

Lightning and Hail

ACTSAFE SAFETY BULLETIN #38a

This bulletin describes safety considerations for lightning and hail. While accompanying thunder is not considered a hazard itself, it can be a warning that there's a potential for lightning or hail.

Lightning results from the buildup and discharge of electrical energy in clouds. Lightning can strike several kilometers from an associated thunderstorm. It can strike even when there are no clouds or rain.

Hail is usually associated with thunderstorms. It is caused by freezing rain and can range in size from 5 mm (0.2 in.) to 15 cm (6 in.).

HAZARDS

Lightning hazards include lightning strikes as well as fire and falling debris resulting from a strike. Resulting injuries may include electrocution, burns, and concussions.

Hail can result in crew injuries and equipment damage.

CONTROL MEASURES

Lightning

If lightning or hail might affect your production, check the weather forecast and plan accordingly. Consider the following control measures:

- Seek shelter in a sturdy building or a hardtop vehicle with the windows rolled up. If those aren't options, try to seek shelter in a thickly wooded area. Avoid tall, isolated trees.
- Avoid high ground and keep clear of tall objects, towers, aerial lifts, camera booms, scaffolding, fences, and other metal equipment.
- Avoid contact with any body of water.
- Avoid using telephones.
- Avoid using other electrical equipment or appliances.
- Turn off generators and other powered equipment, if it is safe to do so.
- Postpone high-risk activities such as work from heights and work involving elevated platforms, lifts, scaffolding, booms, mobile equipment, camera cars, stunts, pyrotechnics, or cranes.
- Stay in a safe location for 30 minutes after you hear the last rumble of thunder.
- Move to your pre-determined safe area or muster station, if instructed to do so.
- Don't return to an evacuated area until someone with authority has given the "all clear" signal.
- For more information, refer to the OHS safety program of your production.

Estimating distances from lightning

You can calculate how far away a lightning strike is by counting the seconds between a flash of lightning and the sound of thunder. Divide the seconds by three to get the distance in kilometers.

For example: a 9 second gap divided by 3 means the lightning is 3 km away.



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Hail (any size)

If a hail watch or warning is issued, follow the procedures described in your production's safety plan. In addition, consider the following control measures:

- Secure and protect all equipment.
- Get down from elevated areas, including aerial lifts, booms, and scaffolds.
- Move to your pre-determined safe area or muster station, if instructed to do so.
- Don't return to an evacuated area until someone with authority has given the "all clear" signal.
- For more information, refer to the OHS safety program of your production.

REGULATORY REFERENCES

For information on requirements for written rescue and evacuation procedures, see [section 4.13, Risk Assessment](#), in the Occupational Health and Safety Regulation.

You can find searchable versions of the Regulation and the guidelines at www.worksafebc.com.

Actsafes Safety Association

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