PROTECTING CONSTRUCTION SITES FROM WILDFIRES

Wildfires can quickly spread from the forest to a community, including construction sites. It is important during the summer wildfire season to keep your site as prepared as possible in the event of a wildfire. To prepare effectively, proper fire safety planning must be done before the summer months.
Planning for summer wildfire season:

- Before the summer months, it's important to review your Fire Safety Plan to ensure that it is up to date. Fire Safety Plans should be updated every 4 months as a minimum. Don't forget to conduct a fire drill at least annually. See the attached checklist for fire safety planning.
- Review your Emergency Response Procedures with your workers. It's imperative that all workers know the emergency response procedures for a fire, especially if there is risk of a wildfire.
- Establish roles and responsibilities on your emergency response plan so everyone knows what to do in the event of an emergency.
- Assign someone to review the BC Active Wildfires list to monitor activity that may be in your area. Stay up to date on evacuation alerts, orders and industry restrictions as fire conditions can change quickly (less than a few hours). Anyone on evacuation alert should be ready to leave within 30 mins at most.
- Know if you're in the fire department jurisdiction and which one. If you are out of jurisdiction, you may require provincial resources (BC Wildfire). Be aware of this as the response time will likely be longer. If your site is located in a rural urban interface, ensure local water supply and have sprinklers available. Contact the local fire department or fire smart as should be able to explain how they'll get water to your location.

  Some helpful links are:

  - **BC Wildfire Dashboard (arcgis.com)** (Interactive ArcGIS Wildfire Dashboard – shows all fires and their location, status, and size)
  - Wildfires of Note (highly visible, large, or impacting structures): **http://bcfireinfo.for.gov.bc.ca/hprScripts/WildfireNews/OneFire.asphttp://bcfireinfo.for.gov.bc.ca/hprScripts/WildfireNews/OneFire.asp**

Before and during wildfire season, you should practice good fire safety on site. In accordance with the **BC Fire Code**, some ways to keep your site fire safe are:

Equipment Needs Assessment and Inventory - establish this inventory so you are aware of what is required, e.g. water tanks, pumps, hoses, portable water cans (backpack style) and where it is located.

Exit Lighting, Exit Signs & Emergency Lighting - in conformance with the BC Building Code, exit lighting & exit signs shall be illuminated during times when the building is occupied.

Fire alarm systems must have a working A/C power-on bulb, be kept in good working condition with no audible or visual damage. They must have a current service tag (dated within the last 12 months) and up-to-date logbook. Electrically supervised alarm (with trouble alarm and light) must be inspected and tested by qualified personnel at least once per year. Systems that aren't electrically supervised must be inspected and tested by qualified personnel each month. Consider investing in sprinklers that are set on high points of all structures.

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Fire department consultations - contact your local fire department to do a walkthrough of your site. You can also get a firesmart assessment done **https://www.firesmartcanada.ca/**

Fire department vehicle access - must always be available to at least one face of every building via a street, yard or private roadway. Ensure that there is clear signage if multiple driveways and that the address and street number are clearly labelled.

Fire Extinguishers located to be accessible. Installed in accordance with NFPA 10 whereby the owner has an obligation for the care and use of all the extinguishers at all times. Also ensure you have the right fire extinguisher for the job.

Fire Hydrants must be accessible, free of damage and serviced within a specified date. Confirm compatibility of hydrant connections with hose connections.

Fire separations must have no holes or openings that compromise their purpose.

Garbage disposal: containers must be kept closed when not in use and be located 3 metres from combustible buildings. If kept inside, commercial containers should have tight fitting lids and be kept in fire-separated rooms.

Hot work - as per BC Fire Code, ensure that you follow the fire watch requirements which include a 4-hour post-activity check or the use of a thermal camera. Ensure that you have safe job procedures developed to control hot work activity. For example, a mechanic or welder coming to site to fix heavy equipment or other operations of heavy equipment that is liable to generate heat low to the ground (exhaust pipes, engines).

Ladder fuels - ladder fuels are any materials that allow fire to climb up the trunk of a tree and into the canopy (candling), such as piled debris, brush, or limbs. If your site is located near forested areas, remove fuels from the edge of the tree line. Ensure trees are limbed to prevent flame height growing which causes candling.

Mechanical rooms (such as boiler, furnace, electrical rooms) must provide clear access to equipment, and, in the case of boiler rooms, must contain no storage. In the breaker box, all switches and/or fuses should be identified, including the fire alarm breaker. Doors must remain closed, with self-closing devices in boiler rooms.

Smoking - Around construction sites, especially where there is adjacent grass or foliage, discarded cigarettes are the most likely source of ignition. While you might ban smoking on your site, those workers who smoke will do so in the public areas around your project. To prevent wildfires, and to be a good neighbour, it is worthwhile to establish a designated smoking areas within or immediately adjacent to your site.

Smoking is permitted, in accordance with the **BC Fire Code** in an area that is specifically designated with signage, provided a safe disposal receptacle (ashtray) for smoking material. For example, a metal bucket filled with water or sand, and a minimum of 3m (10') from buildings under construction or other combustible/flammable material storage.

Storage areas must be kept free of excessive clutter, with aisle widths of at least 36 inches in larger rooms. All combustible materials must be stored away from buildings.

- Ensure that **Outdoor Storage areas** are in good condition and arranged in a manner that minimizes fire risk. Keep outdoor storage areas spread out and limit fuel loading and fuel continuity.
- You can also consult with fire department on flammable liquid storage hazard mitigation (ie. Gasoline, propane)
- Check to ensure there is proper venting as it can help reduce risk of explosion.

Vehicles - establish parking requirements away from grasslands. Be aware of vehicles with potentially hot exhausts as sparks can create a fire hazard.

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If your site is at risk of a wildfire:

- Be aware during wildfire season of any evacuation orders and alerts. Check here regularly: **https://www.emergencyinfobc.gov.bc.ca/wildfires-2021/**
- If you are under an Evacuation Alert, make sure you are prepared to go on short notice
    - Make sure all workers are aware of the alert
    - Ensure that people have supplies if they need to evacuate directly from your worksite,
    - Arrange worker transportation to be available and ready if workers do need to evacuate at short notice.
    - Make sure site is as secure as possible in case you do need to evacuate.

Resources

Wildfire Evacuation Planning

BC Wildfires of Note

BC Wildfire Dashboard

Fire Smart Canada

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FIRE SAFETY PLANNING CHECKLIST FOR CONSTRUCTION AND RENOVATION PROJECTS

At a minimum, a fire safety plan should include the following information. The fire safety plan must be reviewed and updated as construction/demolition progresses.

USE THIS FIRE SAFETY PLANNING CHECKLIST WHEN BUILDING YOUR FIRE SAFETY AND EMERGENCY PLANS.				
1.	**Emergency Procedures and Information**	**YES**	**NO**	**N/A**
	Who is the designate and backup person responsible to sound the fire alarm (horn)?			
	Who is the designate and back up person to notify the fire department (9-1-1)			
	Is instruction given to site personnel on the procedure to follow when an alarm is sounded?			
	Are exit routes clearly visible within the site and on all floors?			
	Do you keep a list of on-site personnel? Can everyone be accounted for in an emergency?			
	Are there persons assigned as site fire wardens?			
	Are the site fire wardens trained to meet the Fire Department upon arrival and give information, such as location of fire or injury?			
2.	**Training of site personnel on evacuation procedures:**	**YES**	**NO**	**N/A**
	Is site orientation provided?			
	Are site fire safety meetings a part of regular safety meetings?			
	Are simulated fire drills conducted when applicable and warranted?			
3.	**Assigned site personnel must be responsible to install and maintain fire safety duties such as:**	**YES**	**NO**	**N/A**
	Controlling combustibles on the site and around buildings			
	General Site Housekeeping.			
	Removing excess pallets, garbage/waste material and other combustibles on a regular basis.			
	Maintaining separation of combustibles from open flame sources.			
	Maintaining clear unobstructed access route (s) for fire department apparatus and to fire hydrants.			
	Designating and maintaining at least one exit from every floor.			
	Separating access routes from materials stored on site-, combustibles etc.			
	Parking of vehicles or delivery trucks should not obstruct fire department access to the site; and adjacent buildings.			
4.	**Firefighting Services - Hydrant, Siamese Connection, Sprinkler, Access Route**	**YES**	**NO**	**N/A**
	Are they installed, tested and activated at the start of construction?			
	Are firefighter access route(s) to the building provided?			
	Are firefighting services (standpipes, hydrants) maintained and accessible?			
	Do drawings provided to the fire department show the location of firefighting systems as they become operational?			

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5.	Fire Extinguishers:	YES	NO	N/A
	Is there sufficient quantity and type-on site? • Such as 2-A:10-B:C on movable equipment? • 4-A:40-B:C in all other locations?			
	Is the servicing up to date (within the last year)			
	Are they provided at or near fuel operated equipment?			
	Are they mounted with proper signage at exit locations within the required travel distance?			
	Are they adjacent to any hot works operations (e.g. welding, cutting torch, torching, etc.)?			
6.	**Hot Works Operations:**	**YES**	**NO**	**N/A**
	Is the area clear of flammable and combustible materials?			
	Is a fire watch assigned during a hot works operation and for 60 minutes after its completion?			
	Is there a final inspection of the hot works area 4 hours after completion?			
	Are the hot works in the proximity of combustible or flammable materials?			
	Have provisions been made for protection of such materials by non-combustible materials, thermal barrier or other means?			
	Is the work being performed by trained and certified personnel?			
	Is a fire extinguisher present at all times? • Such as 2-A:10-B:C on movable equipment? Or 4-A:40-B:C in all other locations?			
	Is proper ventilation provided?			
	Are the hot tar pots on-site complete with fire extinguishers, trained personnel, and located away from combustible materials?			
7.	**Flammable and Combustible Storage:**	**YES**	**NO**	**N/A**
	Are flammable and combustible liquids properly stored, handled and used in and around the building?			
	Is the storage area separated from combustible material by 3 metres?			
	Are non-petroleum based compressed gases properly stored, handled and used in and around the building?			
	Is the storage area locked and vented?			
	Is the storage area protected from vehicular/industrial motorized traffic?			
	Do containers and/or storage areas have proper signage/placards in place?			
	Is there a current or updated list of dangerous goods on-site such as Safety Data Sheets (SDS) as per the Workplace Hazardous Materials System (WHMIS)?			
	Are portable extinguishers provided in close proximity to storage and work areas such as: 2-A:10-B:C on movable equipment or 4-A:40-B:C in all other locations?			
8.	**Electrical Installations and Petroleum Gases:**	**YES**	**NO**	**N/A**
	Do the electrical installations, storage and use of petroleum gases comply with the requirements of the Safety Standards Act and pursuant regulation? (If yes, contact British Columbia Safety Authority 1-866-566-7233)			

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9.	Security	YES	NO	N/A
	What type of on-site security is provided: e.g. locked gate, monitored alarm, 24 hour or nightly walk around?			
	Do security personnel have knowledge of and understand their role in the site's fire safety plan?			
	Can the fire department effectively communicate with the security personnel during an emergency?			
	Do security personnel have access (keys) to locked areas?			
10.	**Contact Personnel**	**YES**	**NO**	**N/A**
	Is there a list of names and telephone numbers of persons to be contacted during and after normal operating hours or in the event of an emergency?			
	Are the contact personnel able to respond in a timely fashion?			
	What is their estimated response to time?			
11.	**Building Diagrams**	**YES**	**NO**	**N/A**
	Are diagrams available on-site? These diagrams should indicate: Plans of each floor area, muster points, location of nearest hydrants, location of fire protection equipment, exit paths, service rooms			

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