





## What's New

Here is the latest on what we have to offer since July 2021. Find direct links to safety alerts, industry-specific resources, industry information and more to download and/or share with employees, industry and safety peers. And make sure to follow us on social media to stay up-to-date with the latest news. Follow us on [Facebook](#), [Instagram](#), [LinkedIn](#) and [Twitter](#).

**Radio Use and Road Calling Procedures Video** – Knowing how to use a mobile radio and following radio road calling procedures is critical to the safe use of resource roads.

**BCFSC Annual Report** – download the 2020 Annual Report

**BCFSC Ombudsperson Report** – download the 2020 Ombudsperson Report

**Communicable Disease Prevention** – BCFSC has a new webpage dedicated to Communicable Disease Prevention to help employers transition from COVID-19 Safety Plans and develop communicable disease plans in their place.

**Training Calendar** – Our 2021 Training Calendar offers both in-classroom (with COVID-19 safety protocols in place) and online courses.

**Safety Alerts** – Alerts provide timely information on incidents and issues which cause, or result in, serious or fatal injuries. The alerts we send by email and post on our website are intended to raise awareness and educate industry so we can learn from each other's experience and effort. Here are the latest alerts from BCFSC and industry.

- **BCFSC Safety Alert of the Month** – VHF Radio Best Practices
- **Manufacturing Weekly Safety Alert** – click on the link to see the latest weekly alert
- **TAG Safety Alert** – Equipment Fire / Excavator

To subscribe to our safety alert emails – [Click Here](#)

## Industry Links

**WorkSafeBC Announcements** – check here for the latest information on WorkSafeBC policy and regulation updates, resource development, risk advisories and more.

**WorkSafeBC Enews** – subscribe to Insight; WorkSafeBC's policy, regulation and research division e-Newsletter, Health and Safety Enews, Young Worker Enews and more. 📧

## Interfor Sources PPE Options for Women in Forestry

The forestry workforce is diverse. The variety of occupational roles runs the gamut across harvesting, transportation, manufacturing, silviculture, etc. with workers coming in all shapes and sizes. With a steady increase of women working in BC forestry, the search for Personal Protective Equipment (PPE) that fits properly can be a struggle, a distraction, or more concerningly, a deterrent.



PPE is a crucial safety measure to protect workers from injuries. Ill-fitting PPE may not protect a worker from hazards or may not function in the manner for which it was designed. Ill-fitting PPE can jeopardize worker safety and elevate the risk to injury not just to those wearing it but to their co-workers. Equipment that is designed for men is not likely to fit women properly due to differences in body size, height and body composition. Often, women are left with little choice but to "make-do" with what is available.

Some good examples of how poor fit can affect safety are common with required PPE like gloves, safety goggles and hi-vis vests. If gloves do not fit right because of a smaller palm circumference and shorter, narrower fingers – the excess material can get caught in equipment. If a woman with a small face must wear shop goggles, the gaps they leave at her temples may allow flying debris from the machine to enter her eyes. Or if a hi-vis safety vest falls off her shoulders because it is too loose, then there is a risk of it getting snagged or entangled.

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Safety boots and fall-arrest harnesses can also be difficult pieces of PPE for female workers to find. A common industry practise is for women to simply wear a man's boot size that is two sizes smaller. But a typical woman's foot is both shorter and narrower, so a smaller boot may be the right length but not the right width. Additionally, men's shoe sizing begins at a women's size 7 – which already is too large for some. When it comes to fall-arrest equipment, women's bodies often differ in body composition thus fall-arrest harnesses may not lend themselves well to unisex sizing either. Body weight and stature alone are not the only factors to consider in unisex sizing since the differences in a woman's chest, hips and thighs can affect the angles that straps fit into the harnesses.

Lana Kurz, Safety & Environment Manager for Interfor's Western Operations and a BCFSC Board Member, and her team from Interfor have developed a list of PPE options that are suited to fit a smaller frame, height, shoe size, and other fit parameters. This list includes PPE categories from work boots to apparel such as hi-vis vests, gloves, chainsaw pants, or eyewear, with a source list of stores, locations, and direct weblinks for online ordering.

"Everybody should be able to find safety products that fit comfortably and keep them safe," says Lana. "This list will help workers find products available in all sizes and configurations to make sure they are outfitted in gear that not only fits well but protects them in the way it was intended."

Download the [PPE Source List for Women](#) from the BCFSC website. 



## Autumn Roads Ahead

By Michele Fry, Director, Communications

As the leaves start to change and cooler days and nights set in across BC, the falling leaves are a sign that road conditions and driving patterns are also about to change. The transition from summer to fall should prompt you to think about what changes and adjustments will be required in your driving skills to ensure you and others stay safe on the road.

Consider these important tips when you start to think of the modifications you'll need to make.

### Back to School

With kids getting back to class, it's important to remember there will be more pedestrian traffic, changes to speed zones as well as school buses to consider while driving. It's always good practice to expect the unexpected and look out for safety risks such as kids darting from cars, kids cycling or walking to school and kids getting on and off buses.

**School Zones** – The school zone speed limit is 30 km/hr between 8AM-5PM on school days unless otherwise posted. Eliminate the mistake of driving along and then suddenly realizing you've been driving at regular speed within a school zone. This is a common mistake but when it comes to children's safety, shrugging it off with a "whoops" just doesn't cut it. Slow down, be cautious and pay extra attention in school zones.

**School Buses** – Across BC, over 110,000 children ride the bus from September to June each school day. Parents send their children off to school, trusting their child will get to school and back home safely each day. They are counting on drivers to do the right, **law-abiding** thing by coming to a complete stop when approaching a school bus with its red lights flashing. Every time someone doesn't stop for the bus, a child's life is at risk. Be patient, be courteous and respect the rules of the road.

Remember the rules: SLOW DOWN | STOP | KNOW THE LAW

- In BC, drivers must stop for school buses with flashing lights whether approaching from the front or rear. The vehicle may not proceed until the school bus moves on or the driver turns off the lights or pulls in the stop sign.
- If approaching from the front, stop at a safe distance to let children cross the road. Don't move until the lights stop flashing and the bus moves forward.
- All school buses must stop at all railway crossings, so be prepared to stop yourself. The bus does not use its flashing red lights for this, so exercise caution.

**School Crosswalks** – With students heading back to school, pedestrian traffic will increase. In BC, almost 20% of all pedestrian accidents involve children under 15 and about 60% of those accidents occur during the morning, noon and afternoon peak school hours. Research shows that children perceive traffic differently than adults and their sensory skills may put them at a disadvantage in traffic situations. Young children may:

- Assume cars can stop instantly
- Think if they can see a car, the driver can see them
- Have difficulty judging speed and distance
- Have a field of vision one-third narrower than an adults
- Have difficulty figuring out the direction of sounds
- Be easily distracted, lost in thought or impulsive
- Have no sense of danger
- Cannot perceive complicated traffic situations
- Overestimate their knowledge and physical strength and speed

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Familiarizing and refreshing your knowledge on crosswalk rules and regulations will ensure everyone's safety on the road. It is important to yield to all pedestrians at marked crosswalks but more importantly to stay extra vigilant at school crosswalks. If there is a crossing guard, follow directions. And remember this rule of thumb - it's safest for drivers to wait for as long as it takes for all pedestrians to reach the curb on the other side.

## Foggy / Wet Weather Conditions

For the most part, the autumn months that lead into winter will bring rain, fog, wind and the start of the snow season in BC. No matter what part of the province you live in, it is almost certain that you will be required to drive your vehicle in rainy, foggy, windy or even snowy conditions at some point. With unpredictable weather patterns becoming more common, being prepared to drive in adverse weather conditions just makes good sense.

*Driving in Rain* – Whether a sprinkle or a heavy downpour, driving in rain can be one of the most difficult driving situations a driver will encounter. And with the extended dry spell BC has encountered this summer, there are increased risks as everyday build up on road surfaces have accumulated. Without frequent showers to wash the build up away, substances like oil, grease, rubber & tar form a thin layer on the road surface. When the rain eventually comes, this build-up rises to the surface and causes the roads to become very slippery. Research indicates that accident risks increase on the rainy days that follow extended periods of dry, hot weather so drivers need to be extra cautious when the rain starts up again.

Rainy conditions, regardless of wet roads after dry spells or continuous rainy/wet conditions, are directly associated with higher accident rates. Knowing how wet roads and reduced visibility affects the way your vehicle handles will help you drive safely in rainy, wet conditions. prevail

- Double check your vehicle's equipment - check your windshield wipers to ensure they are properly installed and in tip-top shape to work efficiently and effectively to handle all types of rain, top up your wiper fluid, check your tire pressure and make sure your tires have good traction.
- Slow down, maintain a safe distance and avoid heavy braking.
- Turn on your headlights – even in misty or light rain conditions.
- Watch out for standing water – driving through standing water and puddles can not only cause hydroplaning in your vehicle but also hazardous water cascades to passing vehicles which can cause startling windshield blindness to other drivers.
- Ventilate your car – rain causes humidity levels to rise which can result in foggy interior windows. Set your vehicle's temperature control systems to maximize air flow and position the vents to reduce the likelihood of foggy windows.

*Driving in Fog* – Even if you're a seasoned pro behind the wheel, fog can make driving difficult and dangerous. No matter how dense, driving in foggy conditions requires extra special care and attention. The key is to remember that everyone is having trouble seeing, so play it extra safe. Consider delaying your trip if possible but if you are caught in foggy conditions – follow these safety tips:

- Slow down gradually and drive at a speed that suits the conditions. Avoid sudden stops and keep a sharp eye out for brake lights in front of you and headlights behind you by checking your mirrors.



- Make sure the vehicle's full lighting system is on:
  - Use your low-beam headlights.
  - If you have fog lights, use them in addition to your low beams.
  - Don't use your high beams – they bounce back at you, which makes it even harder to see.
- Be patient and remain calm.
- Use pavement markings to help guide you using the right edge of the road as a guide, rather than the centre line.
- Maintain a safe following and braking distance.
- Look AND listen for any hazards up ahead.
- Stay alert and reduce distractions by turning off your cell phone.
- Keep your mirrors and windows dry and clean to maximize visibility.
- Watch your speed and don't pass if its not necessary.
- Pull off the road to a safe location if conditions become unsafe. Engage your emergency flashers, keep your low-beam headlights on and wait for the conditions to improve.

## Distracted driving

We all know distracted driving is against the law but its always a good reminder to understand what constitutes distracted driving. Leave the coffee cup in the holder and cell phone tucked away so you can pay close attention while driving. Anything that takes your attention away from driving, like chatting with passengers, eating or drinking, adjusting radio or vehicle settings can contribute to distracted and inattentive driving. When you're behind the wheel, focus on the road.

No matter what the reason, whether you drive all day for work or to simply get from point A to point B, whenever you are out on the road, it is everyone's responsibility to understand the conditions, abide by the rules of the road and always drive responsibly to ensure not only your own safety but the safety of other drivers and road users. 🚗

### Resources:

[BCAA - Back to School Traffic Safety](#)

[Road Safety at Work](#)

[Shift Into Winter](#)

[ICBC – Driving in Poor Conditions](#)

[ICBC - Distracted Driving](#)



# WorkSafeBC Board of Directors Approves the 2020 Amendments to the Occupational Health and Safety Regulation

As of September 1, 2021, the 2020 amendments made to the Occupational Health and Safety Regulation are in effect.

At its April 2021 meeting, WorkSafeBC's Board of Directors approved the amendments in relation to Part 6: Restricted intervals for pesticide application, Part 8: High visibility apparel and safety headgear and Part 16: Mobile Equipment of the Occupational Health and Safety Regulation. These amendments will be of interest to forestry workers with respect to hi-vis apparel, safety headgear and mobile equipment.

To review the amendments, click on the links below. Strikethrough versions of the amendments with explanatory notes are included and the deletions in the regulatory amendments are identified with a strikethrough with the additions in **bold text**, **highlighted in yellow**.

- [Part 6, Restricted intervals for pesticide application](#)
- [Part 8, High visibility apparel](#)
- [Part 8, Safety headgear](#)
- [Part 16, Mobile equipment](#)

These amendments were posted online for feedback during the public hearing process. [Stakeholder feedback](#) received is available for review on the WorkSafeBC website. 🌱



WORKING TO MAKE A DIFFERENCE  
[worksafebc.com](https://worksafebc.com)

## WorkSafeBC Consultation on Proposed Amendments to the Occupational Health and Safety Regulation

WorkSafeBC's Policy, Regulation and Research Division is requesting feedback on proposed amendments to the Occupational Health and Safety Regulation.

The consultation phase provides stakeholders an opportunity to share feedback before the proposed amendments are taken to public hearing.

There are two proposed regulatory amendment packages under review:

- Part 3, Minimum Levels of First Aid
- Parts 14 and 19, Inconsistent Crane Misadventure and Zone Limiting Devices in Tower Cranes

View the [proposed regulatory amendments](#) and information on how to provide feedback.

Please provide feedback by **4:30pm on Friday, October 8, 2021**. 🌱



# Work-Related Deaths & Injuries



For 2021 year-to-date there have been four work-related deaths in the BC forestry industry. Two were reported in March and most recently, two in May. We extend our deepest condolences to the families and friends of the deceased fallers and our sympathies to all those affected by these tragic incidents.

## Recent work-related deaths reported to WorkSafeBC

**Injury:** Fatal

**Core Activity:** Logging road construction or maintenance / Excavator operation

**Location:** Lower Mainland

**Date:** 2021-May

A worker had been operating an excavator, conducting road maintenance at a remote forestry workplace. The worker left to purchase parts to repair the excavator. As the worker was returning to the camp on a resource road, the worker's vehicle left the road and rolled down a steep slope.

**Read the BCFSC Fatality Alert - May 13**

**Injury:** Fatal

**Core Activity:** Tree planting or cone picking / Field work services

**Location:** Northern BC

**Date:** 2021-May

A worker succumbed to COVID-19.

**Read the BCFSC Fatality Alert - May 18**

## Recent work-related incidents reported to WorkSafeBC

The following sample of work-related incidents recently reported to WorkSafeBC may help prevent similar incidents in your workplace.

### HARVESTING

**Injury:** Close Call

**Core Activity:** Integrated forest management

**Location:** Vancouver Island/Coastal BC

**Date:** 2021-Jul

A rubber-tired supersnorkel (line loader), accompanied by a pilot car, was travelling on a resource road when the boom of the snorkel contacted and snapped one of three 138 kV power lines. The operator of the supersnorkel and the driver of the pilot car were not injured, but the incident caused a ground fire within the powerline right-of-way. The fire was extinguished the same day by local firefighters and two helicopters.

**Injury:** Fractured vertebrae

**Core Activity:** Brushing and weeding or tree thinning or spacing

**Location:** Northern BC

**Date:** 2021-Jul

A worker was conducting manual tree-topping activities on a spruce tree about 130 feet tall. The worker had finished topping the tree and was rappelling down when they slipped and fell 35-40 feet to grade.

**Injury:** Burns

**Core Activity:** Forest firefighting

**Location:** Interior BC

**Date:** 2021-Jul

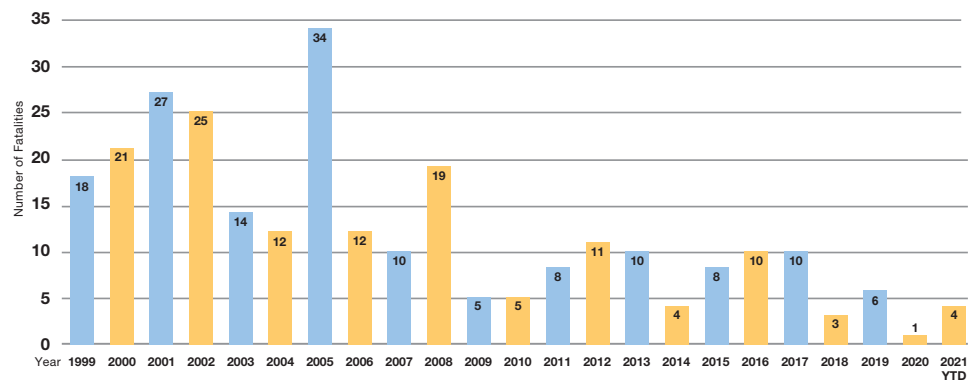
A worker using a handheld drip torch was suddenly engulfed in flames.

**Injury:** Close Call

**Core Activity:** Logging road construction or maintenance / Integrated forest management

**Location:** Vancouver Island/Coastal BC

### WSBC Accepted Harvesting Work-related Death Claims



This information represents the number of work-related deaths by year in BC, up until July, 2021.

**Date:** 2021-Jun

Rock blasting for road construction in a remote forestry operation was being conducted under the direction of a certified blaster. Before the blast, the blaster's helper drove a company truck out of the blasting area but not out of the danger area. When the blast went off, the helper saw incoming fly rock ejected from the blast and took refuge under the truck. The fly rock struck the truck but the worker was not injured.

**Injury:** Multiple injuries

**Core Activity:** Tree planting or cone picking

**Location:** Interior BC

**Date:** 2021-May

A worker was operating an ATV, delivering boxed seedlings to the field planters. As the ATV crossed a natural gully, it rolled over and the worker was injured.

**Injury:** Injuries to upper body

**Core Activity:** Integrated forest management

**Location:** Northern BC

**Date:** 2021-May

A manual tree faller was bucking a cedar tree (5 feet in diameter) on a 70% slope. As the cut was being completed, the top portion of the tree pivoted, striking the worker and dragging them up the hill about 15 feet.

### MANUFACTURING

**Injury:** Lacerated hand

**Core Activity:** Wood product manufacturing

**Location:** Vancouver Island/Coastal BC

**Date:** 2021-Jul

As a worker was operating a custom-guarded automated radial arm saw, one of the worker's hands contacted its running blade.

**Injury:** Heat Exposure

**Core Activity:** Planing mill

**Location:** Northern BC

**Date:** 2021-June

While performing cleanup activities in a planing mill during a heat wave, a young worker lost consciousness.

**Injury:** Close call

**Core Activity:** Sawmill

**Location:** Interior BC

**Date:** 2021-June

A mill was destroyed by fire. Workers who were on site at the time were not injured.

**Injury:** Close call

**Core Activity:** Sawmill

**Location:** Northern BC

**Date:** 2021-May

An early morning fire started in the debarker room of a wood chip plant. A chip truck driver noticed smoke and notified mill supervision. The room sprinkler system activated. Mill staff fought the fire and summoned the

local fire department, and the fire was extinguished. The fire began inside a hydraulic valve bank cabinet that contained electric baseboard heaters. Combustible dust was not involved in the incident.

### TRANSPORTATION

**Injury:** Close call

**Core Activity:** Dry land sort / Log hauling

**Location:** Vancouver Island/Coastal BC

**Date:** 2021-Jul

A loaded tridem-drive logging truck with a tri-axle trailer was parked on a weigh scale platform at a dryland sort operation. Once the load was weighed, a log stacker secured the load with its grapple and started to lift it off. The load was raised high enough to clear the stakes and the operator was about to back up when the hoist cable broke, causing the full load to fall back onto the truck and trailer. The truck operator, who was outside of the cab, was not injured but the truck and trailer, as well as the weigh scale, sustained major structural damage.

**Injury:** Fractured vertebra, lacerations

**Core Activity:** Integrated forest management

**Location:** Vancouver Island/Coastal BC

**Date:** 2021-Jun

A worker was preparing to move a lowbed (truck and trailer). The worker climbed onto the back of the truck with a tire bar to try to get the fifth wheel into position to attach the trailer. When the worker applied the tire bar it slipped, causing the worker to lose their footing and fall off the truck. The worker struck the frame of the truck before landing on the ground about 4 feet below.

**Injury:** Injuries to upper body

**Core Activity:** Log hauling

**Location:** Interior BC

**Date:** 2021-Jun

A logging truck travelling on a two-lane paved road missed a corner, lost control, and rolled into a ditch.

**Injury:** Close Call

**Core Activity:** Cable or hi-lead logging

**Location:** Vancouver Island/Coastal BC

**Date:** 2021-May

Travelling on a forest service road, an off-highway truck with low-bed trailer transporting a super-snorkel log loader contacted a single phase of a 138-kV power line.

**Injury:** Multiple injuries

**Core Activity:** Log hauling / Integrated forest management

**Location:** Vancouver Island / Coastal BC

**Date:** 2021-Apr

As the trailer on a self-loading logging truck was being unloaded, the loading attachment, complete with the seat, broke free of the turret, sending the operator to the ground. 🚧



## SAFE Companies Audit Deadline Extended

All audits due in July or August 2021 have been extended to September 30, 2021 in support of the provincial state of emergency due to the wildfires.

Companies are required to submit audits in 2021 to meet their SAFE and COR program requirements. The audit needs to cover the 12 months prior to the audit date.

Get the forms and templates [you need to help you](#) with your SAFE Companies audit submission. Use the IOO forms and resources for Individual Owner Operator audits and use the SEBASE/ISEBASE for small employer audits. 🌲



## Conversion of BC COR to SAFE Certification

By Martin Ridgway, SAFE Companies Supervisor, Quality Assurance

BCFSC makes every effort to ensure a level playing field for bidding on forestry contracts. The conversion process has been working for several years for select companies. BCFSC is pleased to announce that all companies with WorkSafeBC Certification of Recognition (COR) certification through any other BC COR certifying partner can obtain SAFE Companies Certification.

This certification is available to any AgSafe, BCCSA, ESC, go2HR, MSABC or SafetyDriven COR-certified company working in the BC forestry sector but there are exceptions which include:

- The company seeks a forestry COR certification in addition to the existing COR certification.
- The company wants to SAFE-certify one or more of its classification units (CUs) already assigned or aligned with forestry.
- The company has a WorkSafeBC forestry-aligned classification unit.

In these cases, the company must follow the regular SAFE Certification process.

Furthermore, BASE-sized conversion audits no longer have a requirement for additional questions to be added to the COR audit. Results from several years found that there was no additional safety certainty added by this extra cost.

If you have any questions about this, please contact us by email at [safeco@bcforestsafesafe.org](mailto:safeco@bcforestsafesafe.org). 🌲

## WorkSafeBC Invites Stakeholder Feedback Regarding Workplace Status

WorkSafeBC's Policy, Regulation and Research Division is releasing a discussion paper on **determining workplace status** with options and draft policy to stakeholders for comment.

"Workplace status" refers to whether someone is an employer, worker, or independent operator. A person's status defines the rights and responsibilities the person has under the *Workers Compensation Act*, including compulsory coverage for workers, and obligations of employers to pay assessments into the accident fund.

At issue are changes to WorkSafeBC's workplace status policies to ensure the policies remain up to date. Changes are necessary to align policy with the *Workers Compensation Act* and the common law, and to enable WorkSafeBC to make decisions which reflect the changing nature of work in British Columbia.

The discussion paper, with options and draft policy, as well as information on how to provide feedback, can be found here:

[Proposed policy amendments on determining workplace status](#)

Stakeholders are welcome to provide feedback on the options until **4:30pm on Wednesday, December 15, 2021**. WorkSafeBC's Board of Directors will consider stakeholder feedback before making a decision on the proposed policy amendments. 🌲





## Fall Time is Training Time

With the fall almost upon us, it's a good time to assess safety training needs for workers and companies as operations start ramping up again throughout BC. Whether you have an experienced crew or new hires, BCFSC has solutions to ensure your workers have the knowledge, skills and attributes to do their job safely and productively.

We offer:

- Free self-enrollment online courses
- In-person training courses
- Occupational resources to help you train and assess your workers on-the-job

Free online courses are accessible through our learning center 24/7 at your convenience. It's easy to create an account and self-enroll in many of our courses. The following courses are currently available:

[Assessor Knowledge Units](#)

[Basic Forest Worker Knowledge Units](#)

[Combustible Dust Training for Workers](#)

[Combustible Dust Training for Managers and Employers](#)

[Combustible Dust Training for Contractors](#)

[Phase Congestion](#)

[Professional Industry Driver](#)

[Resource Road Driver Knowledge Unit](#)

[Serious Incident Investigation](#)

More self-enrollment courses are being added regularly, so check back often.

We also offer numerous in-person training options. Register early to reserve your spot!

Enrollment fees will be increasing for some courses in 2022, so lock in today's rates for our fall sessions. Visit [Course List – BC Forest Safety Council](#) to get updated training information for all available courses and to enroll.

If our scheduled sessions and locations aren't convenient for you or if you have a group of workers requiring in-person training, email [training@bcforestsafes.org](mailto:training@bcforestsafes.org) to ask us about preferred training options.

In addition to training courses, we also offer industry-developed assessments for supervisors to use on the job to ensure their workers are qualified for their operations:

### All Occupations

[Basic Forest Worker Assessment](#)

### Yarding

[Grapple Yarder Assessment](#)

[Hooktender Assessment](#)

[Landing Utilityperson Assessment](#)

[Chokerperson Rigging Slinger Assessment](#)

[Tower Operator Assessment](#)

### Mechanized Harvesting

[Feller-Buncher Assessment](#)

[Skidder Assessment](#)

[Dangle-Head Processor Assessment](#)

[Hydraulic Log Loader Assessment](#)

[Forwarder Assessment](#)

[Hoe-Chucker Assessment](#)

### Road Building

[Dozer Operator Assessment](#)

[Excavator Operator Assessment](#)

[Articulated Rock Truck Operator Assessment](#)

[Grader Operator Assessment](#)

[Wheel Loader Operator Assessment](#)

[Rock-Drill Operator Assessment](#)

More occupational assessments are being added regularly. If you are looking for a particular occupation not listed here, please reach out to us at [training@bcforestsafes.org](mailto:training@bcforestsafes.org).

It's a great time to invest in training and assessment of your workforce. There are more options than ever to build a highly skilled workforce with our online training options, on-the-job assessment checklists and classroom-based training delivered by experienced instructors. 🌲

Course	2021 Course Dates	Location
Forest Supervisor Mod. 1	September 23	Prince George
Falling Supervisor (Limited spots/Waitlist)	September 27	Prince George
External Auditor Workshop	September 29	Online
Small Employer OHS/R	September 30	Prince George
Forest Supervisor Mod. 1	September 30	Campbell River
Small Employer OHS/R	October 7	Langley
Forest Supervisor Mod. 1	October 14	Kamloops
Incident Investigation	October 15	Prince George
Falling Supervisor	October 18	Nelson
Forest Supervisor Mod. 2	October 21	Prince George
Forest Supervisor Mod. 3	October 22	Prince George
Small Employer OHS/R	October 28	Kamloops

Course	2021 Course Dates	Location
Forest Supervisor Mod. 2	October 28	Campbell River
Forest Supervisor Mod. 3	October 29	Campbell River
Forest Supervisor Mod. 1	November 4	Nanaimo
Forest Supervisor Mod. 2	November 4	Kamloops
Forest Supervisor Mod. 3	November 5	Kamloops
Joint Health and Safety Committee	November 8	Campbell River
Falling Supervisor	November 15	Campbell River
Small Employer OHS/R	November 18	Nanaimo
Forest Supervisor Mod. 2	November 25	Nanaimo
Forest Supervisor Mod. 3	November 26	Nanaimo
Incident Investigation	November 26	Kamloops
Incident Investigation	December 3	Nanaimo

# Entry Level Forest Worker Training Name Change to Forest Worker Essentials

Since 2019, BC Forest Safety Council (BCFSC) has coordinated a funded initiative from BC Ministry of Advanced Education Skills and Training to develop and deliver pilot training for workers new to BC forestry.

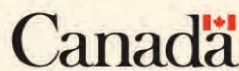
The program is intended as a worker-readiness training program supporting new entrants into the BC forest industry, including Indigenous Peoples, women and high-school students. Graduates arrive on the job with basic skills, a thorough knowledge of forestry and fully prepared for on-the-job learning in their chosen occupation. This program is designed to align with the occupational resources developed by BCFSC and employers can opt to continue their worker's training by utilizing the BCFSC on-the-job training and assessment materials at the worksite.

The program was successfully delivered by four Colleges and highlighted in several previous Forest Safety News articles. Based on feedback from the pilots and users of the program materials, the program name is being changed to Forest Worker Essentials and the model and curriculum are being updated to reflect a 6 to 7 week program. Approximately half of the content will be industry and sector orientation, concepts and applied knowledge through online and trainer-led sessions and the other half of the training will be through field

sites/hands-on, practical sessions and industry guest speakers.

The program can be delivered through training providers such as Colleges and High Schools, or directly at the workplace. BCFSC anticipates being able to accept applications for the new program in November 2021 for 2022 delivery.

If you have any questions about the Forest Worker Essentials Training Program, please contact Allison Thompson, BCFSC Manager Training & Standards. 🌱



*Funding provided through the Canada-British Columbia Labour Market Development Agreement.*

## Safe Tire Changing – Light Duty Vehicles

By Overland Training Canada

Overland Training Canada delivers BCFSC Resource Road Driving program courses across the province. We often get frequently asked questions and one of the most common is “how do I change a tire safely on a resource road?”

Do you remember being shown how to change a flat tire by a parent, driving instructor or friend when you were learning to drive or when you were a new driver? It seems many of us have never changed a tire before or may not have considered the safety implications of changing a tire, especially on a resource road. This article shares some concepts to assist you in not only making the job a little bit easier but will also provide some helpful tips so you can change your tires more safely.

### **What are some signs of a puncture?**

There are a few signs that will indicate whether you have a puncture. One of the first could be the tire pressure monitoring system (TPMS). If your vehicle is equipped with this function, the vehicle's technology would detect a change in tire pressure before you feel anything, displaying a dashboard warning symbol alerting you to a potential problem.

Another sign could be tire noise which can be significant but it's more likely you'll feel a change to your vehicle's performance first. The vehicle will feel sluggish - acceleration, braking and

steering may be affected, sometimes dramatically depending on the speed.

### **What causes punctures on resource roads?**

A tire puncture can be caused by multiple factors but to help reduce the likelihood of a puncture, consider:

1. Tire age – tires typically have a shelf life before they start to degrade.
2. Road surface composition – the road material can be sharp or jagged (sharp rocks).
3. Driving style – more aggressive driving styles can potentially cause more damage.
4. Tire pressure – tire pressure that is too high can result in damage to the sidewalls via road material. Tire pressure that is too low can cause excessive heat build-up within the tire (heat is one of the worst enemies of a tire).
5. Poor line choice through rougher terrain, rubbing tire sidewalls against sharper road material.
6. Tire type – cheaper all-season tires are more prone than good quality AT / MT tires.
7. Debris / foreign objects - such as nails, screws, metal and so on.

*Continued on page 10...*

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### **Can I drive on a flat or punctured tire?**

You can drive on a punctured tire. It may not be ideal, and it can potentially damage the vehicle rim, but if it means you can drive to a safe location - then we actively encourage you to do so. Finding a safe location to pull over is key to ensuring not only your safety but other road users as well when changing a tire.

### **What is considered a safe location to pull over?**

Follow these guidelines as best you can:

1. Pick a spot that is flat.
2. Pull over off the main roadway.
3. Do not park on soft terrain such as a soft road edge.
4. Choose a long straight stretch so you are visible to traffic.
5. Do not park near a rise or depression in a road.
6. Do not park in, on or just before or after a corner.
7. Do not park in a junction.
8. Ensure you park parallel to the edge of the road so that your vehicle does not impede other traffic.

### **What should I do first?**

If a puncture is discovered, it is important to follow these guidelines to ensure you are as safe as possible to deal with the puncture:

1. Reduce speed carefully, do not make sudden driver responses.
2. Find a safe location to pull over (see above for some ideal areas to consider).
3. If you have not already done so, engage 4-wheel drive. This will transfer the parking brake function to the front and rear axle allowing all four tires to be secured. Most parking brakes in pickup trucks actuate the rear axle so if you are changing a rear tire there will only be one tire on the ground, securing the vehicle from rolling otherwise which is not ideal.
4. Once you've pulled over in a safe location, secure the vehicle using the parking brake and set your transmission to Park.
5. Put on the hazard lights / beacons.
6. Make a radio call on your designated RR channel: (i.e.) "Pickup off at km 53 on the North Kitimat, changing a tire."
7. Remove the keys from the ignition (put them in a pocket so they are on your person) to ensure no one starts the vehicle while you are working.
8. Put on your hi-vis vest, gloves and any other required PPE and safety equipment and exit the vehicle.
9. Chock the vehicle wheel chocks or with a good-sized rock or wedge of wood. (Make sure to chock a tire that is NOT the punctured tire).
10. Place your warning triangles in front and behind your vehicle at least 100 paces apart and away from your vehicle to alert other road users that you are there well before they pass your location.

### **How do I change the tire?**

You should refer you to your vehicle owner's manual to provide you with the manufacturer's recommended tire changing procedures. Here are some additional thoughts to help make the process easier and safer.

### **PRE-TRIP TIPS**

1. Check that your spare tire is inflated and good to use.
2. Locate the jack and tools and ensure all tire changing tools and the jack are in good working order.

### **TIRE CHANGE TIPS**

1. Locate the spare tire security key, its location and remove it (place in a safe spot such as door pocket).
2. Lower the spare tire (there is no point in loosening the lug nuts and jacking the vehicle up until you know you can remove the spare tire).
3. Loosen the lug nuts.
4. Secure the jack and jack up the punctured wheel.
  - a. Use the manufacturer's recommended jack and jacking instructions to secure the jack in the right location (typically on the axle or front suspension arm).
  - b. Ensure the jack is flat on the ground.
  - c. Use floor mats or cribbing to stabilize the jack if the ground is soft.
  - d. Ensure you raise the punctured tire high enough to put on the spare tire.
  - e. Use your spare tire as an emergency jack stand (place under the vehicle frame until needed)
  - f. Remove the jacking tool from the jack and place beside the jack so it doesn't accidentally get knocked or kicked while walking around the vehicle, potentially moving the jack by accident.
5. Remove the lug nuts and place them in a safeguarded spot such as a door pocket. **DO NOT** place them on the ground where you could lose them.
6. Remove the punctured tire and place under the vehicle frame as an emergency jack stand.
7. Put on the spare tire and follow the manufacturer's instructions for placing the lug nuts. Ensure the spare tire is positioned correctly.
8. Place and secure the punctured tire back in the spare tire holder.
  - a. A loose tire in a truck bed is extremely dangerous and can become a deadly projectile.
  - b. If there is no other choice than to place the punctured tire in the truck bed, it **MUST** be secured by a properly rated ratchet strap. **A properly secured load is a legal requirement.**
9. Lower the vehicle and torque the lug nuts tightly, but not over tight. Refer to the manufacturer's manual.
10. Replace all the tools back in their factory storage locations.
11. Replace warning triangles back in their factory storage locations.
12. Return to vehicle and continue journey. Assess whether you replaced the tire correctly. Any noises, wobbling, vibrations could suggest the tire was not properly replaced.
13. We recommend to re-check your lug nuts using your lug wrench when you arrive back on a paved surface.

*Continued on page 11...*



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14. Re-torque the lug nuts with a torque wrench within the manufacturers recommended distance

### **What should I do after I have changed the tire?**

Refer to your owner's manual for instructions on tire change protocol, however it is good practise, unless otherwise stated, to do the following:

1. Repair / replace the punctured tire.
2. Switch the spare tire with the newly replaced tire.
3. Check the spare tire is in good use and restow it back in its holder.
4. Have your workshop / maintenance team or a professional shop to re-torque the lug nuts on the changed-out tire to the manual specifications.

### **What are the main safety considerations to remember?**

1. Find a safe spot to pull over, do so gently with no aggressive or sudden driver responses.
2. Secure the vehicle.
3. Let other road users know about your situation.
4. Wear PPE.
5. Place emergency signs on the road.
6. Use a passenger as a spotter on the roadway to caution other road users of your presence and let you know about oncoming traffic.
7. Know your vehicle. Check your owner's manual for correct procedures.
8. Face the direction of traffic as much as you can when changing the tire.
9. Know your escape routes in case unpredictable traffic puts you in more danger.
10. Vehicle suspension can present dangerous pinch points, keep your hands clear.
11. Vehicle brakes can be very hot, keep your hands clear.
12. Be focused and quick but safe and thorough.
13. Ask for help if needed.
14. Secure the punctured tire back under the vehicle and not in the truck bed unless you have a proper ratchet strap to secure it from becoming a projectile.
15. Repair / replace the punctured tire asap with a new tire.
16. Re-torque the lug nuts within the manufacturers recommended distance, typically within 50-100km maximum.

### **NEVER CRAWL UNDER A JACKED-UP VEHICLE / SUSPENDED LOAD**

#### **Final thoughts**

These days, punctures are becoming less common as tire technology evolves. However, it can and does happen. So be prepared. Ensure you are familiar with your vehicle and that it has a good spare tire that meets tread requirements, is the same size as all the other tires and is the correct tire for the vehicle. Make sure your tire changing tools are present and in good working order and that you are practised and familiar with changing tires if operating your work vehicle.

If you cannot change the tire for whatever reason, use the radio to ask if anyone is nearby to assist or call your company or local tow operator.

The MOST important thing to remember is the safety of the driver, passenger(s) and other road users. Consider what it takes for a loaded industrial vehicle to slow down, avoid or stop. A loaded industrial vehicle can weigh 10 times more than a regular pick-up. They have limited manoeuvrability and can take up to 300 feet to fully stop which can be longer as weather and conditions deteriorate.

Learn more about [BCFSC Resource Road Driver](#) training to help keep you safe on resource roads. 🚚





## New Radio Use and Road Calling Procedures Video Provides Viewers with Correct Way to Use Radios on Resource Roads

The latest resource road video released in early August showcases the correct use of radio calling procedures on resource and forest service roads. Resource roads are busier than ever with industry and recreational users driving on these roads all across BC. Incidents continue to occur causing great concern for many forestry, oil and gas, government and other users.

This 7.5-minute [Radio Use and Road Calling Procedures](#) video provides a step-by-step overview of the correct use of radio procedures and details communications protocols between vehicles on resource and forest service roads to support safe passage. This video is the second in the series of Resource Road Safety videos targeted at a broad audience of viewers from industry to the general public.

The narrative transitions between professional log truck drivers providing insight on how to drive these roads, to forestry company representatives providing coaching on safe calling procedures and the narrator giving step-by-step instructions to aid road users in understanding the protocols required to reach their destination safely.

The video was produced by the BC Forest Safety Council (BCFSC) in partnership with Mosaic Forest Management, Interfor, Gorman Bros, the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development and professional off-road driver training company, Overland Training Canada, as a collective message to the public and industry to ensure resource road users understand and follow resource road safety rules.

Travelling on resource roads can pose various risks and though there may not be active logging in the area, other industrial users such as oil & mining exploration, silviculture and forest management may be using these roads. All resource road users should exercise caution and expect the unexpected.

View the [Radio Use and Road Calling Procedures](#) video on YouTube.

### Learn More - Resource Road Safety Resources

[Resource Road Orientation Video – Work Here, Play Here, Stay Safe Here](#)

[BCFSC Resource Road Safety](#)

[Government of BC – Resource Road Safety Information](#)

[Overland Training Canada](#) 🇨🇦

## Industry Focus on Molly Failure and Trailer Hoists

Several unrelated incidents have resulted in an Industry focus on mollies and trailer hoists. Thankfully, no injuries have occurred related to these incidents but there is significant risk of serious injury.

Licensees throughout the province are collaborating to determine key steps to reducing trailer hoist failures within their operations while they work with log hauling

contractors and drivers to better understand the risk of molly failures.

Through the Trucking and Harvesting Advisory Group members, BCFSC recently distributed a [molly survey](#) to capture driver's perspective on the current status of molly failures and receive feedback and input on maintenance and inspections. 🇨🇦





# Okanagan College Professional Industry Driver Program

The Okanagan College Campus in Vernon is the newest location to offer the Professional Industry Driver Program. The program is funded through the Project Based Labour Marketing Training program and will incorporate ICBC's new Mandatory Entry Level Training (MELT) program.

The training program is comprised of:

- 10 weeks of MELT
- One week of employability and occupational skills
- Four weeks of mentorship with an Industry partner
- Nine weeks of work experience
- Two weeks of follow-up support to transition into employment

The program started on August 30th with eight students. Industry partners participated in an afternoon 'meet and greet' with students. The mentor program is scheduled to start on November 15th. Although there are challenges with winter conditions, the opportunity for students to have in-cab supervision and ongoing assessment of conditions by a mentor has significant advantages. Mentors are given full discretion to evaluate each student's ability to drive and may determine that a student is not ready to operate the unit based on the conditions on a given day.

Similar programs are being discussed with Northern Lights College (Chetwynd) and Thompson River University (Kamloops).

The resources used for the Industry Driver theory and mentor portion of the program are available to Contractors and Licensees from industry for use within their operations. Learn more about the **BC Forest Safety Council Professional Industry Driver Program** or contact [transport.admin@bcforestsafe.org](mailto:transport.admin@bcforestsafe.org). 🚚







# Falling



## BCFSC Receives Approval from WorkSafeBC for New BC Faller Training Standard

By Marla Guldbrandsen, Manager, Falling Programs

The BCFSC completed the final pilot of the 30-day New Faller Training Course on June 4, 2021. At the completion of that course, WorkSafeBC granted BCFSC approval of the competency-based New Faller Training Program moving forward.

### How does this impact current trainees?

Trainees who have completed 30 days of one-on-one training in the current program will be required to follow the current process; minimum 20 weekly reports, with the last five meeting the Standard,

recommendation from their Supervisor and a minimum of 75% on the BC Faller Training Standard Field Examination and Evaluation assessment. There are currently 137 trainees who have completed the 30-day one-on-one program but have yet to be certified.

### How does this impact future trainees in the New Faller Training Program?

Starting in 2022, those trainees trained in the new program will need to meet the outcomes of that program and be certified

in that system. This will include weekly reports, a recommendation from their Supervisor, a completion of a Summative Competency Conversation and Practical Assessment.

### How does this impact current certified Fallers?

There is no impact to current certified Fallers. However, if a Faller is engaged with a new faller trainee who has completed training in the new program, there will be small changes to how the trainee's work experience will be documented.

As part of the new competency-based system, periodic quality assurance visits will be conducted by BCFSC QSTs. These visits will ensure consistency of training in the 180-day period as well as provide support to the new faller trainee and the faller who is supervising them. 🧡

## TLA Faller Scholarship

The Truck Loggers Association Forestry Education Fund has created The Truck Loggers Association Faller Scholarship with funds raised from the live and silent auctions held each year at the TLA's annual convention. This is a one (1) x \$1,000 scholarship that is awarded annually to a student that is registered in a BC Faller Program.



### TLA Faller Scholarship

**The TRUCK LOGGERS ASSOCIATION FALLER SCHOLARSHIP – one (1) x \$1,000 award annually.**

Awarded to a student enrolled in a registered BC faller program.

#### The following documents must be submitted with your application:

1. Complete application form
2. A scanned copy of certificate of completion from training institution confirming you completed the faller training course.
3. A 300-word paragraph on why you want to work in the forest industry as a faller.

#### Award criteria:

1. Successfully complete faller training course in the same calendar year as your award application.
2. Plan to work as a faller in BC's forest industry.
3. Applicants with a tie to the TLA will be given priority.

Please visit the TLA website at [TLA - scholarships](https://www.tla-forest.org/scholarships) for more information and to download the application. 🧡

## Changes coming to Falling Supervisor Course

Members from the Falling Technical Advisory Committee (FTAC) and the BCFSC have been working on updating the Falling Supervisor course, looking at a blended approach. This blended approach, offering on-line and instructor-led components of the course would decrease the cost as well as the length of the in-classroom portion of the course. Work will continue for the remainder of 2021 with the hope of offering the new, updated course in 2022. Stay tuned! 🧡



## New Faller Training Pilot – Forbidden Plateau

A pilot of the competency-based New Faller Training course took place May 3 – June 4, 2021 in the Forbidden Plateau region with a timber site supplied by Mosaic. The BCFSC would like to extend our thanks to Ian Emery, Contract Manager with Mosaic, and Colin Sanderson, Operations Manager with Fall River Logging Ltd. The BCFSC worked closely with the Fall River Logging road crew, who helped make the training safe and successful with thanks to their foreman, Steve Cashman and his crew.

Back row, left to right: Trainee Cody Sword, Lead Trainer John Jacobsen, Assistant Trainers Matt James and Wayne Miller.

Front row, left to right: Trainees Eric Klody, Fred Sanford, Assistant Trainer Steve Telosky and Trainee Dave Ewen. 🌲

## Falling Safety Advisor Activities

Lead Falling Safety Advisor, Scott Rushton, provided the Falling Technical Advisory Committee (FTAC) with an update on Falling Safety Advisor activities this year. 2021 Falling Safety Advisor Activities (as of July 31, 2021):

- 5 Faller Certifications (2 New Faller Trainee, 3 Challenge)
- 4 Falling Supervisor Certifications
- 103 Faller Visits
- 5 Certified Falling Supervisor Quality Assurance Visits
- 20 Certified Falling Supervisor Visits
- 11 Trainer Quality Assurance Visits 🌲





## Wood Products Manufacturing Online Training Resources Coming In Fall 2021

By Cherie Whelan, Director SAFE Companies



BCFSC has been working with the Manufacturing Advisory Group to develop training geared specifically to the wood products manufacturing sector.

### Wood Products Manufacturing Hazard Identification and Risk Assessment Training

This will be a 1 hour online interactive module available through BCFSC's online learning centre. The course has been designed to help workers new to manufacturing wood products manufacturing:

- Understand what hazards and risks are
- Become aware of common hazards in wood products manufacturing worksites
- Learn how to assess and control risks

**Wood Products Supervisor Training.** This training is geared towards new supervisors and is leveraging the material from the BCFSC Forest Supervisor Training. The BCFSC Training Department is working with a MAG project team to update the BCFSC Forest Supervisor training with wood products specific content and make it available in six 1-1.5 hour online interactive modules with the following topics

- **Module 1** - Cornerstones of Effective Safety Supervision, Roles and Responsibilities of Safety Supervisor, Business and Regulatory Requirements
- **Module 2** - Due Diligence, Documentation
- **Module 3** - Training and Orientation / Communication
- **Module 4** - Hazard ID / Inspections / Investigations
- **Module 5** - Effective Communication
- **Module 6** - Leadership Styles – Tips and Tricks

Both the Hazard ID/Risk Assessment and Supervisor Training courses will be available in Fall 2021, so stay tuned! 🎧

## Industry Embracing Critical Control Management: Workshops Completed at 10 Sites

By Gordon Murray, Executive Director, WPAC

In 2020, the Wood Pellet Association of Canada and the BC Forest Safety Council teamed up to introduce and implement the Critical Control Management (CCM) process across BC's wood pellet and MDF plants. The uptake and learnings are providing key insight into how the industry can benefit from Bow Tie Analysis which forms the foundation of CCM. To date, workshops, led by researchers at Dalhousie University and BCFSC staff, have been completed at 10 of the 15 sites.

The pellet industry has a record of embracing new systems, processes and technologies to make plants safer and the CCM workshops are no exception. Plant employees participate in bow tie analysis workshops, led by Kayleigh Rayner Brown, P.Eng., M.A.Sc. Participants receive education, training and mentoring in the necessary knowledge and skills required to identify

site-specific critical controls. BCFSC Safety Advisors Bill Laturnus and Tyler Bartels summarize the information developed at the workshops into a workable template for the plant to use when it submits its plan to WorkSafeBC.

"There's a natural journey happening at these workshops," says Laturnus. "By working together, plant staff are open and honest about the potential hazards and collectively they develop processes that improve safety. As the days go by, they begin to get excited at the prospect of applying this approach at a larger scale not just combustible dust but chemicals for example or preventing back injuries, you name it, bow ties and CCM have very broad applications".

Successful workshops mean getting the right people at the table every day of the workshop – no small feat in a plant and managing holiday schedules on top of it.

"The level of commitment and work that went into getting the right people to the workshop while ensuring back up at the plant was excellent and it paid off," says Rayner Brown. "As a result, we had strong energy and an eagerness to, analyze, discuss and learn, which resulted in people identifying tangible and practical changes that could be easily implemented."

West Fraser's WestPine MDF plant in Quesnel is the most recent operation to participate, alongside Canfor and Premium Pellets which have also completed their workshops. Greg Rye, WestPine's Safety Resource Co-ordinator, says the workshop helped the team discover opportunities for further protective barriers and illustrated and validated the controls they need to have in place.

"What stood out for me was how comprehensive the process, especially working with an expert like Kayleigh," says Rye. "Next steps for us will be to identify those controls deemed to be 'critical' and to begin to document our critical controls management plan."

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# Manufacturing Safety

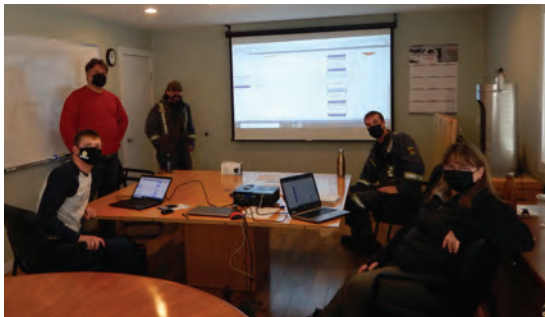
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Rye also has advice for the plants participating in upcoming workshops.

“Bring a diverse group of people together and really engage in the process. Also take time to look at the bow tie [webinars](#) which were a great primer on the process and we recommend everyone complete them in advance.”

WorkSafeBC is funding the Dalhousie University Department of Process Engineering and Applied Science Innovation at Work research project that will build on the WPAC funded CCM project workshops and transfer this knowledge to employees and employers throughout the wood pellet industry across Canada and internationally.

You can read more about CCM on WPAC's [website](#). 🌐



Pellet plants across BC are embracing critical control management, with 10 of the 15 sites already completed in this important initiative.

## Tips for a Successful Bow Tie Workshop:

- **Complete Webinar #1 and #2** in the [WPAC Safety Foundation Webinar series](#) for a primer about bow tie analysis and critical controls management.
- **Collect useful documents** before the workshop so that the team can use them to refer to, like piping and instrumentation diagrams (P&IDs) and corporate risk management programs.
- **Develop a Terms of Reference** ahead of the workshop, get buy-in from all participants so commitments and objectives are clear.
- **Identify key personnel** in your organization that should participate in the workshop and begin planning and scheduling early! Your team should consist of Subject Matter Experts (SMEs) knowledgeable in the operations and maintenance of the facility and its controls ideally, including:
  - » Operations (Manager, Supervisor, Operators),
  - » Maintenance staff,
  - » Electrical staff,
  - » Safety (EHS, OHS & Process Engineering), and
  - » Process Control & Instrumentation.
- **Engage a facilitator** with experience and knowledge in bow tie analysis should lead the workshop.
- **Schedule 5-minute breaks every hour** (hard-stops) during the workshops.
- **Invest in solid/good quality audio-visual equipment.**
- **Be adaptable and nimble** to make the most of the discussions, learnings



## Fibre Pile Management

By Michele Fry, Director, Communications

Wood fibre manufacturing dedicated to biomass fuel production such as wood pellet manufacturing uses industrial waste products such as hog fuel or wood chips from lumber mills, pulp and paper mills, wood products manufacturing and more to create their fuel products. Traditionally these waste products are stored in large fibre piles at manufacturing work sites. If not managed correctly, the accumulation of wood fibre in piles can pose a significant fire risk. These piles contain materials that consolidate and pack together. The range of moisture content combined with various particle size and densities within the material leads to microbial growth and biological activity. The combination of these factors can cause the fibre piles to self-heat over time due to the microbial decay of the wood fibre triggering combustion within the pile(s).

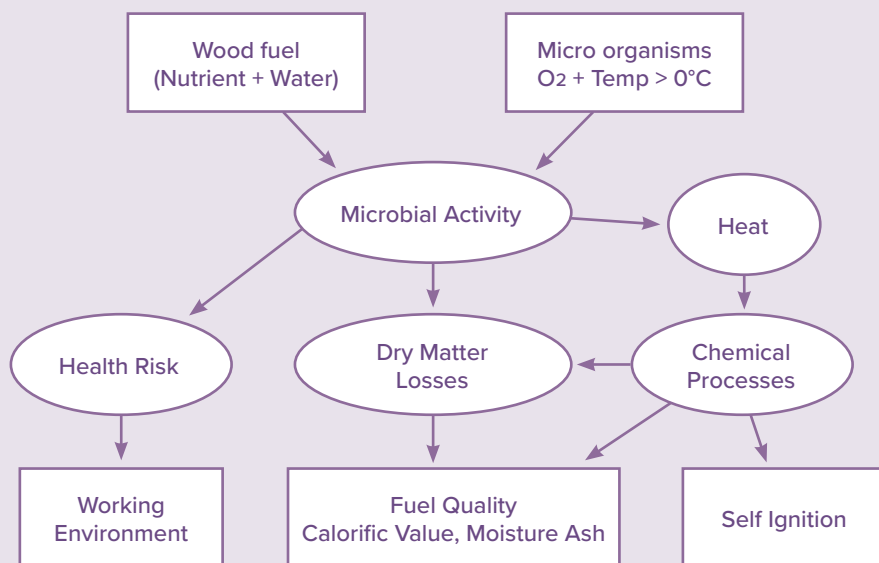


Figure 1. Source \*Best Practices in Fibre Pile Management

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The hazardous result of this biological, physical and chemical reaction generates smouldering pockets that can endure continuously for months creating gaps and fire pockets that can collapse under any weight. These smoulders can even lead to surface fires and open flames when exposed to oxygen such as wind, exposure from another fire or from other ignition sources close to the piles.

Effective management of wood piles and good safety planning can help decrease the risk of internal fires caused when fibre piles self-heat causing combustion. The risk of spontaneous ignition increases if the raw material or solid biofuel is initially moist, the stored volume is large and the ambient temperature is high. Follow these **Best Practices in Fibre Pile Management** and control methods developed by \*Dr. Shahab Sokhansanj and \*Dr. Fahimeh Yazdanpanah to help mitigate the risks of spontaneous fibre pile fires to help keep workers safe and your fibre protected.


## STORAGE:

- Fibre pile storage should preferably be located on dry, level ground on an asphalt or concrete surface close to the transport road.
- The dry, level ground should be free of stumps, stones and large residues.
- The storage area should be located in an area higher than the transport road(s) to avoid rainwater saturating the storage pile from the water accumulating on the road(s).
- Outside storage piles should preferably be covered to avoid precipitation or the accumulation of moisture.
- Store dry fibre piles (<20% moisture content) to avoid microbial growth
- Different types and qualities of fibres such as hog fuel and wood chips should never be mixed and should be stored separately.
- Fibre piles should preferably be stored in small piles.
- Store fibre piles for a short period of time.
- Ensure fibre pile storage management controls are in place with inventory and timeline management as essential control measurement.
- Store the material such for FIFO (First In-First Out)
- Avoid compacting the material – (i.e.) running heavy equipment on the material.
- Use these rules of thumb:
  - » FIFO (First In-First Out) – store the material to ensure the material is transported first in – first out to reduce the risk of some material sitting in the pile for an extended period of time.
  - » Raise piles in elongated stacks using a rule of thumb = base width twice the height of the stack.
  - » Fibre pile typical heights: clean wood chips without bark 15m | chipped forest residue 15m | bark 7m | sawdust 6m.

## CONTROL MEASURES:

- Use a Forward Looking Infrared (FLIR) camera or thermal imaging camera to identify hot spots early.
- Monitor the temperature at several different locations in the bulk.
- Measuring the CO concentration in the air above the fuel surface is one possible method for detection of activity in the fuel bed.
- Other detection methods include multi-gas detectors and sensitive “electronic nose” detectors.
- Understand the signs of an on-going self-heating process to detect the hazard. The first sign is often a sticky and irritating smell.
- Initiate firefighting if the smell or sight of fire is sensed from the storage pile such as the smell or sight of smoke (not steam or water vapour) or if flames or embers are spotted. Use trained fire fighters or contact the local fire department to safely expose and extinguish fibre pile smolders/fires.
- Ensure workers do not climb up on and equipment does not scale or drive on a fibre pile that is suspected of self-heating.
- Restrict public access to fibre storage areas.
- Follow all established safe work procedures regarding fibre pile storage.
- If you suspect the pile is self-heating
  - » Don't go on top, instead seek help and advice from your supervisor.
  - » Check to see if your safe work procedures follow a process. If there is no procedure in place, ask your supervisor for help.

To learn more about Fibre Pile Management, visit [Wood Pellet Association of Canada](#)

**Resources:**      [Best Practices Fibre Pile Management](#)  
                             [BCFSC Fibre Pile Management Crew Talk](#)  
                             [WPAC Safety Alert: Fibre Pile Fatality](#) 

*\*Dr. Shahab Sokhansanj (PhD, MSc) is an Adjunct Professor of Chemical and Biological Engineering at the University of British Columbia Faculty of Applied Sciences*

*\*Dr. Fahimeh Yazdanpanah (PhD, PMP, P.Eng) is the Research and Technical Development Director for the Wood Pellet Association of Canada, founder of Spark Biomass Consulting Inc. and former Research Associate in Biomass and Bioenergy Research Group (BBRG) at the University of British Columbia.*



## What's new in 2021 for Heart Health

By Dr. Delia Roberts

Cardiovascular disease, the second leading cause of death in Canadians, is on the rise and accounts for nearly a quarter of all deaths in British Columbia<sup>1</sup>. Things like heart attacks, strokes, and problems with heart rhythms or the ability of the heart to effectively pump blood, plus high blood pressure and the health of the blood vessels all fall under the category of cardiovascular disease. And with the COVID-19 pandemic the incidence of these illnesses are predicted to increase further, due to the increased mental and emotional stress and the reduction in physical activity due to the lockdown<sup>2</sup>. Thus, faced with an aging, stressed and more sedentary population this article will take a look at what's new for what works – or doesn't work - for the prevention and treatment of cardiovascular disease.

### Blood Pressure

Hypertension Canada completes a comprehensive review of their guidelines for the prevention, diagnosis, risk assessment and treatment of hypertension in adults and children

every two years. The latest version was released in 2020 and continues to emphasize accurate measurements of blood pressure before choosing a course of treatment. Blood pressure is best measured using an electronic device in a quiet room, while seated in an upright posture, back supported and feet flat on the floor. There are also specific requirements for placement of the cuff that are important to make sure that the readings are correct. Because some people's blood pressure is higher when the measurement is taken in the presence of a doctor or health professional (known as white coat hypertension), an easy-to-wear automatic cuff may also be used to take and record a measurement every 20-30 minutes over 24 hours (known as ambulatory blood pressure). Diagnosis of hypertension now also takes into consideration whether the measurements were based on office, ambulatory or home measurements, as well as the presence of diabetes and other risk factors. Also emphasized is the recommendation that low dose aspirin (ASA) not be taken as a

preventative treatment for stroke or heart attack unless you have already had one of these events. The very modest advantages are not worth the increased risk of bleeding.

### Diabetes

Any discussion about cardiovascular disease needs to include diabetes because diabetes has a very strong impact on the health of the heart and blood vessels. People with diabetes are three times as likely to die of heart disease, and at an earlier age than people without diabetes. But what's new about the relationship between diabetes and cardiovascular disease is that some new blood glucose lowering drugs called sodium-glucose cotransporter inhibitors (SGLT2i), have been found to have protective effects for the heart and blood vessels (and the kidneys). Studies have shown that these drugs are effective at lowering the risk of hospitalization for heart failure for people with existing cardiovascular disease. Also exciting is the finding that these drugs are able to lower the risk of developing cardiovascular disease for people with diabetes and other risk factors who haven't yet developed cardiovascular disease, which is great news!

### Blood Lipids

Long included as part of a heart health check-up, the routine measurement of blood lipids is now done non-fasting and is only recommended every 5 years for people over the age of 40 years unless other risk factors (things like diabetes, cardiovascular disease, obesity, COPD, kidney and inflammatory disease) are present. In the 2021 Canadian Cardiovascular Society Guidelines the approach is focused on making collaborative treatment decisions where both the physician and patient work together to make a plan for lowering cholesterol levels, including the use of lifestyle changes and statin and non-statin drugs. To do so, the recommendations include focusing on the use of non-high density

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lipoprotein cholesterol (non-HDL-C) or Apolipoprotein B (ApoB) levels rather than low density lipoprotein (LDL) levels, as was previously used as the key decision-making blood test. Both ApoB and non-HDL-C are thought to be more accurate markers of total blood lipid levels and lipid related cardiovascular risk. In addition, the new recommendation is to include a once-in-a-lifetime measure of another lipoprotein (LPa) which is genetically determined and which provides information on the inherited predisposition for cardiovascular disease. The 2021 review also included an analysis of whether the use of over-the-counter omega-3 polyunsaturated fatty acid (PUFA) supplements such as fish oil, could reduce cardiovascular disease risk. Using very large and long-term databases the conclusion was that no benefit could be shown from taking these dietary supplements.

## Heart Attack

Heart attacks can be caused by a number of different mechanisms, but new evidence shows that one of the most common types occurs most frequently in the winter months. These heart attacks are caused by atherosclerosis (a disease that develops when inflammation and high cholesterol in the blood lead to the deposit of this fat on the inside of blood vessels). A heart attack can occur if the fatty plaque deposits inside of the blood vessels supplying the heart break off and block blood flow, starving heart muscle of oxygen. In people where this occurred, blood pressure was also higher in the winter. One reason why winter increases the rate of these heart attacks might be because of the way blood flow to the hands and feet is reduced to conserve heat when out in the cold, which would raise blood pressure because all that blood is now in a smaller circulatory area. Another theory is that people eat more fatty and salty foods in cold weather, or even exercise less when it's cold and wet outside, all of which lead to higher blood pressures. Another possibility is that people

often get more infections in the winter including the flu, which raises the level of inflammation in the body. It's known that plaque rupture is also associated with inflammation.

In contrast, heart attacks caused by plaque erosion were higher in the summer. In this type of heart attack, there is little or no fatty deposit and high cholesterol levels are not a contributing factor. Instead the muscle on the inner wall of the blood vessel interacts with the clotting system form a blood clot, which then reduces blood flow in the vessel. The theory here is that dehydration stresses the insides of the blood vessels more, which would then cause more plaque erosion. Scientists don't know for sure which of these mechanisms cause the seasonal increases in heart attacks, but making sure to keep your hands and feet warm and limit your intake of salty, fatty foods in the winter as well as staying well hydrated won't hurt!

## What's still true

Choosing healthy behaviours is still the first and strongest choice in cardiovascular disease prevention and a healthy lifestyle remains key in reducing the progression and severity of these life-threatening conditions. It's thought that 74% of strokes could be prevented by lifestyle interventions. Data from study after study shows that in addition to the traditional risk factors for cardiovascular disease (abnormal lipid levels, hypertension, smoking, and diabetes), things like abdominal obesity, dietary habits, alcohol consumption, and physical inactivity, are strong risk factors for heart attacks and strokes that can be changed in all ages, ethnicities and genders. What is newer is our understanding that mental and emotional health are also extremely important. Lowering stress through relaxation practices, getting enough sleep, learning good communication and coping strategies and building a network of supportive relationships as well as spending time out of doors in green spaces have all been shown to be beneficial in preventing and

reducing the severity and progression of chronic diseases like cardiovascular disease.

The question of what exactly is a healthy diet has also been re-examined and in spite of the controversy around ketosis diets and saturated fats, the data continues to support a Mediterranean style diet low in salt and sugar with plenty of vegetables and fruits. These kinds of diets are made up of mostly unprocessed foods, with limited animal protein and lower fat dairy products. Instead, they include plant-based proteins like legumes, whole grains, olive oil and nuts and lots of fibre.

These are choices that each of us can begin to make today that will have real impact on our risk of developing cardiovascular disease, and will lower our risk of dying of a heart attack, heart failure or stroke should we already have high blood pressure or problems with our heart. If you are interested in getting support to make some of these changes there is a new virtual program available free of charge in British Columbia through your family practice physician or self referral. HealthSteps is a wellness program that provides customized coaching for lifestyle interventions to reduce the risk of chronic diseases. Trained coaches provide one-on-one support to help make long-term changes that will directly improve health. For more information or to sign up visit their [website](#).

## Sources:

- 1 [BCCDC COVID Report](#): One Year of the Pandemic in BC
- 2 [StatsCan Study](#): The effect of COVID-19 on physical activity among Canadians and the future risk of cardiovascular disease 🌱



# DRB Contracting Ltd. Takes Safety to Heart

Heart disease is the second leading cause of death in Canada behind cancer and strokes are the third leading cause of death. Both heart disease and strokes are related to cardiovascular health. Currently, around 2.4 million adult Canadians aged 20 and over live with diagnosed heart disease.

Heart attacks and strokes are life-and-death emergencies where every second counts. They can strike at anytime, in a moment when you least expect it. Being prepared to jump into action is one of the most important factors to saving a victim's life.

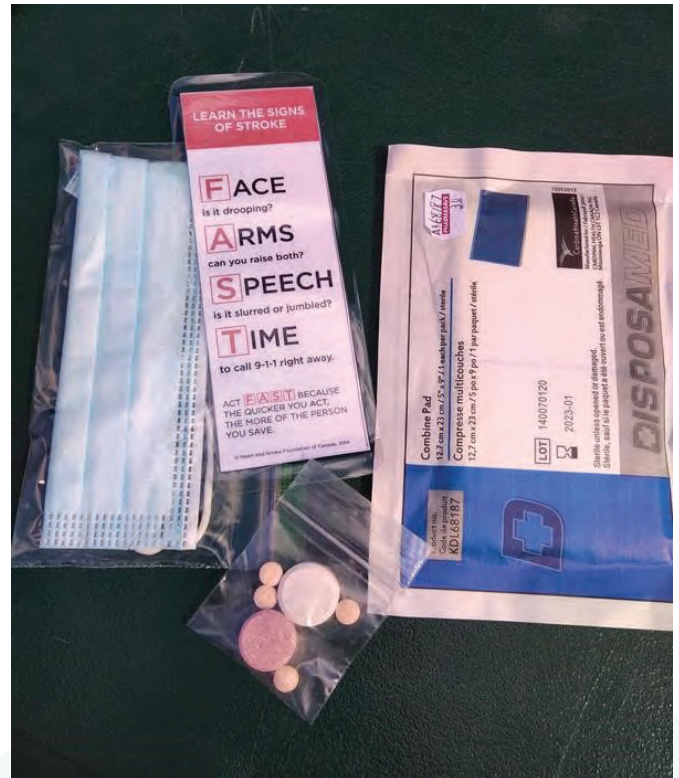
DRB Contracting Ltd, a family-owned and operated business run by Darryl Braaten and Anita Renwall in Clearwater, BC, have been a SAFE Certified company for over 12 years. They take the safety of their worker's very seriously and have taken extra steps in improving workplace safety measures. An innovative idea from Anita, the company's office administrator and safety officer, was to enhance their first-aid and safety kits by including a separate grab kit which is placed in all vehicle glove compartments, both the company and their personal vehicles, as well as in all lunch bags & logging equipment.

Each kit contains a laminated, double-sided SIGNS OF A STROKE and SIGNS OF A HEART ATTACK bookmark, a face mask, low-dose aspirin\* for heart attack symptoms and a compression bandage. The kit is stored in a re-sealable Ziplock bag and has an extended shelf-life since the contents are not affected by heat or cold. The kits are meant to provide some additional equipment to provide better first aid treatment until the person gets professional medical aid.

\*Aspirin can be an effective measure along with the other recommended first aid treatments for heart attacks. Always make sure the person is not allergic and hasn't been advised by their doctor not to take aspirin. Aspirin is not part of the first aid treatment for strokes.

This idea is cost-effective and easy to implement but can make all the difference to someone's life. Our thanks to DRB Contracting for sharing this safety tip and our hats off to them for making safety a priority.

Disclaimer: The Occupational Health and Safety Regulation contains the minimum requirements for first aid equipment. Proactive companies like DRB assess their workplace risks and supplement their equipment. Always check with a medical professional or qualified first aid training provider to ensure additional contents included in first-aid kits meet the recommended measures or treatments as suggested. 🧘





## Colouring Contest

Thanks to everyone who entered our June colouring contest. **Congratulations to Emilie-May, age 6**, whose name was picked from our random draw. Emilie-May wins the DRIVEN Toy Logging Truck and we will be sending a special gift to everyone else just for entering!

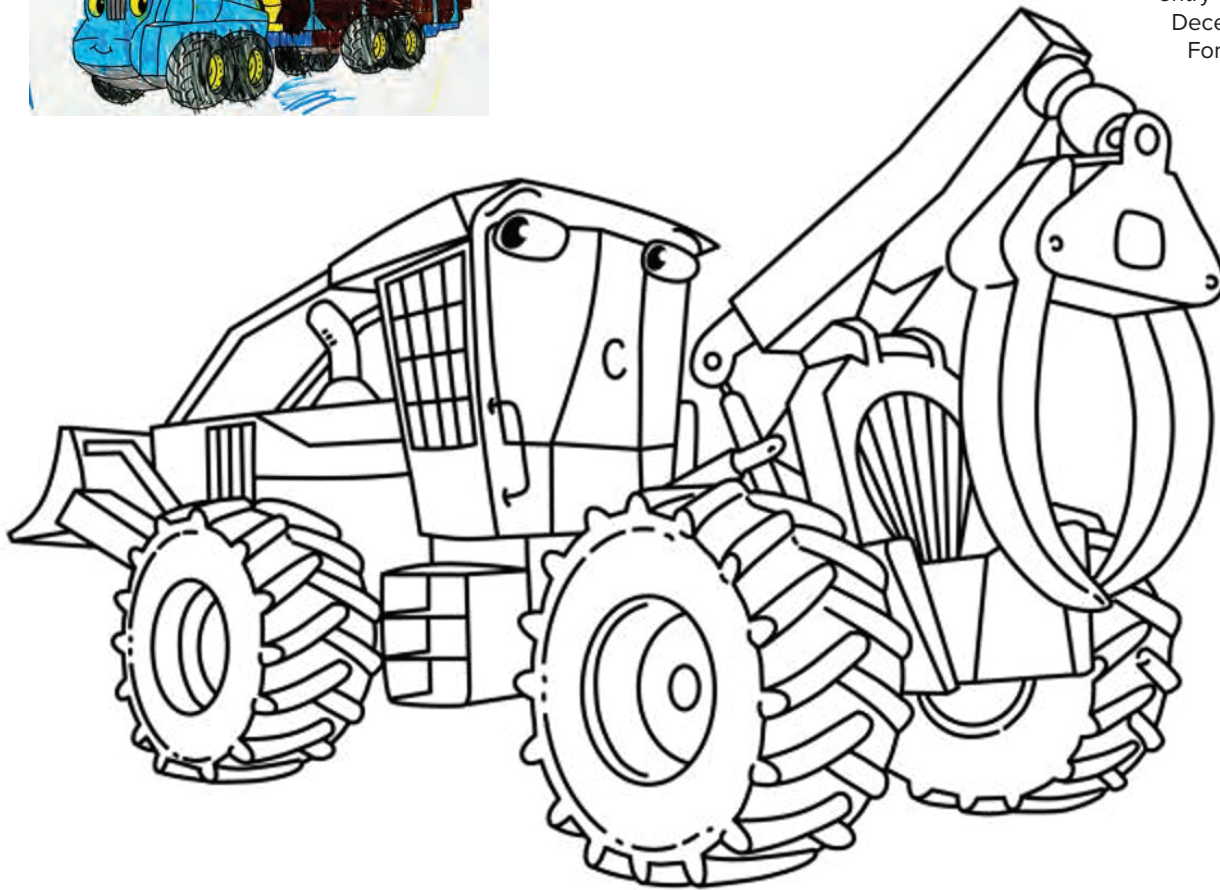


For our fall issue, send us a picture of your artwork and enter to win our super cool DRIVEN Toy Logging Truck – it even has a crane arm and logs! Have your mom or dad, grandma or grandpa or guardian email us a photo of your artwork with your first name and age and we'll put your name into the draw.



## How to Enter:

- Colour the Skidder or make your very own drawing.
- Have an adult take a picture of your artwork and email it with your name, age and your mom/dad's email address to [editor@bcforestsafesafe.org](mailto:editor@bcforestsafesafe.org)
- Submit your entry by 4pm, Friday, November 5, 2021.
- Kids aged 3 – 12 are eligible.
- All entries will be put into a random draw to win the toy logging truck. The winner will be contacted via their parent's email address and the winning entry will be featured in the December 2021 issue of the Forest Safety News. 🌲



## ABOUT Forest Safety News

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