Weather

Weather - High Winds

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What are examples of hazards when working in high wind conditions?

High winds may be the result of a storm, hurricane, tornado or other weather event. Hazards include:

- Potential for injury when wind moves objects
- Eye injuries from dust or debris in the air
- Sprains or strains when the wind forces workers to fall, when workers try to reach for an object that is moving away from them, or when the wind pulls objects/doors from their hands
- Potential for injury from broken glass as a result of objects striking a window or a door swinging with force
- Exposure to skin, especially in the cold
- Loads, equipment or vehicles that fall, drop, or tip over
- Breaking of branches or uprooting of trees
- Collapse of building, roof, scaffolding, fencing, towers, etc.
- Broken power lines, leading to risk of electrocution and loss of electricity
- Reduced visibility (due to dust, snow, etc.)
- · Spreading of fire from sparks or equipment
- Operating suspended equipment (swing stages, cranes...)

Wildfire spread

This document covers general situations when working in high winds. For other related topics, please see the OSH Answers for information such as <u>Working in the Cold</u> and <u>Weather - Lightning</u>.

Is wind an issue in Canada?

Yes, it can be. Winds can be the result of tropical storms, low pressure systems or fronts, thunderstorms, Chinooks or local geography.

Environment and Climate Change Canada state that most of Canada will experience wind damage from "straight-line" winds. Straight-line winds are winds that move horizontally along the ground away from thunderstorms. They may also be known as microbursts, downbursts, squall lines, plough lines, or derechos. Winds can also contain swirling dust and debris. Straight-line winds can be as strong as tornados, but they can cause more destruction as they cover a much larger area.

Generally speaking, Environment and Climate Change Canada issues a wind warning when conditions include a sustained wind of 70km/h or more, and /or gusts up to 90 km/h or more (Note: there are some regional variations for when wind warnings are issued). At winds between 60 and 70 km/h, you will have difficulty with balance and walking against the wind.

High wind combined with heavy rain increases the risk of tree limbs breaking or trees uprooting.

What are some steps to take during high winds?

The level of activity will depend on the wind speed, but general steps include:

DO

- Eliminate tasks or stop work when that work becomes too dangerous due to high winds.
- During a high wind event, inspect your workspace for items that can be picked up by the wind and secure them or store them in an indoor space.
- Secure all items such as by bringing indoors or by using weights, ropes, chains, or stakes.
- Secure latches, doors, windows, scaffolding, ladders, etc.
- Be aware when carrying or lifting large objects, such as plywood, that these objects can act as a sail.
- Be aware that structures or objects can suddenly move.
- Take Shelter. Stay indoors. When indoors, stay away from outside walls and windows where possible.

- Bring in pets or livestock for shelter.
- If driving and unable to find shelter in a building, stay in your vehicle. If possible, move to an area where you will be less likely to be hit by falling trees or power lines.
- Keep a distance from high vehicles such as transport trucks, buses, and vehicles towing trailers. Strong gusts of wind can flip these vehicles.
- Use buildings or vehicles to help block the wind.
- Wear fall protection and secure yourself properly when working at heights.
- Wear safety glasses or goggles, as appropriate, and secure PPE as necessary.
- Monitor wind speeds throughout the day when working outdoors and operating equipment.
- Tether your tools to prevent them from being swept up by the wind.
- Be cautious when using power tools, as wind can affect your precision.
- When operating equipment, verify the manufacturer's operating instructions on high winds and maximum wind speeds.
- Assess nearby hazards from trees, powerlines and other items in the surrounding area.

DO NOT

- Do not perform lifting operations, use cranes, or conduct similar activities when it is unsafe to do so.
- Do not overload structures and scaffolding. High winds can increase the stress on them.
- Do not work at heights when high winds are forecasted.
- Do not reach or try to grab an object such as your hard hat if it blows away.
- Do not shelter in large open areas inside buildings, such as gymnasiums or malls.
- Do not shelter in between two buildings where a wind tunnel effect may occur.
- Do not assume conditions will remain steady and rely on initial weather assessment.
 Wind conditions can change quickly.

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