

## Caution: Hurricane Sandy Cleanup Can Be Hazardous!

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As the flood waters recede, we all want to get our homes, our places of employment, our communities, and our roads, rails, bridges, and tunnels clean and back to normal as quickly as possible.

**Warning** – Hurricane cleanup and restoration work may have serious risks. Doing the wrong thing can endanger your safety, your health, and possibly your life.

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### IMMEDIATE SAFETY HAZARDS

**Building collapse or shift** - Do not enter a space that has any sign of not being structurally sound (for example, large cracks in the walls and/or floors). If in doubt, stay out until it can be professionally evaluated.

**Debris Piles** - Avoid walking on surfaces you aren't sure are stable. Use other approaches, such as bucket trucks or scaffolding erected on stable surfaces and anchored to stable structures. Use fall protection with lifelines tied off to secure anchorage points, including bucket trucks. Wear safety shoes with slip resistant soles and other protective equipment, including reflective vests to be visible to vehicles.

**Debris removal** - Hazards include being struck by cut trees or other objects, falls and amputations. Operators of heavy equipment, such as backhoes, chippers and grinders must be trained in safe operation, and other workers must avoid wearing loose clothing, wear reflective vests, and stay out of the vehicle work area.

**Demolition** - Hazards include collapsing structures, release of toxic chemicals (such as lead, asbestos and silica), falls and severed electric and gas lines. Protective equipment should be provided, including hard hats, respiratory protection, and safety shoes. Workers should not work where structural collapse hazards exist, until the hazards are corrected by shoring, bracing or other means.

**Traffic Control** - All traffic control plans and temporary traffic signs and signals should conform to the *Manual on Uniform Traffic Control Devices* (MUTCD). If you are driving, be aware of washed out road, debris, potholes and puddles.

**Electrocution** - Assume that all power lines are energized unless you know they have been de-energized and tested. Do not enter any space that still contains flood waters until you are 100% certain that the electricity is off and will remain off.

**Dismantling oil or gas tanks** - When dismantling an above ground home heating oil tank that has residual oil in it, or an underground gas tank that has been excavated and is being cut up for removal, or any similar work, avoid welding, torch cutting, or using a tool that could create sparks.

These processes can ignite the residue causing a fire or explosion.

**Other Explosion Hazards** - Do not enter any space where there is spilled fuel, oil or other flammable material or a gas odor. Do not enter any impacted space until you are sure that gas feeds are turned off and will remain off.

**Asphyxiation** (death from lack of oxygen) - Do not work in poorly ventilated areas which may be subject to emissions from gasoline-, diesel-, or propane-powered generators, vehicles or equipment. When you breathe so much exhaust that you do not get enough oxygen, you can die. This can occur outside as well as indoors. Asphyxiation is common in confined spaces – defined as an area not intended for occupancy, with limited entry/exit and poor ventilation, such as trenches, excavations or storage tanks. Such spaces should be monitored for gases and ventilated before entry if needed.

## RESPIRATORY PROTECTION FOR CHEMICAL HAZARDS

**Airborne Contaminants (respiratory hazards)** - During cleanup or restoration work, you may be exposed to **lead, silica, cement dust, asbestos** or other toxic chemicals. Inhaling (breathing in) any of these chemicals can cause serious, long term or permanent harm to your health. Exposure to asbestos or silica may cause cancer.

To protect against toxic airborne dust/fibers, you may need to wear a respirator. A disposable N-95 or more protective respirator can provide adequate protection against inhaling silica or cement dust. For protection against asbestos or lead, you will need at least a half face elastomeric (rubberized) respirator equipped with N,R,or P-100 or HEPA (high efficiency particulate air) filters. *Do not use paper dust masks – they do not provide adequate health protection.*

## RESPIRATORY PROTECTION FOR BIOLOGICAL HAZARDS

**Mold** - Water and dampness can cause mold growth on building materials and furnishings, including sheet rock, ceiling tiles, wood, and carpets. Inhaling airborne mold can cause wheezing, respiratory distress, allergic reactions, and severe nasal, eye, and skin irritation. To protect against breathing in mold, use a disposable N-95 or more protective respirator, such as those recommended above for CHEMICAL HAZARDS.

## ABOUT PROPER PERSONAL PROTECTIVE EQUIPMENT

1. Avoid skin contact with chemical or biological hazards. Wear protective gloves and clothing.
2. Using a respirator, even the right respirator, probably will not provide proper protection unless you have been fit-tested, trained, and medically evaluated to use a respirator. Learn more: <http://www.njwec.org/PDF/WECfactsheetonPPE.pdf>.
3. If you are an employee and are required to use a respirator, your employer must provide you with a respirator at no cost, along with annual training, fit-testing, and medical evaluation.

**Note: This fact sheet does not address all hazards. Additional hazards may be present.**

## FLOOD CLEANUP RESOURCES

**If you see a chemical spill or other environmental incident, call the NJ Department of Environmental Protection hotline at (877) WARN-DEP. For immediate answers regarding health concerns call 2-1-1 or to speak with a public health expert, call 1-866-234-0964.**

Centers for Disease Control & Prevention (CDC) have excellent resources for workers and communities on staying safe and healthy during flood cleanup. To see a list of topics that include identifying and dealing with electrical, mold, carbon monoxide, biological, and chemical hazards, please visit: [www.bt.cdc.gov/disasters/floods/index.asp](http://www.bt.cdc.gov/disasters/floods/index.asp).

**If you have questions, call NIOSH at (800) CDC-INFO (800-232-4636).**

National Institute for Occupational Safety and Health (NIOSH) *Emergency Response Resources: Storm/Flood and Hurricane Response:* [www.cdc.gov/niosh/topics/emres/flood.html](http://www.cdc.gov/niosh/topics/emres/flood.html)

*NIOSH Storm, Flood, and Hurricane Response Recommendations for the Cleaning and Remediation of Flood-Contaminated HVAC Systems: A Guide for Building Owners and Managers:* [www.cdc.gov/niosh/topics/emres/Cleaning-Flood-HVAC.html](http://www.cdc.gov/niosh/topics/emres/Cleaning-Flood-HVAC.html)

NIOSH, *Returning Home After a Disaster: Be Healthy and Safe:* <http://emergency.cdc.gov/disasters/returnhome.asp>

US Department of Housing and Urban Development, Consolidated Safety Services: Detailed coverage of site preparation, mucking and gutting in *Rebuild Healthy Homes, Safe Rehabilitation of Hurricane Damaged Homes Student Guide:* [www.hud.gov/offices/lead/library/misc/HUD\\_CSS\\_Booklet.pdf](http://www.hud.gov/offices/lead/library/misc/HUD_CSS_Booklet.pdf)

Environmental Protection Agency (EPA), *Flooding:* [www.epa.gov/naturalevents/flooding.html](http://www.epa.gov/naturalevents/flooding.html)

EPA, *Flood Cleanup and the Air in Your Home:* [www.epa.gov/iaq/pdfs/floods.pdf](http://www.epa.gov/iaq/pdfs/floods.pdf)

Find MUTCD at [https://www.osha.gov/doc/highway\\_workzones/mutcd/](https://www.osha.gov/doc/highway_workzones/mutcd/)

Occupational Safety and Health Administration (OSHA), *Floods:* [www.osha.gov/dts/weather/flood/index.html](http://www.osha.gov/dts/weather/flood/index.html) OSHA's website contains fact sheets, concise "quick cards," frequently asked questions, safety and health guides, and information in English and Spanish to keep disaster site workers safe during hurricane and storm cleanup and recovery operations. **To request an inspection of a hazardous working condition, call OSHA at (800) 321-6742.**

OSHA, Hurricane Preparedness and Response: [www.osha.gov/dts/weather/hurricane/index.html](http://www.osha.gov/dts/weather/hurricane/index.html)

OSHA, Keeping Workers Safe During Hurricane Sandy Cleanup and Recovery: [www.osha.gov/sandy/index.html](http://www.osha.gov/sandy/index.html)

University of Michigan, *Suggested Guidelines for Remediation of Damage from Sewage Backflow into Buildings:* [www.oseh.umich.edu/pdf/guideline/fdrappe.pdf](http://www.oseh.umich.edu/pdf/guideline/fdrappe.pdf)

**For some NJ specific information go to:** NJ Office of Emergency Response: [www.state.nj.us/njoem/index.html](http://www.state.nj.us/njoem/index.html).

Public employees should utilize the NJ Public Employees Occupational Safety and Health Program.

## For safety issues, call the NJ Department of Labor and Workforce Development at (609) 624-1644. For health issues, call the NJ Department of Health at (609) 984-1863.



This factsheet was originally produced by the New York Committee on Occupational Safety and Health (NYCOSH). It has been revised and reproduced with permission by NJ Work Environment Council (WEC).

Produced by the New Jersey Work Environment Council

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The Occupational Safety and Health Act was enacted in 1970 to prevent workers from suffering work-related injury, illness, or death. It created the Occupational Safety and Health Administration (OSHA), which sets health and safety standards and inspects workplaces for violations. In New Jersey, public workplaces are covered by the state's Public Employee Occupational Safety and Health Act (PEOSHA) which provides similar, but not identical, protections. Both laws prohibit any person from discharging or in any other manner retaliating against any worker for exercising their rights under these laws. These rights include raising health and safety concerns with an employer or seeking an inspection by OSHA or PEOSH. For information, go to [www.osha.gov](http://www.osha.gov). Public employees should go to [www.state.nj.us/health/peosh/](http://www.state.nj.us/health/peosh/).

This material was produced under grant SH-24385-13-60-F-34 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Produced July 24, 2013

Hurricane Resources Submitted Version

V2 November 16, 2012 - USW 4-149/CWA 38010/AFL-CIO