

WHAT BUILDING OWNERS, MANAGERS AND ADJUSTERS NEED TO KNOW ABOUT CONTRACTORS (RESTORERS) WHO CLEANUP SEWAGE CONTAMINATED BUILDINGS

About Sewage Wastewater:

Sewage coming from toilets and broken pipes, city sewers and private septic systems and wastewater coming into buildings from overflowing rivers and streams is unsanitary and unhealthy to come in contact with (ANSI/IICRC). Wastewater contains harmful bacteria, fungus, viruses and parasites. While many illnesses produce short term health affects including diarrhea, fever, cramps, and sometimes vomiting, headache, weakness and loss of appetite (e.g., California and Delaware DHS); some sewage bacteria and viruses can cause acute and long term illness and disease (The Center for Disease Control and Prevention). New super bugs are emerging such as methicillin-resistant *Staphylococcus aureus* (MRSA). *Staphylococcus* bacteria are common on some persons and they can survive in unsanitary conditions (EMLab). MRSA has not been well studied in sewage contaminated environments but *Staphylococcus aureus* is found in treated sewage Class B Biosolids.

About Immunization:

Persons who come in contact with sewage contaminated environments should seek immediate medical attention when they become sick or they suspect that they have been infected. Immunization may protect workers against tetanus, hepatitis A and diphtheria (Center to Protect Workers' Rights and IICRC). While hepatitis A vaccination is not recommended by CDC for individuals who have general contact with wastewater, persons who have direct contact with untreated sewage or who have a liver disease may require hepatitis A vaccination (Univ. of Iowa Worksafe Bulletin, Vol. 16, No. 1 - July 2008). Persons who have contact with contaminated water where blood or blood components are present or is anticipated should receive the hepatitis B vaccine (CDC Bulletin October 12, 2005).

About Industry Sewage Cleanup Standards:

There are industry standards of care sewage cleanup workers are expected to follow when cleaning up sewage (Category 3) wastewater and solids from buildings. This standard is called the ANSI/IICRC S500 *Standard and Reference Guide for Professional Water Damage Restoration*. Each worker is expected to know the standard and comply with its contents. ANSI is the American National Standards Institute and IICRC is the Institute of Inspection, Cleaning and Restoration who certifies workers through independent training schools. ANSI is the official U.S. representative to ISO the International Organization for Standardization. As such, ANSI standards are relied upon by government and industry as the authority in accrediting standards.

Complying with ANSI/IICRC S500 Standard when Cleaning Up Sewage:

All restorers who cleanup sewage wastewater are expected to comply with the S500 Standard and they must comply with U.S./Canadian OSHA regulations. (OSHA regulations are found throughout the S500 Standard.) The S500 Standard is a procedural document and the 2006 edition has been completely updated. Restorers are expected to be current in sewage cleanup and remediation practices.

Below are common sewage-related work practices and procedures restorers are expected to provide building owners, property managers and insurance adjusters with based on U.S./Canadian OSHA regulations and ANSI/IICRC S500 Standards:

- OSHA regulations require workers to use personal protective clothing (PPE) including gloves and respirators.
- Consult an indoor environmental professional (IEP) when there is a question regarding the selection of PPE.
- It is an OSHA violation to allow workers to come in contact with unsafe and unhealthy jobs.
- Complete a job hazard assessment to ensure the sewage contaminated workplace is safe for workers.
- Inspect all damaged materials and determine if they should be cleaned and sanitized or disposed. This evaluation process may be delegated to the IEP as dictated by the situation.
- Get a contract signed that explains all of the cleanup services to be applied.
- When the customer disagrees with a required cleanup service – contact your supervisor.
- When a change (addition or deletion of a service) to the contract is necessary make changes on change order forms.
- When there is a possible occupant health issue including the presence of small children, immune compromised persons, a public health issue may exist or contaminants are believed to have been aerosolized, hire an IEP.
- Place appropriate signage and containment that keeps building occupants and the public safe from sewage hazards.
- Through visual inspection and moisture testing determine the size of the damage/contamination.
- Document the size of the cleanup job through moisture testing and photographs.
- “Moisture map” the size of the affected area as compared to non-water damaged/contaminated areas.
- When unaffected contents are in the way of the cleanup process remove them to a safe place.
- When contents are contaminated surface clean and then remove them to a safe place for further cleaning.
- Porous contents should be cleaned and sanitized or disposed on a case-by-case basis.
- When high-value and irreplaceable contents have been affected by sewage an IEP should confirm the item is decontaminated to where it can be safely returned back to the customer.
- In older buildings, ensure asbestos and lead paint is not being incorrectly disturbed or removed.
- Remove all standing sewage wastewater and solids and dispose of all waste legally.
- Cutout contaminated porous materials such as carpet and pad, drywall and insulation.
- Flush out sewage waste from under sole (sill) plates followed by cleaning and drying.
- When wastewater is below the surface of a hardwood floor remove the damaged/contaminated hardwood.
- When wastewater saturates underlayment remove the underlayment and surface material (e.g., vinyl tile).
- When wastewater is under or behind a cabinet carefully detach the cabinet.
- When wastewater saturates and damages particleboard dispose saturated particleboard.
- Apply cleaners and detergents per manufacturer labeling.
- After detergent washing thoroughly rinse all salvageable materials with fresh water.
- If necessary apply disinfectants per manufacturer labeling.
- When disinfectants are applied, they are expected to be rinsed off with fresh water.
- Install air movement and drying equipment once the indoor space is clean and sanitary.
- Dry wet building materials back to pre-loss moisture conditions.
- When necessary, IEP’s should be used to “independently” verify the completion of work.