

Safety & Health Guidance: Severe Weather Considerations for Community-Based, Outdoor Activities

This document reviews severe weather considerations for program management who oversee community-based, outdoor activities and staff who spend a considerable time outdoors to perform their work activities (e.g. cooling tower inspectors, pest control workers). It also relates to staff commutes that may require extended periods traveling to/from locations on foot outdoors during the workday (excluding commute to/from home). Staff who work mostly indoors are expected to follow general guidance issued by the City of New York for dealing with severe weather.

Introduction

Prior to beginning any outdoor work, employers and supervisors should check the [NOAA weather report for NYC](#) (weather.gov) and radio forecasts for all weather hazards. Staff that work in the community should download the [Notify NYC app](#) (see <https://www1.nyc.gov/site/em/resources/notify-nyc-app.page>) to receive NYC Emergency Management alerts. You can select notification types and limit to “Weather Notifications”.

Programs that have a sizable number of staff performing outdoor work should consider sending weather alerts prior to and during severe weather days to alert staff of precautions and any modified work functions.

Heat Stress

Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress. To keep internal body temperatures within safe limits, the body must get rid of its excess heat, primarily through varying the rate and amount of blood circulation through the skin and the release of fluid onto the skin by the sweat glands. (Sweating does not cool the body unless the moisture is removed from the skin by evaporation. Under conditions of high humidity, the evaporation of sweat from the skin is decreased and the body’s efforts to maintain an acceptable body temperature may be significantly impaired). Heat-related illnesses occur when the body is not able to lose enough heat to balance the heat generated by physical work and external heat sources.

General Information about Heat Illness

Staff working in the community that are exposed to hot weather/environments are at risk of heat illness. Supervisors should review the following OSHA resources related to heat illness and share with staff before summer temperatures take hold:

- <https://osha.gov/Publications/osha-niosh-heat-illness-infosheet.pdf>
- https://www.osha.gov/OshDoc/data_Hurricane_Facts/heat_stress.pdf
- <https://www.osha.gov/Publications/osha3154.pdf>
- https://www.osha.gov/SLTC/heatillness/3431_wksiteposter_en.pdf

Using the Heat Index

For staff working outdoors in hot weather (or who may have extended periods traveling to/from locations on foot outdoors during the day), both air temperature and humidity affect how hot they feel.

The "heat index" is a single value that takes both temperature and humidity into account. The higher the heat index, the hotter the weather feels.

Staff and supervisors should check the weather forecast for Heat Index during summer months. Refer to OSHA's Protective Measures to Take At Each Risk Level – which indicates actions based on the Heat Index (see https://www.osha.gov/SLTC/heatillness/heat_index/protective_measures.html).

Moderate risk is defined as a **Heat Index** between 91F to 103F. General expectations for manager/supervisors include:

- New workers or workers performing work at the start of the summer season may be more sensitive to heat and should consider taking additional precautions until they are acclimated
- Encourage workers to wear sunscreen (note: this should not be limited to summer months)
- Remind workers to drink water often
- Review heat-related illness topics with workers including what to do if symptoms occur
- Schedule frequent breaks in a cool, shaded area.
- For staff who spend most of their day working outdoors (e.g., Pest Control clean-up crews), supervisors and staff members should be in regular contact to monitor conditions and employee well-being. Staff members who work in teams of 2 or more can also establish a "buddy" system for the purpose of regular check-ins.

If workers must wear heavy protective clothing, perform strenuous activity (e.g. moving dirt and garbage while cleaning up an abandoned vacant lot), or pest control staff moving bags of pesticides) or work in the direct sun, additional precautions are recommended to protect workers from heat-related illness.

- *Schedule activities at a time when the heat index is lower*
- *Develop work/rest schedules*
- *Monitor workers closely*

High risk is defined as a Heat Index between 103F to 115F. When possible, reschedule activities to a time when heat index is lower if work requires prolonged or significant physical exertion, prolonged exposure to the sun on rooftops, or the use of protective coveralls such as Tyvek.

If the activity is not rescheduled, in addition to the steps above:

- Alert workers of high-risk conditions
- Modify duties to limit physical exertion
- Establish and enforce work/rest schedules
- Adjust work activities (e.g., reschedule work, pace/rotate jobs)
- Maintain regular contact between supervisors and staff members to monitor conditions and employee well-being

Very high risk is defined as a Heat Index greater than 115F. Under these circumstances, unless the work is essential, re-schedule activities for days with a reduced heat index or to a time when the heat index is lower. Move essential work tasks to the coolest part of the work shift; and consider earlier start times or evening/night shifts. In the event an employee would like to adjust their shift to begin earlier or later to account for a very high risk index they should speak with their supervisor and divisional HR in order to request that a schedule override be granted.

Cold Stress

Staff working in the community that are exposed to cold and windy conditions are at risk of cold stress. High winds, wet weather, and icy conditions are especially hazardous for those who work on roofs.

General Information about Cold Stress/Weather Hazards

Supervisors should review the following OSHA resources related to cold stress and share with staff before winter temperatures take hold:

- <https://www.osha.gov/Publications/OSHA3156.pdf>
- <https://www.osha.gov/Publications/OSHA3982.pdf>

Wind Chill and Wind Chill Temperature

Wind chill is the term used to describe the rate of heat loss from the human body, resulting from the combined effect of low air temperature and wind speed. The Wind Chill temperature is a single value that takes both air temperature and wind speed into account. For example, when the air temperature is 40F and the wind speed is 35mph, the wind chill temperature is 28F. National Weather Service has a [Wind Chill Chart](#) showing wind chill temperatures for reference.

While there is no regulation around air temperature or wind chill temperature limit, the goal is to identify and institute appropriate engineering and administrative control measures to limit worker exposures to extreme situations.

Where staff are conducting outdoor operations for extended periods of time (e.g., exceeding 2 continuous hours), **with limited movement and no ability to take frequent breaks indoors (including a vehicle)**, Assistant Commissioner (or his/her designee) should consider suspending (or modifying) operations if *air temperatures* drop below 32F (0 degrees C) or if *wind chill temperatures* are 27F or below. Factors may exist (e.g., wind speed, rain, etc.) where air temperatures or wind chill temperatures above these thresholds may also warrant suspending (or modifying) operations.

Working Safely in High Winds

Working at heights is especially risky in high winds as the lack of shelter exposes workers to stronger gusts that can throw workers off balance. Do not schedule work at elevations on days where high winds are forecast. Work on roofs or other elevations during strong winds (steady wind speeds in excess of 18 mph or wind gusts over 30 mph) should be re-scheduled.

Other hazards created by wind can include, but are not limited to:

- Objects falling from elevated surfaces
- Struck-by incidents, due to objects blown around
- Eye injuries caused by flying dust and debris

Winter Weather Warnings and Advisories

Supervisors should review safety provisions for winter weather advisories with staff. As with above, programs should also consider suspending non-urgent/non-emergency work for days where there are or projected to be any of the following warnings or advisories:

- **Blizzard Warning:** Issued for sustained or gusty winds of 35 mph or more and falling or blowing snow creating visibilities at or below ¼ mile, where these conditions should persist for at least 3 hours.
- **Wind Chill Advisory:** Issued when wind chill temperatures are expected to be a significant inconvenience to life with prolonged exposure and, if caution is not exercised, could lead to hazardous exposure.
- **Wind Chill Warning:** Issued when wind chill temperatures are expected to be hazardous to life within several minutes of exposure.
- **Winter Storm Warning:** Issued when hazardous winter weather in the form of heavy snow, blizzard conditions, heavy freezing rain, or heavy sleet is imminent or occurring. Winter Storm Warnings are usually issued 12 to 24 hours before the event is expected to begin.

The attached Winter Weather Safety Bulletin also provides useful information.



Winter Weather
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Prevent Slips and Falls

Winter weather can increase the risk of falls. To prevent slips and falls during icy conditions:

- Extend your arms to keep balance while walking, point your feet slightly outward, and take short shuffle steps
- Make sure to wear footwear with proper traction
- Use handrails and walk in designated areas
- Always assume dark wet areas on pavement are black ice

Lightning Safety When Working Outdoors

Workers whose jobs involve working outdoors in open spaces (e.g., pest control cleanup crews, beach inspectors) and on roofs (e.g., cooling tower inspectors) should be aware of lightning risks. Many lightning victims are caught outside during a storm because they did not act promptly to get to a safe place, or they go back outside too soon after a storm has passed. If signs of approaching thunderstorms occur, workers should not begin any task they cannot quickly stop. Proper planning and safe practices can easily increase lightning safety when working outdoors.

Some tips:

- Watch for darkening clouds and increasing wind speeds, which can indicate developing thunderstorms
- When thunder roars, go indoors. If you hear thunder, even a distant rumble, get to a safe place immediately. Any thunder you hear is caused by lightning. NOAA advises that nowhere outside is safe when thunderstorms are in your area.
- Seek shelter in a nearby public location (e.g., subway station)

- Vehicles as Shelter: If safe building structures are not accessible, workers can seek shelter in a vehicle with rolled up windows.
 - Lightning is likely to strike the tallest objects in a given area. As such, avoid isolated tall trees, ladders, and rooftops.

- Avoid water, and immediately get out of and away from bodies of water (e.g., pools, lakes). (Water does not attract lightning, but it is an excellent conductor of electricity).
- Avoid wiring, plumbing, and fencing. Lightning can travel long distances through metal, which is an excellent conductor of electricity.
- Do not shelter in sheds, pavilions, tents, or covered porches as they do not provide adequate protection from lightning.