



# **CAUTION: HURRICANE SANDY CLEANUP CAN BE HAZARDOUS!**

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.

## **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). If in doubt, stay out until it can be professionally evaluated.

**Debris piles** - Where possible, avoid direct contact with unstable surfaces. Use bucket trucks, stable and secure scaffolding, and/or fall protection with secure anchor points.

**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.

**Explosion** - Do not enter any space where there is a natural gas odor. If possible, do not enter any impacted space until you are sure that gas feeds have been shut 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. Carbon monoxide poisoning can occur outdoors as well as indoors.

## **CHEMICAL HAZARDS:**

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

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

To protect against toxic airborne dust, you may need to wear a respirator. A disposable N-95 or greater 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 HEPA (high efficiency particulate air) filters. *Do not use paper dust masks - they do not provide significant health protection.*



**Using a respirator, even the right respirator, probably will not provide proper protection unless you have been fit-tested, trained, and qualified to use a respirator.**

**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 clearance.**

## **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 greater respirator.

- Avoid skin contact with chemical or biological hazards. Wear protective gloves and clothing.

## **ADDITIONAL NYC HAZARDS: GOWANUS CANAL & NEWTOWN CREEK AREAS**

These areas are both highly polluted Superfund sites. Flooding of these areas is likely to complicate cleanup by introducing additional serious chemical and biological hazards.

During and after Hurricane Sandy, untreated sewage mixed with storm water is likely to have overwhelmed sewage treatment plants, which then release sewage overflows into the Gowanus Canal and Newtown Creek (and also into New York Harbor and Jamaica Bay). Sandy caused both sites to overflow into nearby occupied areas. Sewage poses very significant threats to human health. Safe and effective cleanup or removal of sewage-contaminated materials is usually best left to technically qualified environmental professionals.

The Gowanus Canal Superfund site is contaminated with a variety of highly hazardous pollutants, including polycyclic aromatic hydrocarbons (PAHs), volatile organic contaminants (VOCs), polychlorinated biphenyls (PCBs), pesticides, and heavy metals. Some of these chemicals are carcinogens (cancer-causing). The Newtown Creek Superfund site is similarly contaminated with pesticides, metals, PCBs, and VOCs. Cleanup or removal of materials contaminated by overflow from the Gowanus Canal or Newtown Creek should be performed by technically qualified environmental professionals.

## **FLOOD CLEANUP RESOURCES:**

Centers for Disease Control and Prevention. *After a Flood: Precautions when Returning to your Home.* <http://www.bt.cdc.gov/disasters/floods/after.asp>

Centers for Disease Control and Prevention. *Clean Up Safely After a Disaster.* <http://emergency.cdc.gov/disasters/cleanup>

Centers for Disease Control and Prevention. *Natural Disasters: Response, Cleanup & Safety for Workers.* <http://emergency.cdc.gov/disasters/workers.asp>

Centers for Disease Control and Prevention. *Personal Hygiene and Handwashing After a Disaster or Emergency.* <http://www.bt.cdc.gov/disasters/floods/sanitation.asp>

Centers for Disease Control and Prevention. *Reentering Your Flooded Home.* <http://emergency.cdc.gov/disasters/mold/reenter.asp>

Centers for Disease Control and Prevention. *Returning Home After a Disaster: Be Healthy and Safe.* <http://emergency.cdc.gov/disasters/returnhome.asp>

Environmental Protection Agency. *Flooding.* <http://www.epa.gov/naturalevents/flooding.html>

Environmental Protection Agency. *Flood Cleanup and the Air in Your Home.* [http://www.epa.gov/iaq/flood/flood\\_booklet\\_en.pdf](http://www.epa.gov/iaq/flood/flood_booklet_en.pdf).  
<http://www.epa.gov/naturalevents/flooding.html>

National Institute for Occupational Safety and Health. *Emergency Response Resources: Storm/Flood and Hurricane Response.* <http://www.cdc.gov/niosh/topics/emres/flood.html>

National Institute for Occupational Safety and Health. *Storm, Flood, and Hurricane Response*  
*Recommendations for the Cleaning and Remediation of Flood-Contaminated HVAC Systems: A Guide for Building Owners and Managers.*  
<http://www.cdc.gov/niosh/topics/emres/Cleaning-Flood-HVAC.html>

National Institute of Environmental Health Sciences. *Flood Response Orientation, Safety Awareness for Responders to Floods: Protecting Yourself While Helping Others.* [http://tools.niehs.gov/wetp/public/hasl\\_get\\_blob.cfm?ID=6709](http://tools.niehs.gov/wetp/public/hasl_get_blob.cfm?ID=6709).  
<http://www.cdc.gov/niosh/topics/emres/flood.html>

National Institute of Environmental Health Sciences. *Protecting Yourself While Removing Post-Disaster Debris from Your Home or Business.* [http://tools.niehs.gov/wetp/public/hasl\\_get\\_blob.cfm?ID=9295](http://tools.niehs.gov/wetp/public/hasl_get_blob.cfm?ID=9295)

Occupational Safety and Health Administration. *Floods.* <http://www.osha.gov/dts/weather/flood/index.html>

University of Michigan. *Suggested Guidelines for Remediation of Damage from Sewage Backflow into Buildings.* <http://www.oseh.umich.edu/pdf/guideline/fdrappe.pdf>