

WorkSafe

Tools for building safer workplaces | worksafemagazine.com | September / October 2016



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still a significant issue p7

Be prepared for winter driving
season p13

Recognizing the sacrifice of B.C.'s
fishing industry pioneers p25



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While claims for injuries due to falls from elevation have been halved since regulations were introduced, falls from heights remain a top safety concern.

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— This theatre troupe needs to learn how to act safe.

On the front cover: Safety officer Jeremy Berlinger of Coastal Craft Welded Aluminum Boats Ltd. demonstrates a guardrailing system to WorkSafeBC occupational safety officer Mark Benoit.

Investing in fall protection

In the past twenty years, the number of serious injury claims for falls from heights has gone down by 47 percent. This was made possible by the employers, associations, suppliers, manufacturers, unions, and workers who embraced fall protection and helped refine it.

Manufacturers that integrated the regulations into their fall protection equipment made significant advancements in fall protection that continue to save lives. In our Work Science article (page 21), researchers are delving even further into the performance of that fall arrest equipment in everyday scenarios.

In our cover story (page 7), we look at the history of fall protection, and tell the story of an employer who did a complete turnaround. Once cited for not meeting fall protection regulations this business is now committed to installing protective railings that keep their worker's safe. Their investment in fall protection scaffolding and hand railings to protect their workers from injuries is an investment into the future of their employee's lives.

Although falls from heights have decreased overall, they continue to remain a significant source of injury in B.C. As our cover story shows, these injuries are not just from falls from over 3 metres, but include falls from ladders, and other work situations where a fall onto a hard surface can cause serious injury. For more information on protecting yourself and your workers from falls from heights, search for fall protection on worksafebc.com.



Terence Little
Editor-in-chief

WorkSafe

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Contributors



Gord Woodward

Nanaimo-based writer Gord Woodward discovers the dangers of falling from ladders (page 7) in our cover story and delves into ergonomics in this edition's Ask an Officer (page 5).



Lucy Hyslop

Overtaking and driving into a snowplow is just one of the dangers Vancouver writer Lucy Hyslop learned about in our Safety Spotlight on winter driving (page 13).



Susan Kerschbaumer

Victoria-based writer Susan Kerschbaumer covers a WorkSafe Update on a new video honouring the sacrifice of B.C.'s fishermen (page 25).



Lynn Easton

Lynn Easton from Maple Ridge, interviews motivational speaker Shane Jensen on how we can all become better communicators in a multi-generational workforce (page 28).

Ask an Officer

Ergonomics reduce the risk of musculoskeletal injuries



Carol-Anne Boufford Senior regional officer, Prevention Field Services

Region: Surrey
Years on the job: 22

In honour of Global Ergonomics Month, this October, we talked with Carol-Anne Boufford, senior regional officer from our Prevention Field Services team, about applying ergonomics in your workplace.

Q. What is ergonomics, and why is it so important?

A. Ergonomics is an applied science that uses a systems approach to designing and fitting a work environment to a worker instead of trying to fit a worker to a work environment. A work environment includes your workstation layout, temperature, vibration, tools, equipment, and work organization or pace. Ergonomics reduces the risk of a musculoskeletal injury (MSI) in the workplace, prevents workplace incidents, and maximizes productivity.

Q. What is an MSI and how does it affect people?

A. An MSI is an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels, or related soft tissue that may be caused or aggravated by work. Sprains, strains, and inflammation are MSIs; a back strain from over-exertion is a common example. Repetitive motion injuries like carpal tunnel syndrome are also MSIs.

These injuries can cause you to miss time from work and affect your quality of life. If you have an injured shoulder, for example, it could

“Ergonomic changes can be made in your workplace at little or no cost, by making the work environment more comfortable for the worker.”

—Carol-Anne Boufford, WorkSafeBC senior regional officer

affect your ability to engage in your favourite hobbies or lift and hug your children.

Q. Is ergonomics only for certain industries?

- A. No. It doesn't matter what industry you're in. All employers need to do an ergonomic risk assessment and educate their workers about the risks of injury. Ergonomic risk factors include:
- Repetitive motion involving the same muscle groups throughout the workday with little chance for rest or recovery
 - Working in awkward postures such as reaching or bending, or stationary positions, such as standing for long periods of time
 - Lifting, carrying, pushing, or pulling heavy or awkward items
 - Exerting force on an object

Q. I don't know much about ergonomics. Where do I start?

- A. Download our two key booklets, *Preventing Musculoskeletal Injury (MSI): A Guide for Employers and Joint Committees* and *Understanding the Risks of MSI: An Educational Guide for workers on sprains, strains, and other MSIs* at worksafebc.com. These booklets lay out a seven-step MSI prevention process that includes consultation, education, risk identification, risk assessment, risk control, training, and evaluation. The booklet also gives you some common risk control options, and a chart that can be used to investigate MSIs.

Q. How can ergonomics provide a return on my business investment?

- A. First off, it's important to know that many ergonomic changes can be made in your workplace at little or no cost, by making the work environment more comfortable for the worker. Eliminating heavy lifting, for example, can

sometimes be as straightforward as using the pallet jack that's already in your workplace, rather than having a worker do manual lifting.

You may incur expense to adapt tasks, workstations, tools, or equipment, but keep in mind that reducing the physical stress on a worker's body may reduce the risk of MSI, which is the biggest driver of employer assessment premiums. Last year in B.C., MSIs accounted for approximately one-third of all claims, and one-quarter of all claims costs.

There are hidden costs for the employer when a worker has to take time off with an MSI. Productivity suffers, and you may have to spend money to replace the worker or train someone else to do the job. Using ergonomics can help you avoid those costs and improve productivity.

Q. As a worker, how can I reduce my risk of an MSI?

- A. Understand the signs and symptoms that could indicate an MSI and report to first aid or your supervisor before it becomes an injury that requires medical attention or lost time. Once reported, your employer is required to investigate and take corrective action. You can find practical information in our booklet *Understanding the Risks of Musculoskeletal Injury (MSI): An Educational Guide for Workers on Sprains, Strains, and Other MSIs* on worksafebc.com.

You should also be aware that non-prescribed wrist braces and back belts may not prevent injury and could in fact actually aggravate the injury, by making you think you can continue carrying out work tasks safely. You can find more information on wrist braces and back belts by searching for those terms on worksafebc.com.

Looking for answers to your specific health and safety questions? Send them to us at worksafemagazine@worksafebc.com and we'll consider them for our next Ask an Officer feature. ☺

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WorkSafeBC occupational safety officer Mark Benoit and Coastal Craft safety officer Jeremy Berlinger survey the final stages of a boat build. While the worksite materials on the ground are integral to the job, those working above would be in danger of falling onto them without the guardrails.

Keeping workers protected from falls at any elevation

By Gord Woodward

Boat building may not be the first industry you think of when you think of workers who need fall protection, but it is one of the many industries that needs to protect its workers from the hazard of injury from falling from heights both above and below 3 metres.

Coastal Craft Welded Aluminum Boats Ltd., is a small boat building firm just off the Sunshine Coast Highway in Gibsons. Owner Jeff Rhodes swears by the fall protection regulations, which help ensure the safety of his tradespeople as they weld, paint, and install cabinetry all while being as much as 6 metres off the floor. According to Rhodes, the regulations are helping to protect his business. “One fall-related accident that causes serious injury or death could be the demise of your company, both financially and culturally,” he says.

The fall protection regulations we have today were first introduced by WorkSafeBC in 1996, and were the first comprehensive fall protection regulations in Canada. In the two decades since, injuries due to falls from elevation have been cut nearly in half, across all industries from construction to manufacturing.

In the past year, the company introduced a new fall protection plan designed to cover the different kinds of dangers that arise from the unique work that they do. The new plan has helped worker morale, says Jeremy Berlinger, the firm’s safety officer. “It’s definitely given people a feeling of more assurance and comfort” while working on the boats. “In some cases it’s made it easier to work.”

Mark Benoit, a WorkSafeBC occupational safety officer whose region includes the Sunshine Coast, praises Coastal Craft’s commitment to improve its procedures. “They’ve changed the way they do business,” he says. “They took safety to heart.”

Addressing the risk of injury 1.2 metres off the ground

In an interesting twist, the transformation began when the company was cited for not being in compliance with safety regulations. Among the problems was fall protection.

“We were kind of stunned by that,” Berlinger recalls of the order issued by WorkSafeBC in 2015. “We weren’t aware that we weren’t complying.”

Coastal Craft thought it had been following the Occupational Health and Safety Regulation, which begins by stating that a fall protection system is required for work done anywhere in which a fall of 3 metres or more may occur. Since much of the boat building work happens about 1.2 metres off the ground, Rhodes and his team didn’t see fall protection as a concern.

But the company made an assumption that many other firms have made, explains Benoit. “A lot of people read the first line of the Regulation and that’s as far as they go. “The next lines in that section spell out additional requirements for fall protection. It’s needed if a fall from any height — even those less than 3 metres — could result in serious injury.”

There is also a hierarchy of fall protection choices available. Employers may not automatically revert to the use of fall protection harnesses if guardrails are a reasonably practicable alternative.

That scenario applied to Coastal Craft. And once the problem was pointed out, Rhodes took action. “He wanted it fixed and he wanted it fixed now,” says Berlinger.

The “fix” cost about \$40,000, and included engineering controls such as scaffolding, and hand railings specifically designed and made in the firm’s fabrication shop. Boats in construction are kept as

“Everyone now knows that the first thing they do when a boat moves into their area is to get a railing on it.”

—Jeremy Berlinger, safety officer for Coastal Craft



Coastal Craft painter's assistant, Nante Del Rosario, safely sands the top deck with the new guardrails installed.

low to the ground as possible. A safety consultant was hired to suggest improvements, Berlinger spent countless hours researching safety gear and processes — each of the three areas of the plant required its own application of fall protection procedures — and all staff were properly trained.

“Everyone now knows that the first thing they do when a boat moves into their area, is to get a railing on it,” Berlinger says with satisfaction. “Everybody’s bought in. They know what needs to be done and they know how to do it.”

Safety gear “second nature” for workers

Coastal Craft’s commitment to protecting workers is part of a larger trend that’s two decades old.

In 1996, WorkSafeBC introduced the country’s first comprehensive regulations designed to protect workers from falling from heights. Before then, fall protection rules weren’t specific and only talked about falls from heights over 3 metres. The new rules were a dramatic change, says Al Johnson, vice-president, Prevention Services for WorkSafeBC. “The general regulations became more comprehensive and somewhat prescriptive.”

The rules changed workplace behaviours, leading to a 47 percent decrease in claims due to falls from elevation over the last two decades, and cutting the rate of those types of claims — measured per 100 workers — by nearly two-thirds.

In the 20 years since the legislation was introduced, the safety attitude and outlook surrounding fall protection

has changed for the better, says Johnson. Like the workers at Coastal Craft who have made maintaining a railing around the boats they're building a regular part of their process, workers in other industries have also made fall protection just another necessary part of their work.

"Attitudes have changed," says Johnson. "There's a greater understanding of the dangers, and awareness of the need to wear a harness."

Dale MacDonald, a WorkSafeBC occupational safety officer, sees this shift in workplace culture every day as he inspects high-risk construction sites. For workers, "using fall protection gear has become second nature," he says.

Not only are they wearing it while on the job, but many also keep it on even when they're taking breaks. "You wouldn't have seen that 20 years ago."

Progress from manufacturers

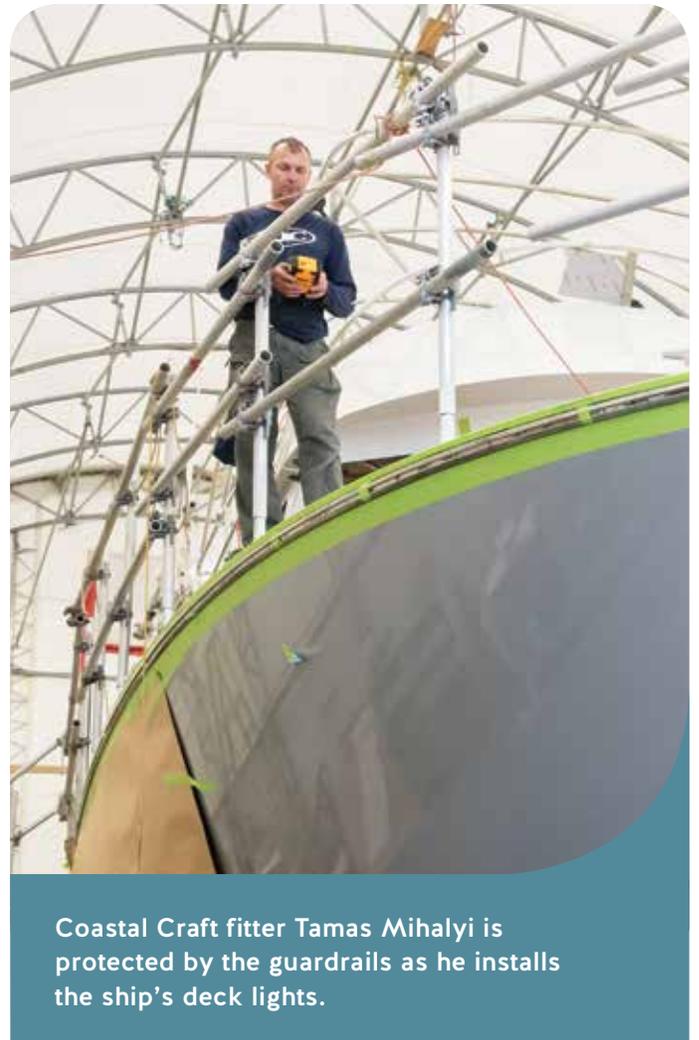
When the fall protection regulations came into effect, they inspired manufacturers of safety gear to make major improvements in fall restraint and fall suppression equipment, says Ken Boucher, a former WorkSafeBC employee who helped craft the regulations that took effect May 1, 1996.

"The technology was extremely primitive" in the early 1990s, says Boucher, now the vice-president of Health, Safety and Environmental Protection for Ledcor Construction Limited. Fall restraint harnesses weren't even invented.

Today's gear is lighter, more comfortable, and ergonomically friendly. It's also effective. Just ask the worker on the Olympic Village construction site in Vancouver who, a few years ago, fell off a stepladder while hundreds of feet above ground. He tumbled over the edge of a balcony but "his fall protection caught him right away," MacDonald says. "It saved his life."

Johnson proudly acknowledges the impact WorkSafeBC's regulations have had on elevated workplaces but is quick to point out that reducing injuries depends on the efforts of many people. "It's really been a joint effort between labour, employers, and WorkSafeBC over the years."

"The young people understand the hazard. They've grown up with the messages about safety," says MacDonald. Getting through to workers is a matter of training and supervision, he adds. "If you train people properly it becomes part of their culture."



Coastal Craft fitter Tamas Mihalyi is protected by the guardrails as he installs the ship's deck lights.

That's exactly what has happened at Coastal Craft. Owner Rhodes says the investment in creating the safety-oriented culture that now permeates his plant will pay off by preventing injuries. "I do know that injured workers result in direct costs to the company and lower morale in the workplace that also results in lower productivity."

Today's focus is on ladder safety

Despite the progress, there's still work to do. Falls from elevated workplaces continue to cause a significant number of serious injuries and deaths.

"Falls from elevation continue to be a primary focus for us in 2016," says Johnson. "Ladders are the most significant issue."

In fact, improper use of ladders and stepladders remains one of the leading causes of injuries to B.C. construction workers. The statistics tell a grim story: Between 2012 and 2014, falls from ladders injured

“Attitudes have changed. There’s a greater understanding of the dangers, and awareness of the need to wear a harness.”

—Al Johnson, WorkSafeBC vice-president of Prevention Services

or killed 1,005 construction workers — an average of nearly one person per day.

In addition to the human cost, those falls bring a financial one as well, accounting for 35 percent of all claim costs. With that in mind, WorkSafeBC’s high-risk strategy for the construction sector aims to slash the rate of injuries caused by ladders.

To help all employers protect their workers at elevations, WorkSafeBC has launched programs and initiatives under its high-risk construction strategy that include:

- Inspections targeting sectors that make extensive use of ladders as a work platform

- Education (a variety of free materials are available at worksafebc.com)
- Outreach (WorkSafeBC staff speak at many conferences and seminars)
- Consultations with industry and other stakeholders
- Enforcement

No matter how it is delivered, the message will always be that the proper use of fall protection equipment — in addition to planning, supervision, and training — can reduce or eliminate the risk of death or serious injury. ☺



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Resources to protect people who work at elevations

Do your employees or contractors work at elevations, especially on ladders?

If so, here are some free resources that can help you maintain an effective fall-protection plan. You can find them by searching on worksafebc.com:

- Section 11 of the Occupational Health and Safety Regulation
- *An Introduction to Personal Fall Protection Equipment*, a booklet explaining the safe use and limitations of safety belts, harnesses, lanyards, and lifelines
- The 2.5-minute video *Fall Protection Can Save Your Life*, a quick guide to the need for fall protection and the dangers of going without it
- The *Written Site-Specific Fall Protection Plan* tool box meeting guide, listing key elements that should be included in your safety plan



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WorkSafeBC industry specialist Kevin Bennett keeps a careful eye on the changing conditions of a snowy drive.

Bracing for winter

By Lucy Hyslop

From the extremes of massive snowdrifts on mountain passes to rain, snow, fog banks, fewer daylight hours, and the threat of black ice lurking under the wheel, B.C. is almost guaranteed to whip up adverse weather conditions to challenge most journeys.

From fall to early winter, B.C. sees an alarming spike in the number of motor vehicle incidents. The common cause? Driving too fast for road conditions. On average, the number of incidents nearly doubled across the province between October and December during 2010–2014 (from 114 to 222). Breaking that down by region, according to ICBC, the Southern Interior's

numbers rose fourfold from about 23 to 93; the Lower Mainland's increased from 51 to 59; Northern Central's, from 18 to 44; and Vancouver Island's went from about 22 to 26.

For commercial drivers and road maintenance workers, trying to prevent winter crashes begins before they hit the road. Drivers need to ensure that their vehicles are geared up correctly for this type of changeable weather and that they are physically and mentally prepared before they head off.

"People have crashes because all it takes is a little bit of an oversight or overestimation not only of one's abilities, perhaps, but also because they think the road is better than it is," explains Rick Viventi, director of

“Road maintenance plow operators are performing an important public service — at all hours — to keep highways open and safe for travel. Passing a plow puts you and the workers operating these vehicles at risk of a preventable and potentially serious crash. Drivers should stay about 10 car lengths behind a plow.”

—Kevin Bennett, WorkSafeBC transportation industry specialist

health, safety, and environment for Kamloops-based Arrow Transportation Systems, which has 1,000 employees and 400 trucks hauling goods across North America. “Before you know it you’re off the road and you’ve hurt yourself or someone else. People must consider what could happen or you’re not going to behave according to the conditions.”

Viventi advises that, for all drivers, taking their foot off the accelerator is critically important. “People must slow down,” he stresses. “Regardless of what you are driving, you have to be smooth, methodical, and purposeful when steering and braking.”

Employers also have a role to play in road safety before their workers get out on the road, notes WorkSafeBC transportation industry specialist Kevin Bennett. If you supervise workers who drive a commercial truck, work van, or personal vehicle, says Bennett, ask yourself these questions, “Have you taken steps to ensure their safety, especially during the B.C. winter driving season? Are your workers familiar with the company driving policy, written safe work procedures, and working alone protocols? Have they received education and training on how to respond to winter driving conditions? Have they received guidance to check conditions before they travel?” Taking the time to address these issues before heading out on the road leaves workers better prepared for the variable conditions they may face.

The perils of overtaking snowplows

Road maintenance adds another element to the winter landscape. Despite the “Do Not Pass” warnings and flashing amber lights on plows (usually travelling at 60km/h), some drivers frequently overtake these vehicles and end up clipping the wing that can stick out two metres on either side of the plow.

“It’s insane to overtake a plow,” says Blair Barr, general manager of VSA Highway Maintenance Ltd. in Merritt. He cites “an unprecedented” 11 crashes in 2015 among

the 30 trucks the company runs on B.C. roads, including the Coquihalla Highway. “Sometimes you can’t see those attachments in the cloud of snow and in many cases drivers end up pushing us into the ditch and causing damage to themselves.”

Plows now often work in tandem to effectively block the road and prevent these types of manoeuvres. They typically pull over to allow traffic to pass every 10–15 kilometres. Kevin Bennett, points out that there needs to be patience for the workers who make roads safer for other users.

“Road maintenance plow operators are performing an important public service — at all hours — to keep highways open and safe for travel. Passing a plow puts you and the workers operating these vehicles at risk of a preventable and potentially serious crash.” Bennett adds, “Drivers should stay about 10 car lengths behind a plow.”

Overall, it is often the decisions made behind the wheel that get people home safely. “If you choose to make a poor decision, you can — and most times you will — get in trouble,” Viventi concludes. ☹



In winter driving conditions, you should keep a safe distance (at least four seconds) between you and other vehicles.

How employers can get winter ready

If you are an employer who requires workers to drive during winter, it's your responsibility to ensure the health and safety of those workers. Here are some tips on how you can be winter ready.

Prepare your workers

Where possible, promote alternatives to driving, such as email or videoconferencing and, where available, public transportation. When travel is necessary, follow these steps to reduce the risk of a motor vehicle incident:

- In adverse conditions, consider whether the journey can be postponed.
- Take time to plan the journey. Work out the safest time to drive, be mindful of fewer daylight hours, and identify the most suitable routes. And build in time for the likelihood of reduced speeds and delays. Have them check sites such as DriveBC (drivebc.ca) before starting their trip.
- Conditions can change quickly. Tell your workers to be alert during times when black ice can form, typically when temperatures fluctuate between +5° and -5° C. Educate your drivers to exercise caution and safely reduce speed when driving in shaded areas and on bridges and overpasses, which can freeze faster.
- Inform your drivers to follow messages posted on official fixed and digital highway signs, including the recently introduced variable speed limit signs.
- A regular posted speed limit is for ideal road conditions, so drivers have a duty to reduce their speed and drive according to the conditions. In winter, remind drivers to increase the distance between their vehicle and the vehicle in front.
- Advise your workers to be careful when driving in areas with pedestrian traffic.

- Educate your drivers to follow the “slow down move over” law when they encounter vehicles with flashing amber or blue and red lights.
- Drivers of passenger cars and light-duty trucks must share the road with commercial vehicles, which have long stopping distances. Make sure your drivers are aware of the blind spots on these large vehicles, and instruct them to give commercial vehicles extra space, and never cut in front — they should only pass in front of a large truck when they see both of its headlights in their rear-view mirror.

Prepare your vehicles

- Make sure that your work vehicles are properly inspected and maintained.
- Properly inflated winter tires (identified by a mountain/snowflake symbol on the sidewall) or mud and snow tires in good condition are required for most B.C. highways between October 1 and March 31. Tires must have a minimum tread depth of at least 3.5 mm.
- If you operate commercial vehicles, check that the trucks are equipped with tire chains that are in good working order and that the driver has been trained to safely and correctly install them.
- Give your engine a pre-winter check-up, looking at such key parts as the belts, brakes, battery, exhaust, electrical, and cooling and heating systems.
- Make sure that before your driver leaves that snow and ice have been safely removed from the lights, windows, mirrors, and flat surfaces.

For more brochures, resources, tips, and other information on winter driving, see www.shiftintowinter.ca/driving-for-work/keeping-your-workers-safe.



CONDITIONS CHANGE. SO SHOULD THEIR SPEED.

The safety of your employees is your responsibility. Help reduce the risks your workers face in hazardous road conditions by using the tool kit on ShiftIntoWinter.ca.



Be part of the solution.

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WINTER DRIVING
SAFETY ALLIANCE

In a small business like this one, sharing your safety concerns with your boss could have a huge impact on your whole team's safety culture.

Small businesses can make large safety strides

By Jesse Marchand

Keeping safe in a small business is no small matter. While small businesses are usually comprised of 20 or less employees, they still face a large number of incidents. In 2015, WorkSafeBC had over 11,000 time-loss claims for injuries from small businesses. The stats also show that the leading causes of injuries at small businesses aren't that different from the ones incurred at large ones, such as falls from heights, overexertion, being struck, or repetitive motion. Many injuries like these can be prevented by being part of a healthy safety culture.

"Incident prevention is just as important for a workplace that has five people as it is for one that has five hundred," says WorkSafeBC manager of Industry and Labour Services Glen McIntosh. "Workplaces are

healthy only when managers, supervisors, and workers all make health and safety a priority."

"The good news is that when you work for a small business, there are lots of ways that you can make a big impact on your company's safety culture," adds McIntosh.

As an employee at a small firm, here are five things you can do to make your workplace safer:

- 1 Set a good example.** A workplace is a culture and workplace culture is influenced by things like leadership and management, but it's also shaped by peer pressure and worker attitudes. In a small team, your actions can affect the whole group, so taking the time to show you care about your own personal safety can have a huge impact. Show your co-workers that you care about your personal safety and they should too, by always wearing the safety equipment required by your industry. We aren't always careful when we think the work will just take a second, but it only takes a second for an incident to happen.

2 Speak up. If you've developed a safe way of doing something, don't keep it to yourself. Share it with your co-workers and your boss. See something that doesn't seem right? As a worker, it's your responsibility to speak up if you see something unsafe. In a small team, your boss might seem too busy to approach, but think of it this way, it's worth it to speak up if it means saving someone from getting hurt. Still hesitant? You don't have to do it alone. Consult your co-workers, and go forth as a unified team.

3 Know your tools. Good training is the key to using tools correctly. But even with training, you may find you still have questions or concerns about the tools you need to use. If you work in an industry with machines that require regular maintenance, ask yourself: Do I know everything I should about this machine? Am I familiar with its lockout procedures? Do I know how often it needs maintenance? And if I am required to clean it, do I know how to do that safely? If the answer to any of these questions is no, speak up. Sometimes the fear of looking

inexperienced can prevent us from asking questions, but you'll be setting a better example of being safety conscious if you can show that having all the facts before you start is important to you. You never know who else may be questioning the same things.

4 Leave the phone alone. For many young workers, constantly checking their phones has become second nature. But ask yourself, is that text worth your life or someone else's? Your workplace may not have guidelines about phone use in place, but that doesn't mean it should be a free-for-all. We all know that when we're busy looking at our phones, we're not paying attention to our surroundings. If you're using your phone while driving, walking, or working on a busy worksite, you're distracted, which means you could miss something big that you can't undo, unlike that text you just drafted.

5 Refuse unsafe work. Remember that under the *Workers Compensation Act*, you have the right to refuse any work that's unsafe.

For more information on small business safety, visit worksafebc.com/for-employers/small-businesses. ☺



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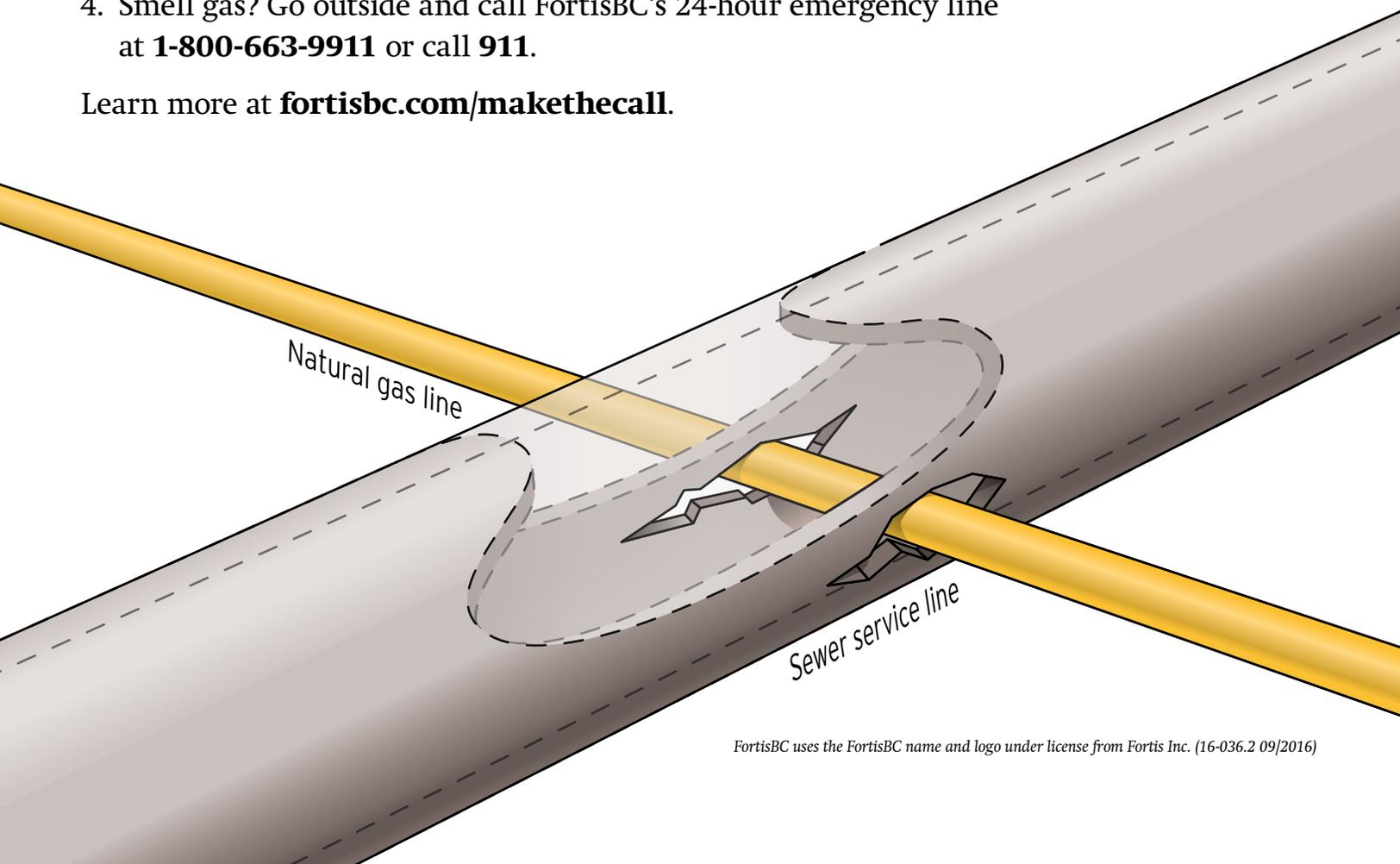
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What's wrong: you tell us



Winner

Projectiles a danger in messy car

The winner of the July/August “What’s wrong with this photo?” contest is Doug Campbell, the Woodlands safety coordinator for Gorman Bros. Lumber Ltd.

The driver

- He is not using the sun visor and the sun is affecting his vision
- He’s using a handheld device while driving
- He’s eating while driving
- He has bad posture/ergonomics
- He seems to be reading while driving
- He is not wearing his seatbelt

- He is driving with one hand
- He is not paying attention/looking at the road
- He has not adjusted the headrest to the proper height

The car

- The item on the dashboard is reflecting off the windshield, affecting his vision
- There’s an open hot beverage
- The mobile device is improperly setup
- There’s clutter, creating an untidy workspace/cab
- There are projectiles if an accident happens
- The rearview mirror is not adjusted properly ☹️

Using fall-arrest equipment correctly is integral to safety. A shock-absorbing lanyard improperly rubbing against a sharp edge, could cause “catastrophic failure” according to recent research.

Extreme heat and sharp-edge contact a concern for fall-arrest systems

By Gail Johnson

Reliable fall-arrest systems are critical safety equipment for workers at risk. Falls from heights continue to be the major factor in worker deaths in general construction and are some of the most frequent and costly incidents in B.C. workplaces. New research supported by WorkSafeBC looks into how the reliability of fall-arrest systems could be affected by various environmental and workplace factors like dirt, heat, UV light, and cuts.

Carolyn Sparrey, associate professor in the field of Mechatronic Systems Engineering at Simon Fraser University, set out to study the effects of various exposures on the performance of fall-arrest systems, with funding through an Innovation at Work research grant from WorkSafeBC.

Manufacturers are required to make fall protection systems that meet the standards set out by the Canadian Standards Association (CSA) or the American

National Standards Institute (ANSI). While they do of course test their lanyards and harnesses for compliance and the effects of wear and tear, they often don't publicly publish their results, and very little independent research has been done. Sparrey and her team wanted to perform independent analysis on how fall equipment was affected by work-related wear or damage, or the effects of contact with a sharp or rounded edge.

“We know falls are one of the most common causes of workplace injury,” says Sparrey. “I realized research in this area could inspire better design of fall arrest systems and better outcomes for workers.”

Putting fall protection to the test

Sparrey's team tested several styles of shock-absorbing lanyards in dynamic drop tests to determine the effects of environmental exposure, tool damage, and contact with rough and sharp edges on fall arrest dynamics.

It was a collaborative project. They tested the lanyards in a CSA-compliant drop test facility, built for this study, at the Steel Trades program at the British Columbia

“We know falls are one of the most common causes of workplace injury. I realized research in this area could inspire better design of fall arrest systems and better outcomes for workers.”

—Dr. Carolyn Sparrey, associate professor in Mechatronic Systems Engineering at Simon Fraser University

Institute of Technology (BCIT), in collaboration with JADE Engineers Inc, a consulting engineering company. Ironworker students also helped with the testing, giving them a unique view into what can go terribly wrong if any piece of safety equipment is compromised.

The researchers found that exposure to environmental factors such as dirt and debris contamination, tool cuts, or contact with a rounded edge did not significantly affect the fall arrest dynamics of energy-absorbing equipment.

Even on brand-new equipment, high temperature tool damage and contact with sharp edges were found to negatively impact the strength and energy-absorbing capabilities of shock-absorbing lanyards to a large degree. In fact, these factors resulted in “catastrophic failures” of several lanyards during testing, says Sparrey.

Consider the effects of high temperatures resulting from a plasma torch or a cutting tool being used near a lanyard, for instance.

“In one case, it baked the lanyard and melted it,” Sparrey says, noting that damage anywhere along the length of a bungee-style lanyard could compromise the functionality of the energy-absorbing mechanism even when the external webbing is intact. “Some of them just had one spot along the whole length affected by high temperature and the rest of the length looked beautiful, but that is still risking failure.”

Sharp-edge contact also proved problematic. As a lanyard goes over such a surface, friction can wear down the webbing. Occupational Health and Safety (OHS) guidelines, as well as manufacturer specifications, require that fall equipment be examined thoroughly before use, but the effects of certain kinds of wear on a lanyard’s performance aren’t necessarily apparent to the naked eye, according to the researchers.

Bungee-style lanyards were more likely to fail from edge contact because of the distributed nature of the energy absorber, which also made them susceptible to localized tool damage. The preliminary findings of Sparrey’s research suggest that using these types of lanyards might not be advisable in workplaces where welding, plasma torch, tool damage, or sharp edge contact may occur. OHS guidelines currently support this finding, as the regulation stipulates that when a tool is being used that could sever or burn fall protection, the lanyard, safety strap or lifeline should be made of wire rope.

Securing workers’ safety

While the need for fall protection systems is well-established, the study highlights the need for further study of how fall-protection systems work in real-world situations.

“We have little information regarding fall-protection systems and how those systems and their components will work in real world scenarios, specifically in situations where significant environmental hazards like heat, sparks, sharp edges, and UV radiation are present,” says Mike McKoryk, chief instructor of Steel Trades at BCIT, of the lack of independent study in this field. “More work needs to be done to evaluate how fall protection components perform in conjunction with each other and in situations where more than just the hazard of a fall is present.

“This information would then be used to better educate workers and industry on how to integrate fall protection systems with the intent to establish holistic best practices for systems in the field,” he says.

The research also had an impact on the workers of tomorrow. The BCIT ironworker students will, after graduation, find themselves working high above the ground, on buildings and bridges. Being involved in the

testing gave them a rare glimpse into the importance of fall protection and the reason workplace-safety research matters. “The transfer of knowledge that occurs by working alongside ironworkers is even better than I could have hoped,” says Sparrey. “They ask great questions based on their experience that will inform the next stages of this research.”

“This innovative study went beyond testing fall-arrest systems,” says Lori Guiton, WorkSafeBC director of Research Services. “Because ironworking students at BCIT had an opportunity to contribute to the project, they got to learn about the research process and help to shape future stages of the work. Dr. Sparrey’s research could also lead to enhancements in the design of fall-arrest systems, ultimately keeping workers in dangerous professions like construction and ironwork a lot safer on the job.” ☺

“More work needs to be done to evaluate how fall protection components perform in conjunction with each other and in situations where more than just the hazard of a fall is present.”

—Mike McKoryk, chief instructor of Steel Trades at BCIT



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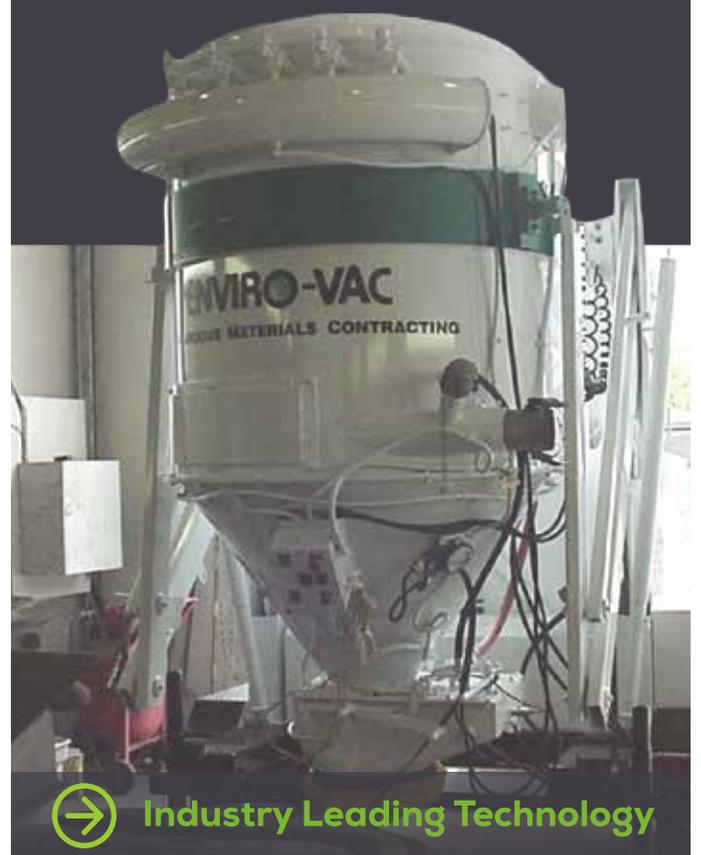
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Historical photos in a heritage video give a window into what life used to be like for commercial fishermen.

Fishing heritage video honours those who shaped B.C. fishing industry

By Susan Kerschbaumer

A new video by WorkSafeBC in partnership with the BC Labour Heritage Centre tells the health and safety story of B.C.'s commercial fishing industry, from its beginnings more than a century ago to today. The 13-minute video is the eighth in a series that tells the stories of the working men and women who shaped B.C. industry.

"We took a chance to cross Hecate Strait," remembers former commercial fisherman Nick Carr, of a stormy day in 1975. "By the time you got halfway across, you took a hell of a beating. There was another boat behind us and they were buried under a swell," he says. "Seven men got lost ... there's nothing you can do about it."

Carr was drawn into life as a commercial fisherman early on. "I took a week off from school," he says of his first enticing days at sea in 1946. "We had a good catch. I got \$350 for the five days." He continued in the career until 2000, but he admits that it wasn't

an easy life: "It was risky all the time — and anything could happen."

Recognizing the sacrifice

In honour of fishermen like Carr, the new video points to the importance of recognizing the history of these pioneers. "Commercial fishing, along with forestry and agriculture, has been the historic heart and soul of B.C. industry," says Scott McCloy, WorkSafeBC's director of government, community, and media relations. "It's important that the sacrifice of these men and women is recognized and honoured."

For many years, "safety was not really on the radar," says Bruce Logan, a 35-year veteran of the commercial fishing industry and now an occupational safety officer for WorkSafeBC. "You went out there and you hoped that you'd come back with some money in your pocket. And you learned the hazards one by one." Despite the risk, he loved his work. "I used to think when I was out on the boat on a good day and we were making money that we had the best job that you could ever possibly imagine in British Columbia. It was that good then."

**“It was risky all the time —
and anything could happen.”**

— **Nick Carr**, commercial fisherman,
active 1946–2000

Gina McKay, retired program manager of Fish Safe, grew up in a fishing family and was herself a commercial fisherman for 30 years. She describes the history of fishing safety in B.C. as “reactionary.” “We would suffer a loss or bad accident; regulators would regulate, fishermen would mourn and, for the most part, they would accept that accidents and loss were a part of fishing life.” McKay lost her own father in a fishing expedition in 1975.

Fourteen deaths in 2 months

McKay’s father was not the only casualty that year. In 1972, a new and lucrative roe herring fishery had opened, making things more competitive — and more hazardous. By 1975, the issue had come to a head, and the deaths of 14 fishermen in just two months that year led to a push to enact legislation and other changes, that since that time have led to major improvements

in health and safety for B.C.’s fishermen. Over time, independent fishermen also became recognized under B.C.’s *Workers Compensation Act* as a result of ongoing activism from B.C.’s labour movement, most specifically the United Fishermen and Allied Workers’ Union.

Working people, acting together

The fishing safety video “demonstrates how the determination of working people acting together can lead to safer, healthier working conditions,” says Kenneth Novakowski, chair of the BC Labour Heritage Centre. In 2004, fishermen further exemplified this determination with the creation of the FishSafe program. Created by fishermen for fishermen, Fish Safe provides a host of resources and training on what it means to fish safely today.

Thankfully and with the hard work of many people and organizations, says McCloy, “the industry today is far safer than it was 20, 30, 40 years ago, but we must all remain focused. Safety is a journey that never ends.”

In terms of fishing safety today, we’ve just “scratched the surface,” says McKay. “Hopefully one day everyone will come home safely.” ☺



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Shane Jensen of New Quest Consulting gives examples of communication styles at the WorkSafeBC Prevention Field Services Conference.



Generating Communication

By Lynn Easton

Take a look around any office or jobsite these days and you'll see people of all ages working side by side — and that's a healthy thing, says leadership consultant Shane Jensen of New Quest Consulting and Coaching.

"This is a perfect opportunity for baby boomers to embrace the idea of coaching younger workers," he says. Demographics are changing quickly. These young employees — known as millennials — now make up 37 percent of Canada's workforce, and are the fastest growing pool of workers in the country.

As knowledgeable baby boomers begin to retire, these new workers must be taught the ropes to ensure safe, efficient, and healthy jobsites in the future. But how do older workers connect with millennials who may be more than half their age?

"Leaders need to create a two-way dialogue," Jensen says. "It's all about trust." While older employers and

supervisors are eager to pass on their knowledge, he urges them to use soft skills such as listening and encouragement. Starting a dialogue about technology can also help.

Unfamiliar communication styles can be challenging to incorporate, but Jensen warns against divisive generational stereotypes that can cause friction in the workplace. "Every generation has had a bad rap," he says. "We need to suspend our preconceived notions to create a positive work environment."

However, there are a few unique traits that can help people understand communication styles used by co-workers of different generations. Baby boomers, born between 1946–1964, were once maligned as lazy hippies, says Jensen. Now, they are workplace leaders. They often prefer to talk on the phone, or in person, and want to pass on their extensive knowledge.

Generation Xers, born from approximately 1965–1978, were once accused of being slackers, but are now seasoned workers who like to get straight to the point, and favour the efficiency of email.

“Every generation has had a bad rap. We need to suspend our preconceived notions to create a positive work environment.”

—Shane Jensen, leadership consultant of
New Quest Consulting and Coaching

Millennials, born from about 1979–2002, are at ease with evolving technology media and prefer texting to talking. These employees often turn to Google or YouTube instead of co-workers to learn new skills. While they’re often criticized for their reliance on technology, this can also sometimes lead to improved safety and efficiency.

He points to the example of a young worker texting his supervisor who was sitting right beside him in a car. When his supervisor chastised him, the young worker explained that he believed it was safer to text a non-urgent reminder message instead of distracting his boss while driving.

“This is the new reality,” Jensen says. “It makes sense.”

Millennials can help create a healthy work environment by sharing their tech savvy but employers must have the final word on which type of communication is most safe and efficient for their organization. Young workers should use traditional email, phone, and in-person communication when necessary, Jensen adds.

Baby boomers can continue to impart important knowledge these new workers can’t find online — they just need to ask millennials what kind of support they need to succeed. “Baby boomers want to download their tremendous amount of knowledge,” Jensen says. “That’s why it’s important to embrace their coaching role.”

His message of creating a healthy multi-generational work place is catching on. His workshops were the highest rated sessions at a recent WorkSafeBC prevention field service convention.

“The approach resonated very well,” says WorkSafeBC manager of Field Prevention Services Colin Duong, who helped organize the conference. The message is timely as demographics begin to change rapidly, he said. “The challenge is already here.” ☺

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Construction

0805760 B.C. Ltd. / Haztec Environmental Consulting | \$2,000 | Vancouver | April 11, 2016

This firm conducted a hazardous materials survey on a house due for demolition. WorkSafeBC inspected the site and found deficiencies with the survey. For example, the firm did not collect sufficient representative samples of many potentially asbestos-containing materials (ACMs); the firm misidentified ACMs as not requiring asbestos abatement; and for several samples the firm did collect, it did not adequately identify their location. The firm also failed to include the approximate quantity of identified hazardous materials. Overall, the firm failed repeatedly to have a qualified person inspect the worksite, collect representative samples, and produce a written hazardous materials survey according to the requirements of the Occupational Health and Safety Regulation.

0945295 B.C. Ltd. / Wesbuilt Construction | \$4,898.23 | Kamloops | April 12, 2016

WorkSafeBC observed this firm's worker on the topmost roof of a two-storey house under construction. The worker was not using a personal fall protection system and no other form of fall protection was in place. The roof slope was 7:12, and the worker was exposed to a risk of falling about 9 m (30 ft.). A supervisor was on site. The firm failed to ensure that fall protection was used, a repeated and high-risk violation. It also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety, a repeated violation.

579812 BC Ltd. / Sumas Valley | \$2,500 | Mission | February 17, 2016

WorkSafeBC observed two of this firm's workers sheeting the sloped portion of a skirt roof on a two-storey house under construction. Neither worker was using a personal fall protection system. The workers were exposed to a risk of falling 4 m (13 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

A J Framing Ltd. | \$3,012.87 | Burnaby | April 6, 2016

WorkSafeBC observed this firm's worker on top of a 23.5 cm (9.25 in.) wide form for a two-storey house under construction. The worker was not using a personal fall protection system, and no other form of fall protection was in place. The worker was exposed to a risk of falling more than 3 m (10 ft.). A representative of the firm was on site. The firm's failure to ensure that fall protection was used was a repeated and high-risk violation. The firm also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety, a repeated violation.

Advanced Framing Ltd. | \$3,541.13 | Richmond | February 24, 2016

Two of this firm's workers (including a representative of the firm) were sheathing the roof of a new two-storey house. The workers were not using personal fall protection systems, and no other form of fall protection was in place. They were exposed to a risk of falling about 9 m (30 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

Amex Framing Ltd. | \$3,855.50 | Vancouver | May 5, 2016

WorkSafeBC observed four of this firm's workers on the open second level of a house under construction. Some of them were working with their backs to the edge, which did not have guardrails. No other form of fall protection was in place either. The workers were exposed to a risk of falling 4 m (13 ft.). The firm failed to ensure that fall protection was used and failed to use guardrails when practicable. These were repeated and high-risk violations.

Atlantic Construction Ltd. | \$4,090.70 | Kitimat | April 7, 2016

WorkSafeBC inspected a jobsite where this firm was building a hotel and observed two workers on the roof and one in the basket of a boom lift. None of the workers were using fall protection. They were exposed to a risk of falling as much as 10.6 m (35 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

B S Roofing Ltd. | \$30,000 | Vancouver | April 14, 2016

Three of this firm's workers (including a representative of the firm) were roofing a new two-storey house, one on an entry roof and two on a second-floor balcony with only a low parapet. None of the workers were using personal fall protection systems and no other form of fall protection was in place. They were exposed to a risk of falling 4 m (13 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

Ballagan Construction & Framing Ltd. | \$2,616.28 | Vancouver | May 12, 2016

Two of this firm's workers (including a representative of the firm) were installing roof trusses on top of a newly built three-level house. They were standing on the trusses and wall plates instead of using a suitable alternative, such as a work platform. They were also not using personal fall protection systems. This exposed them to a fall hazard of about 7 m (23 ft.). The firm's failure to ensure that fall

protection was used was a repeated and high-risk violation. The firm failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety, a repeated violation.

Besthaus Custom Homes Ltd. | \$2,500 | West Vancouver | April 6, 2016

WorkSafeBC observed this firm's worker (also a representative of the firm) installing fascia boards on the roof of a new two-storey house. The worker was not using a personal fall protection system, and no other form of fall protection was in place. The worker was exposed to a risk of falling 6.4 m (21 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

Blu Fox Form & Frame Inc. | \$2,500 | Victoria | May 30, 2016

This firm's worker was on the second-floor deck of a house under construction. The worker fell through an unguarded window opening to grade, sustaining serious injuries. WorkSafeBC's investigation found that the worker had not been using a personal fall protection system, nor had any other form of fall protection been in place. The firm failed to ensure that guardrails were installed around the window and stairwell openings or that workers exposed to these fall hazards used fall restraint. Both violations were high-risk, and the lack of guardrails was also a repeated violation.

Blue Sparrow Construction Ltd. | \$2,500 | Burnaby | April 6, 2016

Two workers were standing on the top plate of a wall installing trusses on a two-storey house. Both of the workers were representatives of the firm, but neither was using a personal fall protection system, nor was any other form of fall protection in place. The workers were exposed to a risk of falling 7.3 m (24 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

Continental Pipeline & Facility Ltd. | \$150,000 | Fort St. John | April 20, 2016

This firm was moving a tanker truck down a steep grade at a remote location with the help of a bulldozer. The firm's worker sustained serious injuries from being caught between the step frame and the tracks of the moving bulldozer. The firm had not analyzed the risks posed by the work activity, nor implemented safe work procedures for it. This was a high-risk violation.

Corwest Builders Inc. | \$45,424.34 | Kelowna | March 7, 2016

WorkSafeBC inspected a construction site where this firm was the prime contractor. Three workers were on the third floor of a building without adequate fall protection systems, exposed to a risk of falling 6.7 m (22 ft.). The site superintendent for the firm was not aware that workers were on the third floor — indicating that as the qualified coordinator for the site, the superintendent failed to ensure that hazards were addressed while work was being carried out. The firm failed to do everything reasonably practicable to establish and maintain a system for ensuring compliance with the *Workers Compensation Act* and the *Occupational Health and Safety Regulation*. Both failures were repeated and high-risk violations.

Administrative penalties are monetary fines imposed on employers for health and safety violations of the *Workers Compensation Act* and/or the *Occupational Health and Safety Regulation*. The penalties listed in this section are grouped by industry, in alphabetical order, starting with "Construction." They show the date the penalty was imposed and the location where the violation occurred (not necessarily the business location). The registered business name is given, as well as any "doing business as" (DBA) name.

The penalty amount is based on the nature of the violation, the employer's compliance history, and the employer's assessable payroll. Once a penalty is imposed, the employer has 45 days to appeal to the Review Division of WorkSafeBC. The Review Division may maintain, reduce, or withdraw the penalty; it may increase the penalty as well. Employers may then file an appeal within 30 days of the Review Division's decision to the *Workers' Compensation Appeal Tribunal*, an independent appeal body.

The amounts shown here indicate the penalties imposed prior to appeal, and may not reflect the final penalty amount.

For more up-to-date penalty information, you can search our penalties database on our website at worksafebc.com.

Gibson Framing Ltd. | \$8,879 | Kelowna | March 7, 2016

WorkSafeBC inspected a construction site where this firm was the framing contractor. Three workers were on the third floor of a building without adequate fall protection systems, exposed to a risk of falling 6.7 m (22 ft.). The firm failed to ensure that proper fall protection was used, and failed in general to ensure the health and safety of workers in its workplace. These were repeated and high-risk violations.

Gurvinder Singh Shergill / SG Framing Co. | \$1,250 | Surrey | May 30, 2016

WorkSafeBC inspected a jobsite where this firm's workers were building a three-storey townhouse complex. Construction debris littered the ground. Workers at the site were exposed to a risk of falling 2.75 m (9 ft.) due to stairwell and window openings that lacked guardrails. Workers at ground level were not wearing hard hats even though workers on the upper levels of the complex were throwing debris out the window openings onto the ground. The firm allowed waste material to accumulate on site and failed to provide guardrails and to ensure that workers wore safety headgear. These were all repeated violations.

Haab Contracting Ltd. | \$18,113.10 | Fort St. John | April 11, 2016

WorkSafeBC inspected a residential construction site where two of this firm's workers were in an excavation about 3.7 m (12 ft.) deep. The sides of the trenches were not sloped, benched, or shored and had not been assessed by a professional engineer. The firm's failure to adhere to the sloping and shoring requirements of the Occupational Health and Safety Regulation was a high-risk violation.

Horns Construction Corporation | \$2,500 | Maple Ridge | April 20, 2016

WorkSafeBC inspected a jobsite where this firm's workers were on the roof of a two-storey house. One worker was wearing a fall protection harness but was not connected to an anchor. The other two workers did not have their harnesses on. No other form of fall protection was in place. The workers were exposed to a risk of falling about 6 to 7.5 m (20 to 25 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

Jora Roofing Ltd. | \$5,000 | Vancouver | April 6, 2016

Two of this firm's workers (including a supervisor) were roofing a newly built two-storey house. One was working at the edge of the roof and the other was walking around on the roof. Both had on fall protection harnesses, but neither was connected to an anchor. They were exposed to a risk of falling about 7.5 m (25 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation. It also failed to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety, a repeated violation.

Kevin Sam Schinkelwitz / K. Schinkelwitz Co. | \$2,500 | Sun Peaks | February 23, 2016

WorkSafeBC observed this firm's worker and the firm's representative framing the roof of a house. They were working among the trusses without personal fall protection systems or any other form of fall protection. This exposed them to a risk of falling more than 7.5 m (25 ft.). The firm failed to ensure that fall protection was used. This was a high-risk violation.

Platinum Stone Contracting Ltd. | \$8,443.08 | Mackenzie | February 23, 2016

This firm was building a bridge over a creek in a remote location. A worker was installing planking on the bridge deck and fell to the rocky creek bed 5.5 m (18 ft.) below. The worker sustained serious injuries. WorkSafeBC investigated the incident and found that no acceptable method of fall protection had been in place on the bridge deck. The firm's failure to ensure that fall protection was in place was a high-risk violation.

PR Pomeroy Restoration & Construction (B.C.) Inc. | \$42,948.74 | Richmond | May 17, 2016

Two of this firm's workers were on the roof of an apartment building. One was crouched on top of a parapet wall, installing flashing. The other was installing siding, standing on a portion of the roof with a 12:12 slope. Neither was using a personal fall protection system and no other form of fall protection was in place. The workers were exposed to a risk of falling about 16.5 m (54 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

Radec Group Inc. | \$18,020.62 | Penticton | June 2, 2016

This firm was building a townhouse complex. Three of the firm's workers, including the construction manager and the site supervisor, were on the open third level of a building in cold, rainy conditions. None of the workers were using personal fall protection systems and no other form of fall protection was in place. Two of the workers approached the unguarded edge of the floor and were exposed

to a risk of falling 6.7 m (22 ft.). There were also unguarded openings in the floor of the building, and a ladder was being used between the first and third floors instead of a stairway. The firm's failure to ensure that fall protection was used was a high-risk violation. The firm's failure to install guardrails around floor openings was a repeated and high-risk violation. Finally, the failure to provide a stairway to upper levels before beginning construction on those levels was a repeated violation.

Rainer Heinze Todsén / Rainer's Roofing | \$2,500 | Qualicum Beach | May 25, 2016

Two of this firm's workers were applying shingles to the roof of a house under construction. Neither worker was using a fall protection system, and no other adequate form of fall protection was in place. They were exposed to a risk of falling 3.7 m (12 ft.). The firm failed to ensure that fall protection was used, a high-risk violation.

Robinson Masonry Ltd. | \$8,895.85 | Merritt | May 2, 2016

WorkSafeBC observed three of this firm's workers (including a representative of the firm) building a concrete block wall for a new hotel. The workers were on a work platform exposed to a risk of falling 10.6 m (35 ft.) but were not using personal fall protection systems. Nor was any other acceptable form of fall protection in place. Also, no written fall protection plan was in place as required for a location where a fall of 7.5 m (25 ft.) or more could occur. The firm's fall protection violations were repeated and high-risk. The firm also failed repeatedly to provide its workers with the information, instruction, training, and supervision needed to ensure their health and safety in the workplace.

Sanghe Construction Ltd. | \$5,224.80 | Delta | February 4, 2016

This firm was performing framing activities at a jobsite where a townhouse complex was under construction. During four inspections over the course of four weeks, WorkSafeBC observed the firm's workers on the roof and the third level of one of the buildings. They were standing at the edge of the steep roof, on roof overhangs, and on top plates of walls, and were not using personal fall protection systems. Nor was any other form of fall protection in place. They were exposed to a risk of falling 6.7 to 8.4 m (22 to 27.5 ft.). The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

Sanghe Construction Ltd. | \$8,038.15 | Surrey | February 9, 2016

This firm's worker was installing roofing trusses on a two-storey house while standing on the top plate of the second-storey wall. The worker was not using a personal fall protection system, and was exposed to a risk of falling 5.5 m (18 ft.). The firm's failure to ensure that fall protection was used was a repeated and high-risk violation.

Sirwal Construction Ltd. | \$7,500 | Burnaby | April 26, 2016

WorkSafeBC observed this firm's worker and a supervisor on the roof of two-storey house under construction. Neither was using a personal fall protection system. They were exposed to a risk of falling at least 7 m (23 ft.). The supervisor had proof of having received fall protection training, but only one set of fall protection equipment was available on site. The firm failed to ensure that fall protection was used — a repeated and high-risk violation — and failed to provide its workers with the information, instruction, training, and supervision required, a repeated violation.

Sky Blue Environmental Services Inc. | \$2,500 | Surrey | April 19, 2016

This firm was responsible for removing asbestos-containing drywall from a house due for demolition. While WorkSafeBC was on site, the firm's worker emerged from the decontamination facility. The facility lacked the required shower, and the worker was not wearing the necessary respirator or protective suit for the high-risk work. No supervisor was on site. WorkSafeBC issued a stop-work order. The firm violated Occupational Health and Safety Regulation requirements to maintain a proper decontamination facility and to ensure that workers wear protective clothing. It also repeatedly failed to provide its workers with the information, instruction, training, and supervision needed to ensure their own and other workers' health and safety. These were high-risk violations.

X Q Enterprises Ltd. | \$1,000 | Vancouver | February 3, 2016

This firm was hired to perform asbestos abatement on a pre-1990 house due for demolition. The firm issued a clearance letter stating that all hazardous materials had been removed from the house. When WorkSafeBC inspected the jobsite, however, it found asbestos-containing materials still present. WorkSafeBC issued a stop-work order for the site. The firm failed to safely remove hazardous materials identified at its worksite and to have a qualified person ensure that the materials had been safely removed. These were repeated violations.

Yellowhead Road & Bridge (Kootenay) Ltd. | \$70,684.10 | Lardeau | April 27, 2016

This firm's crew felled a dangerous tree that struck a high-voltage power line on the way down. Before falling began at the site, the firm was required to have the worksite inspected by a qualified person authorized by the owner of the power system to identify any hazards due to the nearby power lines. This violation was repeated and high risk. In addition, the inspection revealed a number of safety concerns regarding dangerous falling practices, worker access and egress, lack of fall protection, and inadequate supervision. Overall the firm failed to provide its workers with the instruction, training, and supervision needed to ensure their health and safety. This was a repeated violation.

Manufacturing

Delta Forming Hardware Ltd. | \$2,500 | Delta | May 20, 2016

This firm operates a machine shop. WorkSafeBC inspected the shop and found various safeguarding deficiencies that placed workers at high risk of serious injury. Workers were able to access hazardous points of operation on machines. Some machines lacked starting and stopping controls within easy reach of the operator, and on others, controls were not positioned, designed, or shielded to prevent inadvertent activation. Operator stations lacked hardwired emergency stop devices. In-running nip points of a power transmission belt were not guarded to prevent contact by workers, and a press brake was not safeguarded to prevent injury to workers. Feed rolls also lacked guards to prevent the operator from contacting in-running nip points. WorkSafeBC ordered the firm to remedy these failings, but the firm failed to comply in a reasonable time. These were all repeated violations except for the failures to equip operator stations with starting and stopping controls and emergency stop devices.

Delta Forming Hardware Ltd. | \$5,000 | Delta | May 20, 2016

This firm's worker sustained a serious injury from a punch press (a machine that cuts holes in metal). WorkSafeBC found that the machine had not been properly safeguarded and that it was not locked out before maintenance was performed on it. WorkSafeBC placed a stop-use order on the punch press until adequate safeguarding was installed on it. The firm's failure to adhere to lockout requirements was a repeated and high-risk violation.

Tolko Industries Ltd. / Heffley Creek | \$75,000 | Kamloops | April 26, 2016

A worker at this firm's sawmill was cleaning a chipper room. The worker's hand got caught in the chipper and the worker sustained serious injuries. WorkSafeBC's investigation found that the guard on the chipper's drive chain was inadequate and allowed workers to access a hazardous point of operation. The firm failed to ensure that the in-running nip point of the chain was guarded to prevent contact by workers. This was a repeated and high-risk violation.

Primary Resources

Rubicon Timber Inc. | \$2,500 | Pemberton | April 18, 2016

This firm was the owner of a forestry operation on a steep cutblock. A felled tree slid downslope. Either the tree or an object dislodged by it hit a worker at the site. The worker sustained fatal injuries. WorkSafeBC's investigation found that the firm had failed to plan the operation adequately and to ensure that it was carried out in a manner consistent with the Occupational Health and Safety Regulation and safe work practices. The firm failed in general to ensure the health and safety of workers at its workplace. These were high-risk violations.

B. Ford Falling Ltd. | \$38,238.70 | Pemberton | April 18, 2016

At a forestry operation in a remote area, a felled tree slid downslope. This firm's worker was hit either by the tree or by another object dislodged by it. The worker sustained fatal injuries. WorkSafeBC's investigation found that the firm had placed the worker in a location where the worker was endangered by other fallers' work. This was a high-risk violation. A claim costs levy was imposed in this case because the death was the direct result of failures by the firm to comply with the Occupational Health and Safety Regulation and to adopt reasonable means to prevent injury and death.

Crew Energy Inc. | \$4,674 | Farmington | April 11, 2016

This firm was the prime contractor at an oil and gas site where equipment was being lifted into place. The load shifted, pinning a worker between it and a wellhead. The worker sustained a serious injury. WorkSafeBC's investigation found that the firm had allowed unqualified workers to rig the load and had not supervised the workers as they did so. The firm failed to do everything reasonably practicable to establish and maintain a system for ensuring compliance with the Workers Compensation Act and the Occupational Health and Safety Regulation. These were repeated violations.

Congratulations

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Precise Contract Falling Ltd. | \$2,500 | Port Hardy | April 8, 2016

This firm's worker, a recently certified faller, was falling limb-tied trees on a remote cutblock. The trees fell unexpectedly and one struck the worker, who sustained fatal injuries. WorkSafeBC's investigation found that the firm had not provided sufficient supervision to the worker, given the worker's skill level and the complex falling environment. The firm failed to ensure the health and safety of workers at its workplace. This was a high-risk violation.

Service Sector

0849273 B.C. Ltd. / Paul's Tree Service | \$2,500 | Delta | May 24, 2016

A representative of this firm was falling cottonwood trees when a tree fell and hit one of the firm's workers. The worker sustained fatal injuries. The firm representative had not ensured the minimum of two tree-lengths between the tree and the position of the worker. This was a high-risk violation. WorkSafeBC's investigation also found that the worker who died had not been provided with a proper orientation or adequate supervision at the site. This was a failure by the firm to provide its worker with the information, instruction, training, and supervision needed to ensure the worker's health and safety.

High Precision Monitoring & Analysis Ltd. / HPMA | \$1,000 | Vancouver | April 7, 2016

This firm was hired to perform hazardous materials surveys on four adjacent houses that were to be demolished. WorkSafeBC inspected the houses and found that the firm had not collected representative samples of suspected asbestos-containing materials and other hazardous materials. Also, for many of the samples the firm did collect, it did not identify the location and quantity of the samples. Overall, the firm failed to have a qualified person inspect the worksite, collect representative samples, and produce a written hazardous materials survey according to the requirements of the Occupational Health and Safety Regulation. This was a repeated violation.

High Precision Monitoring & Analysis Ltd. / HPMA | \$1,000 | Coquitlam | April 18, 2016

This firm conducted a hazardous materials survey on a house due for demolition. WorkSafeBC inspected the site and found

Penalties (continued)

deficiencies with the survey. For example, the firm claimed to have checked areas of the house that had not been checked; the firm did not collect any samples of various easily accessible materials; samples that were collected were taken from too small an area; labels on bulk samples did not match samples listed in the survey; and for several samples the firm did collect, it did not identify their location. The firm failed repeatedly to have a qualified person inspect the worksite, collect representative samples, and produce a written hazardous materials survey according to the requirements of the Occupational Health and Safety Regulation.

High Precision Monitoring & Analysis Ltd. / HPMA | \$1,000 | Vancouver | April 20, 2016

WorkSafeBC inspected a house due for demolition, which this firm had surveyed for hazardous materials. The firm had not collected representative samples of some suspected asbestos-containing materials. The survey noted the presence of certain hazardous materials throughout the house but did not identify the type and location of items containing these materials. And it gave contradictory recommendations as to the necessary asbestos abatement measures. These and other deficiencies with the survey show that the firm failed to have a qualified person inspect the worksite, collect representative samples, and produce a written hazardous materials survey according to the requirements of the Occupational Health and Safety Regulation. This was a repeated violation.

Modpro Containers Limited | \$5,141.17 | Abbotsford | March 29, 2016

This firm operates a facility that modifies and sells metal storage containers. WorkSafeBC inspected the facility and found several violations of workplace health and safety requirements. The firm did not initiate and maintain a less formal occupational health and safety program (required for smaller workplaces). It did not conduct regular inspections and meetings to identify and correct unsafe conditions and practices that may have developed. It did not have adequate first aid attendants, supplies, and services for promptly giving workers first aid if they suffered injury at work. It did not secure compressed gas cylinders to prevent falling or rolling. And it did not fit-test workers required to wear respirators. These were all repeated violations.

TNR Consulting Ltd. | \$2,500 | Gold Bridge | April 8, 2016

This firm was responsible for burning piles of debris generated by land clearing for a hydroelectric project in a remote area. A worker driving a water truck at the site was fatally injured when the truck rolled off the edge of a forest service road and down an embankment. WorkSafeBC's investigation found that the firm had not provided a site-specific safety orientation to the worker — a failure to ensure that its workers were made aware of health and safety hazards they were likely to be exposed to by their work. In general the firm failed to provide the information, instruction, training, and supervision needed to ensure the health and safety of workers at its site.

Vernon School District #22 | \$75,000 | Vernon | May 4, 2016

This employer failed to ensure that its workers were made aware of potential health and safety hazards to which they were likely to be exposed by their work. The employer failed to effectively identify asbestos-containing material (ACM) in its workplaces with signs, labels, or other means. It also allowed workers to work in areas contaminated with ACM or potential ACM without taking necessary precautions and without providing training in how to recognize these hazards. These were high-risk violations.

Transportation and Warehousing

BD Construction Ltd. | \$2,500 | Coquitlam | February 1, 2016

WorkSafeBC inspected a jobsite where a two-storey house was under construction and saw this firm's worker (also a representative of the firm) on the roof, stretched out near the edge. The worker was not using a personal fall protection system and no other form of fall protection was in place. The worker was exposed to a risk of falling as much as 9 m (30 ft.). WorkSafeBC imposed a stop-work order on the jobsite. The firm failed to ensure that fall protection was used, a repeated and high-risk violation.

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