

Climate Change – The Impact on Workers in BC

Bulletin for Members in CUPE BC Region

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I. Introduction:

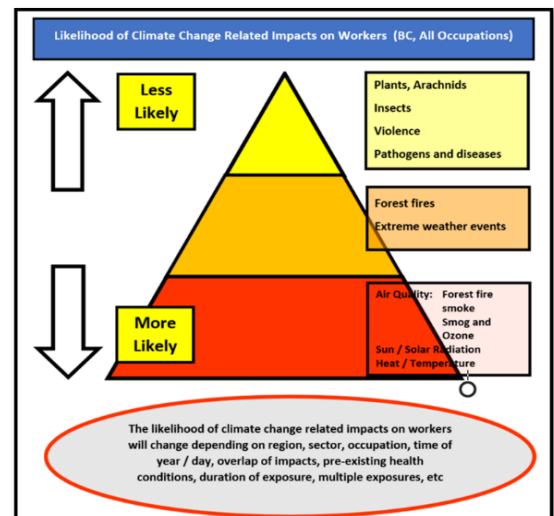
Climate change is an important issue that affects many workers. The purpose of this Bulletin is to summarize key points in the accompanying Guide and Power Point. The Guide reviews a variety of hazards and risks in various sectors and sample occupations in BC and Canada. The Guide also provides information that may need to be considered in responding to the effects of climate change in the workplace. The hazards (including exposures) and risks associated with climate change become more severe and frequent each year. Examples include:

More extreme heat and longer durations of heat events, including humidity	Shorter snow and ice cover seasons
Less precipitation in some areas resulting in droughts and water restrictions	Earlier spring peak streamflow flooding
Less extreme cold in some areas and record cold temperatures in other areas	Extreme winds including the frequency of windstorms
Forest fires and resulting air quality issues	Severe storms and frequency of storms

The most common effects of climate change on workers in BC include: extreme temperatures (heat), poor air quality (forest fires, ground level ozone and smog), extreme weather events (storms such as windstorms) and forest fires.

II. Direct and Indirect Effects of Climate Change:

Both direct and indirect effects need to be considered. This includes immediate and long term hazards and risks, additive effects and multiplier effects. Effects may vary for different workers depending on demographics such as age, gender, the presence of pre-existing conditions and even whether the worker is in precarious employment. The sample flow chart shows the most common effects of climate change in BC for all sectors and all occupations analyzed. (Full size image in the Guide)



III. Extent of the Problem:

There are many impacts on workers e.g. equity seeking groups, the sector, occupation, etc. Climate change impacts that were most supported by studies, WorkSafeBC records and information from other sources and jurisdictions include the following (Canada wide, in no particular order):

Air Temperatures including Humidity



Ultraviolet (UV) / Solar Radiation



Air Quality



Pollen and Other Allergens



Pathogens - Fungi, Viruses, Bacteria, Protozoa (and Parasites - little evidence)



Insects and Arachnids – Fleas (little evidence), Bed Bugs (little evidence), Spiders, Wasps and Hornets, Fire Ants, Mosquitos, Ticks



Rodents



Plants



Extreme Weather Events – Thunderstorms, High Velocity Winds, Tornadoes (no evidence in BC), Turbulence, Precipitation, Flooding



Forest Fires

Violence (little evidence of)

Mental Health and Psychosocial Impacts



IV. Assessing Impacts on Workers by Sector, Occupation and Equity Seeking Groups:

Traditional views of hazard and risk assessment have viewed climate change exposure on a continuum - with more exposure to certain environments as being more hazardous. This is an incorrect, outdated approach. A broad definition of adverse health effect must also be used.

As per the CCOHS and CSA Standard Z1002 "Occupational health and safety - Hazard identification and elimination and risk assessment and control" a risk assessment is the process where the Employer (with the Joint Health and Safety Committee):

- Identify hazards and risk factors that have the potential to cause harm (hazard identification) including equity seeking groups
- Analyze and evaluate the risk associated with that hazard (risk analysis and risk evaluation)
- Determine appropriate ways to eliminate the hazard or control the risk when the hazard cannot be eliminated

Risk assessment is a term used to describe the overall process or method where a person(s):

- Identify hazards and risk factors that have the potential to cause harm (hazard identification)
- Analyze and evaluate the risk associated with that hazard (risk analysis and risk evaluation)
- Determine appropriate ways to eliminate the hazard or control the risk when the hazard cannot be eliminated (risk control)

Hazard and risk assessments must consider more than immediate hazards. They must consider potential hazards, including: direct and indirect effects, multipliers and additive effects. This includes short term and long term hazards. The following sample table shows potential hazards and risks to workers. The following is the first page of the Guide for illustration purposes only. The entire table is in the Guide. Add equity seeking groups.

Sample Types and Levels of Hazards and Risks		Hazard and Risk Levels				
Types of Hazards and Risks		Unknown	None	Low	Medium	High
Air Quality – forest fire smoke, ozone, pollen (note: pollen and mould also have their own categories below), smog, Volatile Organic Compounds						
Duration of exposure to hazard						
Types of injuries and diseases that may occur						
Chance / Probability of occurrence of each type of injury or disease						
Hazard and risk controls already in place						
Extreme Weather						
Thunderstorms						
Duration of exposure to hazard						
Types of injuries and diseases that may occur						
Chance / Probability of occurrence of each type of injury or disease						
Hazard and risk controls already in place						
Other Types of Storms						
Duration of exposure to hazard						
Types of injuries and diseases that may occur						
Chance / Probability of occurrence of each type of injury or disease						
Hazard and risk controls already in place						

V. Areas of the Occupational Health and Safety Legislation and Regulations to Consider:

There are a number of areas of occupational health and safety that need to be considered:

- Legislation, regulations and standards, such as (federally, provincially and internationally):
 - Occupational health and safety (OHS) legislation, regulations, policies and guidelines – provincial and federal
 - NIOSH
 - CSA Group Standards
 - International Organization for Standardization
 - CCOHS

- Employer policies and procedures that include:

- Assessment and control of hazards and risks
- Hazard and risk communication
- Development of early warning systems and surveillance
- Prevention through design
- Education of workers
- Joint Occupational Health and Safety Committee participation

The specific areas of legislation and regulation that may need to be addressed include:

- General conditions
- Health and safety programs
- Due diligence
- Worker orientation
- The roles and responsibilities of the management representatives, workers, supervisors, contractors, the joint health and safety committee, worker health and safety representatives (this is a partial list. There may be more than one worksite / location)
- Hazard identification and risk assessment
- Elimination, management and control of hazards and risks
- Right to refuse
- Exposure control plans
- Development of general safety procedures
- Personal protective equipment
- Health and safety monitoring systems
- Emergency rescue plan development and implementation
- Incident investigation
- Corrective and preventative actions
- Travel / transportation to and from workplace
- Training and education
- Determining fitness for work
- Working alone

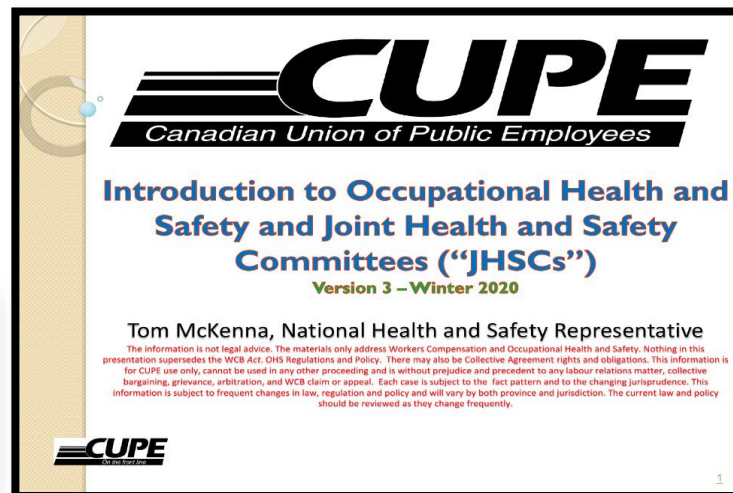
VI. Conclusion:

When considering the impact of climate change on the workplace, assessment and management of immediate and long term hazards and risks, whether direct or indirect (and considering threat multipliers and additive effects), must occur on an ongoing basis – hazard and risk control is not a one time event. The workplace must have a health and safety program that includes key elements such as the following (see the CSA Group Standards, CUPE resources, CCOHS resources, etc.):

- Implementation of a hazard and risk management system that focuses on hazard elimination
- Ongoing hazard and risk assessments
- Full and equal participation of the Joint Health and Safety Committee
- Educating workers on all aspects of health and safety

See the CUPE Power Point for Joint Health and Safety Committees at:

<https://www.cupe.bc.ca/committee/occupational-health-and-safety-committee/>



Workers are the canaries in the coal mine of climate change (Roelefs and Wegman, 2014):

“Workers’ exposures are greater in frequency, duration, and intensity and, thus, represent the ‘sentinel cases’ that sound the alert to the larger society health effects.”

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