

FLOOD HAZARDS AND FLOOD CLEAN UP OPERATIONS BRIEF FOR KYARNG PERSONNEL

Military personnel, workers and volunteers involved with floods and flood cleanup work should be aware of the potential dangers involved and the proper safety precautions. Because the level of experience varies among these workers, cleanup crews must work together and look out for one another to ensure safety. Good communication and situational awareness is key to avoiding accidents. Perform your risk assessments.

Work-related hazards include: Electrical Hazards, Carbon Monoxide, Musculoskeletal Hazards, Thermal Stresses, Heavy Equipment, Structural Instability, Hazardous Materials, Fire, Drowning, Confined Spaces, Power Line Hazards, Agricultural Hazards, Stress, Flash Flooding, Personal Protection Equipment, Chemicals and Waste Hazards in Flood Waters, Displaced Wild Life, Pets and Farm Animals, Communication and Accountability of (command and control) of Deployed Personnel, Mosquitoes, Dealing With Irate Public and Fatigue.

MAJOR HAZARDS

Flash Floods: Flash floods can strike any time and any place with little or no warning. Distant rain may be turn streams and roads into rivers in seconds. Most flood-related deaths occur in automobiles. Two feet of water can float most automobiles. Escaping from a floating vehicle is very difficult, and in some cases nearly impossible. Water pressure on the outside of the vehicle prevents occupants from opening doors. Avoid driving onto water-covered roadways, even if the water depth appears low. Water depth is very difficult to estimate on roads, especially at night, when many flood deaths occur. Observe these flash flood safety rules.

- Don't try to drive through flooded areas. Know the **limitations** of your tactical vehicles.
- Don't attempt to cross flowing water which is more than knee deep. When in doubt, don't cross.
- If your vehicle stalls, abandon it and seek higher ground immediately.
- During threatening weather listen to commercial radio or TV Weather bulletins.

Drowning: When entering moving water, you are at risk for drowning, regardless of your ability to swim. Avoid working alone and wear a Coast Guard-approved life jacket when working in or near flood waters.

Electrical Hazards: To prevent future electrocutions: If water has been present anywhere near electrical circuits and electrical equipment, turn off the power at the main breaker or fuse on the service panel. Do not turn the power back on until electrical equipment has been inspected by a qualified electrician. Never enter flooded areas or touch electrical equipment if the ground is wet, unless you are certain that the power is off. NEVER handle a downed power line.

Carbon Monoxide: Flood cleanup activities may involve the use of gasoline- or diesel-powered equipment. These devices release carbon monoxide, a deadly, colorless, odorless gas, always operate all gasoline-powered devices outdoors.

Musculoskeletal Hazards: Cleanup workers are at risk for developing serious injuries to the hands, back, knees, and shoulders. Special attention is needed to avoid back injuries associated with manual lifting and handling of debris and building materials. Use the buddy system when lifting heavy/bulky items.

Thermal Stresses - Heat: Cleanup workers are at serious risk for developing heat stress. Excessive exposure to hot environments can cause a variety of heat-related problems, including heat stroke, heat exhaustion, heat cramps, and fainting. Drink water at least every hour to reduce heat injuries.

Thermal Stresses - Cold: Standing or working in water which is cooler than 75 degrees F (24 degrees C) will remove body heat more rapidly than it can be replaced, resulting in hypothermia. To reduce the risk of hypothermia, wear high rubber boots, ensure that clothing and boots have adequate insulation, avoid working alone.

Structural Instability: Flood waters can rearrange and damage natural walkways, as well as sidewalks, parking lots, roads, buildings, and open fields. Never assume that water-damaged structures or ground are stable.

Hazardous Materials: Flood waters can dislodge tanks, drums, pipes, and equipment, which may contain hazardous materials such as pesticides or propane. Do not attempt to move unidentified dislodged containers without first contacting the local fire department or hazardous materials team. If working in potentially contaminated areas, avoid skin contact or inhalation of vapors by wearing appropriate protective clothing and respirators. Frequently and thoroughly wash skin areas that may have been exposed to pesticides and other hazardous chemicals.

Fire: Fire can pose a major threat to an already badly damaged flood area for several reasons: inoperative fire protection systems, hampered fire department response, inoperable firefighting water supplies, and flood-damaged fire protection systems.

Communication and Accountability of (command and control) of Deployed

Personnel: Remember to supply personnel assigned to remote locations with adequate amounts of drinking water, food, clothing and other necessities (radios and flash lights). Contingency briefings are also important for “what ifs”. Knowing their locations and rallying points is important too.

Displaced Wild Life, Pets and Farm Animals: Natural Disasters force the displacement of wild and domestic animals. Stress, unfamiliar surroundings and strangers can change the temperament of normally friendly pets

First Aid: First aid is extremely important when exposure to waters potentially contaminated with human, animal, or toxic wastes exists. Clean out all open wounds and cuts with soap and clean water. Most cuts, sustained during flood cleanup activities will warrant treatment to prevent tetanus. Follow up with a doctor.

Protective Equipment: For some work in flooded areas, you will need the following personal protective equipment: hard hats, goggles, heavy work gloves, and watertight boots with steel toe and insole (not just steel shank). Excessive noise from equipment such as chain saws, backhoes, tractors, pavement breakers, blowers, and dryers may cause damage to ears. Wear hearing protection.

STRESS, LONG HOURS, AND FATIGUE MAY INCREASE THE RISKS FOR INJURY AND ILLNESS:

Continued long hours of work, combined with emotional and physical exhaustion and losses from damaged homes can create a highly stressful situation for flood cleanup workers. Workers exposed to these stressful conditions have an increased risk of injury and emotional crisis, and are more vulnerable to stress-induced illnesses and disease.

If you have any questions, or need additional information, please contact me at the State Safety Office: reginald.packer@ky.ngb.army.mil or call me at 502-607-1281.

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