



# WATER RESTORATION

## Category Three (Black Water)

### INTRODUCTION

Category 3 (black water) floods contain pathogenic agents and are grossly unsanitary. These are typically from rising water such as river flooding or sewage back-flows but can come from other sources such as a Category 2 flood that has not been removed promptly. Toilet back-flows that originate from beyond the toilet trap are considered black water contamination regardless of visible content, color or odor. Technicians performing gray or black water restoration must be trained in microbiology, biocide use, psychrometry, and health and safety equipment use.

### PROCEDURE

- **STEP 1**  
Complete an authorization and consent form, and have the insured sign and date it.
- **STEP 2**  
Identify health and safety hazards of the job. When a structure has been flooded with Category 3 water, a threat to human health exists. Look for electrical problems or gas leaks. Post warning signs where needed to notify anyone who may enter the structure of potential hazards. Provide all technicians with proper PPE (personal protective equipment) that will be needed to perform the job safely. Determine if evacuation of sensitive persons is needed. Infants, elderly and those with immune deficiencies are at higher risk.
- **STEP 3**  
Significant evaluation of all structure, materials and contents is a must. Determine if items can be restored, or if they should be replaced. Porosity, cost of restoration vs. replacement, effect on occupants, and state and local regulations all need to be considered.
- **STEP 4**  
Locate and eliminate the source of the water or contain the intrusion to the extent possible. Determine the category of the loss..

- **STEP 5**  
Prevent cross-contamination by turning off air handling systems and covering supply and return vents. In some cases, building a containment chamber with polyethylene sheeting and negative air pressure may be required.
- **STEP 6**  
Furnishings, contents and all other items should be moved to an unaffected area to prevent contamination of migrating water.
- **STEP 7**  
Extract water from the carpet and pad using the **Hydro-X Xtreme Xtractor** or the **Water Claw**. These tools are able to remove up to 97% of the water from the carpet and padding without disengaging the carpet. Pad that was saturated with the category 3 water should be removed and discarded. However it is much easier to remove pad that is not soaking wet. Remove water from hard surfaces, duct work, etc. using pumps, squeegees or other appropriate tools.
- **STEP 8**  
Apply a heavy saturation spray of a biocide to all affected surfaces. This is not a complete disinfecting. This is to reduce the growth of microorganisms as quickly as possible. Follow all directions on the label of the bottle. At conclusion – Deodorizers may be used for the benefit of those working in this environment.
- **STEP 9**  
Thoroughly inspect anywhere water may have traveled. This includes under walls, into a crawl space or basement, stairwells, under cabinets or built-in appliances even HVAC systems and ductwork. Make sure to include drying these areas.
- **STEP 10**  
Install professional drying equipment including axial air movers and dehumidifiers to begin evaporating the water that could not be extracted. Use the structures air condition system and ceiling fans. Do not use air movement if it will spread biological contamination to unaffected areas. Be familiar with the principles of drying, Psychrometry and the S500 industry standards to determine the best drying procedures.
- **STEP 11**  
Monitor the drying process closely using appropriate tools such as a Thermohygrometer and various Moisture Meters.

- **STEP 12**  
Inform client of any unsalvageable items. After getting approval, dispose of these safely and properly. This will include carpet, pad and stuffed materials such as upholstered furniture, pillows, mattresses and stuffed animals that were saturated by contaminated water. Include other highly absorbent materials such as ceiling tiles, drywall, books and papers.
- **STEP 13**  
Inspect structural materials including paneling, plaster and wood to determine if they can be restored or if they need to be replaced. Some demolition maybe necessary to expose pockets of contamination.
- **STEP 14**  
For high value area rugs refer to the IICRC S500 Water Restoration Guide, section 12.3.10.6.
- **STEP 15**  
Hard surface floors, sub-floors and framing material must be carefully evaluated if they are to be restored. Floor coverings and sub-floor materials must be carefully evaluated if they are to be restored. A thorough flushing of these areas with a clean ing/disinfecting solution through an extraction system is mandatory. The **Turbo/Gekko Hard Surface Cleaning System** from Hydro-Force is perfect for this application.
- **STEP 16**  
In some water loss situations where microbial contamination was remediated, it may be necessary for a qualified third party to evaluate the effectiveness of your working/disinfecting solution through an extraction system is mandatory. The **SX-12/Gekko Hard Surface Cleaning System** from Hydro-Force is perfect for this application.
- **STEP 17**  
In some water loss situations where microbial contamination was remediated, it may be necessary for a qualified third party to evaluate the effectiveness of your work.

### Chemicals Needed



#### Quat Amo

**Type:** *Quaternary Disinfectant*

**Highlights:** *An EPA registered disinfectant that kills a wide range of microorganisms including bacteria and mold.*

**Delimitate**

**Type:** Solvent based odor neutralizer

**Highlights:** Destroys odors from urine, smoke, sewage, flood damage and more.

**Viper Venom**

**Type:** Cleaner for hard surface floors

**Highlights:** Aggressive cleaner that dissolves soils and oils for quick cleaning.

**Alternative Chemicals****Microban**

**Type:** Anti-microbial / Disinfectant

**Highlights:** Kills germs, bacteria, fungi, mold and mildew. Can be used on most surfaces.

**Accessories Needed****Water Claw Extraction Tools**

**Type:** Extraction Tools

**Highlights:** Extract water from carpet, backing and pad.

**Carpet Wand**

**Type:** Wand

**Highlights:** For surface extraction of water from carpet fibers.

**Turbo and Gekko Tile and Grout Cleaning Tools**

**Type:** Hard surface cleaning tools

**Highlights:** Extract flood water from hard surfaces. Clean hard surfaces, tile and grout.

**Moisture Probe**

**Description:** Moisture Detector

**Purpose:** Locate migration of water in carpet backing and pad.

**SurveyMaster, Hygrometer and Moisture Meters**

**Description:** Moisture Detection Tools

**Purpose:** Aids in psychrometry to monitor moisture content, relative humidity and dew point.

**TCBS 3-gallon Pump Sprayer**

**Description:** Pump Sprayer

**Purpose:** Applies chemicals quickly, evenly and efficiently.

**EZ Moves**

**Description:** Furniture Slides

**Purpose:** One person can move heavy furniture without damaging furniture or carpet.

**Personal Protective Equipment**

**Goggles, Gloves, Respirators and Warning Signs will be needed for each technician.**

**Carpet Repair and Reinstallation Tools and Power Stretcher**

**Type:** Carpet Reinstallation Tools

**Highlights:** Used for reinstallation of carpet.

**Equipment Needed****Truckmount**

**Description:** Hot water extraction machine

**Purpose:** Provides heat, pressure and vacuum for the cleaner.

**Axial Air Mover**

**Description:** Air Mover for Structural Drying

**Purpose:** Focuses high velocity air movement along wall and floor for rapid drying.

**LGR Dehumidifier**

**Description:** Dehumidifier

**Purpose:** Removes moisture from the air to speed up drying and prevent secondary damage.

**HELPFUL HINTS & CAUTIONS** – It is imperative that anyone who performs water restoration attend an IICRC Water Damage Class. You will learn the proper fundamentals of water restoration and be trained to identify the different categories of water sources. This is extremely important to protect yourself, your technicians and your business as well as your customers from the hazards of improper drying techniques. You take on a certain liability when you accept a water loss job, so it is important that you perform all aspects of the restoration properly.



In addition to the basic classes, additional classes are available that cover advanced structural drying (ASD), mold remediation and related topics. This training will better equip you to meet your customer's needs as well as provide additional services for the home and property owner. This provides another avenue of income for your company, as well as needed services for the home and property owner.

**QuickGuide****PROCEDURE**

- 1 Get signed authorization form.
- 2 Identify health and safety issues.
- 3 Evaluate all structure and materials to determine if they can be restored, or if they must be replaced.
- 4 Eliminate sources of incoming water.
- 5 Prevent cross-contamination by ensuring containment.
- 6 Remove as many items as possible from affected area.
- 7 Extract water from all contaminated areas.
- 8 Apply a biocide to affected surfaces.
- 9 Dry all structures, materials and contents that are to be restored.
- 10 Discard all unsalvageable materials properly and safely, including carpet and pad.
- 11 Clean, disinfect and seal (where needed) all areas to be restored.
- 12 Reinstall new carpet and new padding.
- 13 Perform a post-flood cleaning of all surrounding areas.
- 14 Seek a qualified third-party evaluation of remediation where needed.

**Other Resources**

**IICRC \$500 Water Damage Restoration Standards**  
**IICRC Water Damage Restoration Technician Class**  
**Bridgepoint Website [www.bridgepoint.com](http://www.bridgepoint.com)**  
**Your local Bridgepoint or Interlink Supply distributor.**