To keep all employees engaged in safety concerns and solutions, we post all of our good catches, near misses, and workers' compensation claims through flyers and have a rotating list on a TV in the manufacturing area. This allows the employees to be involved in finding solutions and raises awareness that this could easily have been one of them.

Continued on page 21





Above: Custom guards were made to keep workers from reaching inside this piece of machinery. **Center:** Ryan Morgan uses an overhead crane to lift a 60-pound blade segment. **Right:** Michael Flinker pulls parts to build an assembly. **Top Right:** Cecil Smith performs his work on a table that has been lifted so he doesn't have to bend over repeatedly.

Above: James Madsen, (left), Bergeron, and Jimmy Alvarade talk about the importance of safe lifting. **Middle:** Bergeron points to the hydraulic tables that help workers prevent strains. **Right:** Michael Flinker serves on the safety committee with Bergeron and helps tackle ergonomic issues on the shop floor.

What advice do you have for other safety and health managers hoping to make a difference?

I truly believe that by building communication and relationships with the employees, they will come to understand that you care about them. With this relationship comes the trust needed to work as a team to identify problems and generate solutions. ■

January 2014

Construction Safety Conference • Bend

January 27 & 28, 2014

SAFETY GET PLUGGED IN

Continuing education credits available.

Keynote: Eric Giguere – The Buried Truth Uncovered

"Working in a trench, I crouched down near the pipe our crew had been laying. Without warning the sides collapsed..." Eric shares his story of a near-death accident of being buried alive while on the job.

www.safetyawarenesssolutions.com

13th Annual Mid-Oregon Construction Safety Summit

Join us for training designed for residential, commercial, and industrial construction workers.

Topics include:

- PPE Evaluation and Assessment
- Electrical Safety (NFPA 70E)
- Confined Space
- Excavation Safety
- Power Line Safety
- Mobile Apps for Safety
- Crane Best Practices
- Safety and Health Management
- Rigging Best Practices
- Trench Rescue
- JHA/Task Planning
- Safety and the Supervisor
- Fall Prevention and Protection
- Scaffolding
- Hazard Communication (GHS)

***New!* Pre-Conference Workshops**

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- Forklift Train-the-Trainer
- Basic Rigging
- Work Zone Safety/Flagging Course
- Photovoltaic Design and Best Practices

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Restration open in December!

www.regonline.com/construction_summit14

www.cosha.org

April 2014

16th Biennial

CASCADE Occupational Safety & Health Conference

April 2 & 3, 2014

Keynote:

Corrie Pitzer

Founder and CEO, SAFEmap International

Drifting into Disaster… Why "Safe" Organizations Fail

Topics include:

- Emergency and Disaster Preparedness
- Revive Your Hazard Communication Program
- Safety Committee Basics
- Electrical Safety
- Ergonomics: Next Steps
- Wellness Programs
- Team Building and Leadership
- Confined Space
- Fatigue Management
- Safety Training Tips

LEARN ADAPT CHANGE

SAFETY EVOLVES

Watch for registration information in January 2014

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www.orosha.org or www.cascade.asse.org

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