

Hurricane Response

Deployment Guide

This deployment health guide provides information that can help reduce risk of injury and disease when you're deployed in response to a hurricane. The Defense Health Agency (DHA) **Procedural Instruction 6490.03, Deployment Health Procedures**, requires actions to be taken pre-deployment, during deployment, and post-deployment, including Health Threat and Countermeasure Briefings.

Authority and Communication

Other federal, state, and local officials may have higher authority than your agency, and they may be coordinating the on-scene efforts.

Communicate with them and understand how your mission fits into the response efforts.

Site Safety

Before you begin any response efforts, an on-scene safety officer should brief you about site safety and health issues. As conditions and missions change, the safety officer should provide updated information to allow for adjustments in safety measures.

Exposure to Floodwater

Avoid unnecessary contact with any floodwater. Flooding can disrupt water purification and sewage disposal systems and overflow toxic waste and chemical storage sites. Some floods can cause sickness in workers who encounter contaminated floodwater. Assume that floodwater is unsafe unless authorities have specifically declared it safe. Wash your hands with soap and water or use hand sanitizer at every opportunity. Before entering floodwaters, you should don plastic or rubber gloves, boots, and other protective clothing needed to avoid contact with floodwater. Use life jackets as warranted.

Insects

Initially, the number of flying insects will be reduced by the storm. However, within 7 to 10 days after the storm, numbers of mosquitoes and flies can rebound to very high levels. To reduce exposure to harmful insects, use the Department of Defense (DoD) Insect Repellent System.

DoD Insect Repellent System

| | | | | | | |
|---|---|---|---|---|---|---|
|  | + |  | + |  | + |  |
| PERMETHRIN-TREATED UNIFORM | | DEET, PICARIDIN, OR IR3535 | | PROPERLY WORN UNIFORM | | PERMETHRIN-TREAT BED NET |

Use ALL elements for maximum protection.

Hazardous Plants

If touched, some plants can irritate the skin; if burned, they can irritate the skin and lungs. Avoid contact with plants when possible, or wash contaminated skin and clothing after contact. "Leaves of three – let them be."

Carbon Monoxide

Carbon monoxide is a colorless and odorless gas that can kill you. Gasoline- or diesel-powered pumps, generators, and pressure washers produce carbon monoxide. Never operate gasoline-powered equipment indoors. Symptoms of low-level exposure include shortness of breath, mild nausea, and mild headaches. If you suspect carbon monoxide exposure, move to fresh air immediately and seek medical attention.

Heat and Cold Stress

Heat (TB MED 507):

- Drink enough water to remain hydrated. If your urine becomes dark yellow and infrequent, drink more fluids.
- Follow fluid replacement and work-rest guidelines, and when possible, work during the cooler hours of the day.

Fluid Replacement and Work-Rest Guidelines for 4 Hours of Work

| Heat Cat | WBGT Index, °F | Easy Work | | Moderate Work | | Heavy Work | | Very Heavy Work | |
|----------|----------------|-----------|--------------------|---------------|--------------------|------------|--------------------|-----------------|--------------------|
| | | Work-Rest | Water Intake qt/hr | Work-Rest | Water Intake qt/hr | Work-Rest | Water Intake qt/hr | Work-Rest | Water Intake qt/hr |
| 1 | 78° - 81.9° | NL | ½ | NL | ¾ | 40/20 | ¾ | 20/40 | 1 |
| 2 | 82° - 84.9° | NL | ½ | 50/10 | ¾ | 30/30 | 1 | 15/45 | 1 |
| 3 | 85° - 87.9° | NL | ¾ | 40/20 | ¾ | 30/30 | 1 | 10/50 | 1 |
| 4 | 88° - 89.9° | NL | ¾ | 30/30 | ¾ | 20/40 | 1 | 10/50 | 1 |
| 5 | > 90° | NL | 1 | 20/40 | 1 | 15/45 | 1 | 10/50 | 1 |

qt/hr: quart per hour NL: no limit WBGT: wet bulb globe temperature

Easy Work = weapons maintenance, marksmanship training, drill and ceremony

Moderate Work = patrolling with a 30-pound load, low and high crawl, digging a defensive position

Heavy Work = patrolling with a 45-pound load, 4-person litter carry (180 pounds), jogging 4 mph

Very Heavy Work = 2-person litter carry (150 pounds), move under direct fire, obstacle course

- Get medical attention for heat cramps, exhaustion, or stroke. Becoming a heat casualty increases the likelihood of subsequent episodes.
- Use sunscreen.

Cold (TB MED 508):

• Remember **C-O-L-D**: Keep clothing **C**lean, avoid **O**verheating, wear clothing **L**oose and in layers, and keep clothing **D**ry.

• Standing or working in water that is cooler than 75° F will remove body heat faster than it can be replaced and can result in hypothermia. Take frequent breaks out of the water.

» Change your socks frequently to keep your feet dry.

• Get medical help for mental slowness, loss of sensitivity in any body part, or uncontrollable shivering.

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Personal Protective Equipment (PPE)

The level of PPE required will depend upon your role in the effort. Anticipate, and bring items such as a hard hat, goggles, heavy work gloves, steel-toed boots, and hearing protection. Some PPE items may not be standard issue for most U.S. military personnel.

Unstable Structures

Assume all structures are unsafe until they are inspected. Leave at once if shifting or noise signals a possible collapse.

Work around flood-damaged structures only after they have been certified safe by an engineer or architect.

Drive on flooded roads and bridges only after authorities have declared them safe.

Physical Injury

Clearing debris can cause cuts, scrapes, bruises, and sprains, especially to the hands, back, knees, and shoulders. Wear leather gloves, safety goggles, and steel-toed shoes. Avoid lifting more than 50 pounds per person. Be sure you've had a tetanus vaccination within the past 10 years. Get first aid quickly to treat any wounds and prevent infection.

Confined Spaces

Never enter a confined space—even to rescue a fellow worker!—unless you have been properly trained. Call 911 for help.

If you are properly trained and have the necessary equipment to enter a hazardous confined space, consider other hazards. Molding or fermenting agricultural materials in confined spaces may generate large amounts of toxic gases, which could cause lung damage or death if inhaled.

Turn on ventilation in silos and other storage areas at least 30 minutes before entering, and leave them on while working.

Bloodborne Pathogens

If you contact blood or other body fluids, treat them as infectious. Wear gloves and eye protection. If necessary, you can improvise with a towel or plastic bag to avoid contact.

Respiratory Infections

If there is potential for exposure to infectious respiratory particles (SARS-CoV-2, influenza, etc.), follow DoD guidance on required face coverings or PPE.

Dealing with Human Remains

You may encounter human remains. Leave remains in place and notify mortuary affairs or your chain of command. Human and animal remains do not pose a disease threat for people not directly involved with recovery.

Displaced Animals

Stress can change the temperament of normally friendly pets. Wild and domesticated animals will seek shelter in unusual places to avoid the rising waters.

Do not handle displaced animals. Do not keep them as pets or mascots. Contact animal control specialists for help. If you've been bitten or scratched, you should wash the wound(s) immediately with soap and water and contact a healthcare provider.

Drinking Water

If local drinking water supply systems are not available, or water supplies are unsafe, store containerized potable water in an accessible location, protected from direct sunlight and high temperatures. Plan for 3 gallons of water per day per person for consumption and minimal hygiene purposes. Restoring a municipal supply service may take several days or longer. If you are assigned to help homeowners reoccupy houses, ensure that all water lines within the home are disinfected (if possible) and flushed for a minimum of 5 minutes prior to water consumption.

Electrical Hazards

If there has been water 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 the electrical equipment has been inspected by an electrician.

If you must work near downed power lines, contact the utility company to de-energize and ground or shield them. If power is out, use flashlights instead of candles.

Fire

Fire protection systems may be inoperable. Bring two or more fire extinguishers with an Underwriters Laboratory (UL®) rating of at least 10A (suitable for putting out wood, paper, and cloth fires) to each cleanup job.

Hazardous Materials

Floodwaters may dislodge tanks, drums, and pipes containing hazardous materials. Contact the local fire department or hazardous materials team before moving unidentified containers. In contaminated areas, wear protective clothing and respirators. Wash exposed skin areas frequently.

Supply Information

| Item | NSN |
|---|-----------------------|
| Sunscreen Lotion | Sunscreen Lotion |
| Non-alcohol Lotion Base Sunscreen | 6505-01-267-1486 |
| DEET Insect Repellent | DEET Insect Repellent |
| 20% Picaridin Insect Repellent Pump Spray | 6840-01-619-4795 |
| IR3535 Insect Repellent Pump Spray | 6840-01-656-7707 |
| Hearing Protection - Sound Guard Earplugs | * |
| Eye Protection | ** |

* Department of the Army Pamphlet (DA PAM) 40-501, Table 7-3

** Authorized Protective Eyewear List (APEL®)

Military Vaccine Requirements

Refer to DHA's [Immunization Healthcare Division](#) for up-to-date vaccine requirements.



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SHG-023-SEPT22

