



Weather Monitoring and Lightning Safety

TOOLBOX TALK: Weather Monitoring & Lightning Safety

RATTLIR Safety Series – “Strike Before It Bites”

Purpose

Weather can change rapidly and create hazardous conditions, especially lightning, high winds, heavy rain, and reduced visibility. This toolbox talk explains how to monitor weather conditions, understand lightning risk, and take proactive steps to protect personnel and equipment.

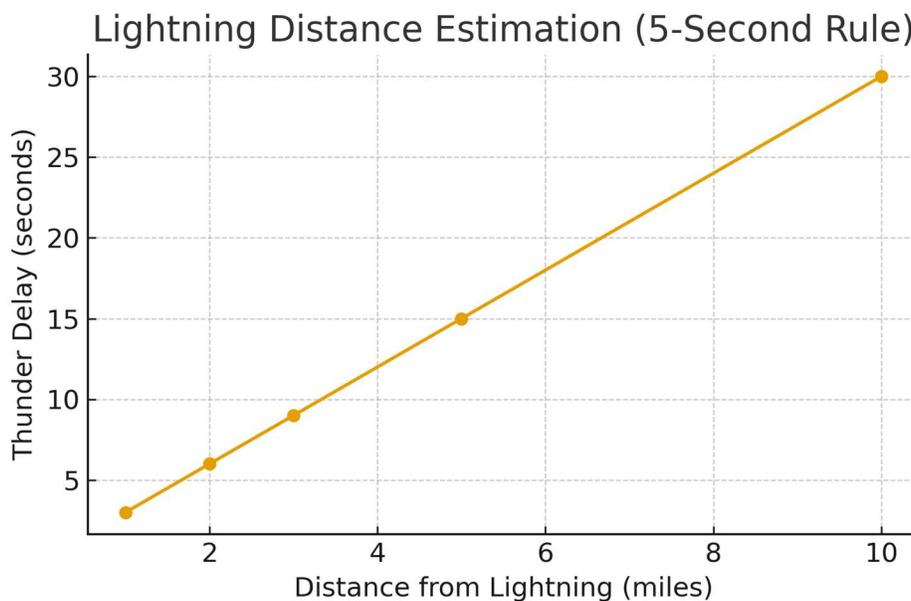


Figure 1 – Using thunder delay to estimate lightning distance (5 seconds \approx 1 mile).

Weather Monitoring Methods

- Use trusted weather apps, NOAA alerts, and radar tools to track storms.
- Monitor wind speed, storm cell movement, and lightning strike patterns.
- Use on-site weather meters when working in remote areas.
- Stop elevated or outdoor work when storms appear on radar within 10 miles.
- Designate a weather watcher during high-risk operations.



Weather Monitoring and Lightning Safety

Lightning Safety Rules

- Follow the 30/30 Rule: If thunder occurs within 30 seconds of lightning, seek shelter immediately.
- Stay sheltered for 30 minutes after the last thunder before resuming work.
- Avoid open areas, isolated trees, towers, rooftops, and metal structures.
- Stop drone operations immediately when lightning is within 10 miles.
- Avoid contact with conductive equipment such as ladders, vehicles, and scaffolding.
- Do not handle electrical tools or cords during thunderstorms.

High Wind & Storm Hazards

- Secure loose materials and tools before storms arrive.
- Stop work at heights when winds exceed safe operating limits. A general rule of thumb is to stop elevated work when:
 - Sustained wind speeds reach 25 mph
 - Gusts reach 30 mph
- Postpone lifting operations, crane work, or drone flights in gusty conditions.
- Avoid standing water, which can hide slip hazards or energized conductors.

Emergency Response

- If lightning strikes nearby, move all personnel to fully enclosed vehicles or buildings.
- Call emergency services if someone is struck – victims do not carry an electrical charge.
- Begin CPR/AED immediately if the victim is unresponsive.
- Document weather conditions and stop-work actions.

Discussion Questions

- Are storms or lightning present within 10 miles of today's worksite?
- Who is monitoring weather conditions during field activities?
- Do high winds or lightning require stopping work or securing equipment?

RATTLIR Takeaway

Weather hazards escalate quickly, but they are predictable with proper monitoring. Watching the skies, and the radar, ensures we strike before it bites.