

Post-disaster recovery: Keeping your workers safe



Employees are a company's greatest asset. These guidelines can help make their safety a top priority during cleanup and recovery operations.

The damage wrought by a natural disaster can be dangerous and devastating. Cleanup and recovery operations for a business necessarily fall on the employees and contractors hired to cope in these challenging situations. This emergency work can present serious hazards, including structural damage, chemical spills, electrical shock, and heat or cold stress.

Zurich's Risk Engineers bring their experience and knowledge to work by offering guidelines that can help boost worker safety. Consider the following tips a starting point for coping with the effects of a hurricane, flash flood, tornado, blizzard or other severe weather event.

Pre-disaster planning

The best time to prepare for severe weather is long before it occurs. Have a plan in place that includes reviewing the most up-to-date information provided by government agencies and private organizations or firms involved with such cleanup operations. This type of advance preparation will help protect the safety and security of workers, as well as your company's physical assets.

The scope of a disaster may present more challenges than your employees are capable of handling alone. Identify and establish relationships with trustworthy contractors and salvage specialists you can call upon. This list should include hazardous waste-removal professionals. The same safety guidelines you expect your workers to follow should also apply to outside contractors.

Care and planning will help to minimize these hazards, protect your employees and bring your business back to life.



General safety guidelines

- **Check your gear:** Equip workers with the basics in safety equipment, all of which should be available and in good working order: hard hats, safety vests and glasses, heavy work gloves and steel-toed safety boots with non-skid soles. Circumstances and conditions may require additional gear, such as protective clothing to reduce risk from chemicals or extreme cold, as well as protective hearing equipment and/or respirators. Selection of proper equipment should be made by a qualified safety professional.
- **Talk it out:** Before the work begins, activities should be preceded by a pre-plan or "toolbox" meeting to clearly communicate safety strategy to everyone involved.
- **Promote good hygiene:** Severe weather can present a working environment that exposes individuals to toxic chemicals, as well as human or animal waste. Encourage workers to practice good personal hygiene, including washing hands and face, before eating and at the end of a work shift. Provide disinfecting solutions to promote this. Workers should also be trained in the proper use, cleaning, decontamination and maintenance of personal protective equipment.

Physical stress

- **Addressing heat and cold:** Much of the work may be undertaken in extreme temperatures. Heat and cold stress require different strategies, but each can cause severe physical harm ranging from sunburn and dehydration to frostbite and hypothermia. Heat stress is also a significant exposure for workers wearing an extra layer of protective clothing.
- **Staying hydrated:** Potable water should be available to all workers. Those performing heavy work, especially in hot temperatures, should drink cool, clean water several times per hour to maintain electrolyte balance. Dehydration is also a risk in cold weather¹, and warm sweetened liquids are recommended for those conditions.
- **Rest is essential:** Provide workers performing stressful functions at least 15 minutes of rest per hour and schedule longer rest periods in extremely hot temperatures, when concentration and judgment can be adversely affected. Personnel in hazmat Type A gear should be limited to 20 minutes per hour in extreme heat.

Structural, chemical and electrical hazards

- **Overall safety of area:** Before anyone enters a compromised structure or work site, have qualified personnel inspect the area. A visual inspection should be completed by a trained professional and severely damaged areas of a building should be reviewed by a qualified structural engineer. Emergency repairs may be required before operations can begin. Isolate unsafe areas with physical barricades or other means, such as signs, to restrict access.
- **Don't neglect confined spaces:** A typical confined space is large enough for human entry with limited means of movement. It can present distinctive challenges: lack of oxygen, potential chemical exposure (especially if there's standing water) and mechanical hazards. Qualified personnel should inspect for weakened structure, air quality and other potential risks before anyone enters.
- **Chemical spill safety:** Qualified personnel should evaluate the extent of, and worker exposures associated with, hazardous chemical spills. Training programs should take into account the hazards present. However, much of the cleanup of chemicals and oil spill debris will be considered hazardous waste cleanup. Hazardous materials training, such as OSHA's HAZWOPER standards training, should be provided by competent personnel when appropriate.
- **Utility risks:** Electrical and gas utilities are often shut off by emergency service personnel during natural disasters. Work should not begin until authorities affirm that conditions are safe. Electrocutation also is a risk from downed power lines. Treat them as "live" until your local utility confirms they have been de-energized. Existing systems should be equipped with GFI protection.

- **Water's hidden hazards:** Emphasize caution with areas of standing water, which can camouflage holes and tripping hazards. Live electrical lines, shorted wiring and interior electrical systems may also energize the water. Because waste products or toxic materials can be carried by water, workers should also be mindful of protecting exposed skin, face and eyes.
- **Elevated risk:** Provide solid work areas for those assigned to elevated heights, and use tie-offs and other fall protection if guardrails are not present. If in doubt, postpone this work until adequate lifts and scaffolding are available. Make sure ladders are in good condition and monitor their placement and usage.
- **Generating safety:** If gasoline or diesel generators or compressors are used, adequate venting is essential.
- **Pull the plug on electric-tool risks:** The electrical supply for power tools should be equipped with GFI protection. Guards and safety devices should be in place for all equipment, such as chainsaws. Avoid using extension cords in wet areas.

Removing debris

- **Safety during removal:** Removal of debris should be done with caution. Look for movement or damage to the building's structural elements.
- **Lift lessons:** Practice proper lifting techniques. Workers should use their legs, not backs, to lift heavy items. Workers should also keep the load close to their body. Limit lifts to about 35 to 50 pounds.

Disease prevention

- **Combat disease:** Severe weather events, such as hurricanes and floods, can create a toxic environment for workers. There is significant potential for disease from debris, waste and standing and contaminated water. Assure that all workers have proper immunizations.
- **Worker Rx:** First-aid kits and properly trained personnel should be available to address the various risks workers may face. Each injury, no matter how minor, should be reviewed by a first-aid professional. Extra care should be taken to protect broken skin, such as cuts and scrapes, to prevent disease transmission.
- **Natural enemies:** Post-flooding conditions create a risk of snake and other reptile bites from animals trapped in structures. (Pets or stray animals seeking shelter may also be present and, if injured, present similar risks.) Flood-displaced rats may require the use of rat bait stations, and in areas where insects present disease exposure, workers should use repellent that contains DEET.
- **Battling mold:** Humid, moist areas are prime breeding ground for mold and fungus growth, a potential health hazard. The sooner debris can be removed and the space dried, the less chance of excessive mold growth.

1. "Cold Stress Guide." U.S. Department of Labor Occupational Safety and Health Administration. www.osha.gov

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