

Severe Rainfall and Flooding

ACTSAFE SAFETY BULLETIN #38b

Severe rainfall, or heavy rain, generally refers to an amount of rain that substantially exceeds what is normal for a particular area. An atmospheric river is a long, narrow band of concentrated water vapour in the atmosphere — like a river in the sky. These weather systems travel from the tropics toward the poles and hit the west coast of North America.

Atmospheric rivers and slow-moving thunderstorms can result in flooding or flash flooding. Flash flooding can occur within a few minutes or hours of heavy rain.

HAZARDS

Potential rainfall and flooding hazards include:

- Rapidly rising rivers or creeks
- Mudslides
- Limited visibility
- Workers or equipment being trapped or stranded when escape routes are damaged or blocked
- Workers or equipment being swept away or covered by water, mud, or debris

Rain and flooding can result in serious incidents such as drowning, electrocution, or hypothermia, even if temperatures are above freezing.

High-risk locations include low water crossings, recent burn areas in mountains, and urban areas with pavement and roofs that concentrate rainfall runoff. The risk increases when working near flood plains, rivers, lakes, or other bodies of water.

Flash flooding can be worse in areas where there are dry, hard-packed soil conditions and little or no ground cover. It also depends on topography — the arrangement and shape of landscape features.

Be especially cautious at night when it is harder to recognize flood dangers. It does not have to be raining at your location for a flood to occur.

CONTROL MEASURES

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

- Dress for the conditions. Wear waterproof, protective clothing.
- Get down from elevated areas, including scaffolds, booms and sets.
- Secure equipment and electrical power. Use temporary shelters for sensitive equipment.
- Monitor and keep culverts, sumps, and run-off areas clear of debris.
- Stay clear of potential slide areas next to hillsides or on cliff edges.
- If you come upon a flowing stream where water is above your ankles, STOP. Go another way.
- Don't drive through moving water or a flooded roadway.
- 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.
- Follow directions for evacuation procedures as outlined in the production safety plan.



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REGULATORY REFERENCES

- [Sections 4.13 to 4.16, Emergency Preparedness and Response](#)
- [Part 19, Electrical Safety](#)

RELATED RESOURCES

- [Working in Wet or Cold Weather](#) (Toolbox Talk)
- [Preventing Cold-Related Illness](#) (Safety Bulletin)

Actsafes Safety Association

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