



**FIRST<sup>®</sup>  
ONSITE**

PROPERTY RESTORATION

# **5-STEP WATER RESPONSE PLAN**

Whether it's a small leak or a major flood, water can wreak havoc on buildings and properties, creating costly issues that can impact your business and potentially shut down operations completely. Unforeseen events like broken water lines, drain backups, and weather-related floods can ruin furnishings, damage important documents, and in the worst cases, create health risks and compromise the structural integrity of your building.

**HELPING YOU  
RESTORE, REBUILD, & RISE**

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# STEP 1: PROTECT OCCUPANT HEALTH

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## 1 Identify water type by:

- Water source
  - Appearance
  - Odor
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## 2 Follow environmental health and safety best practices for category 2 and 3 water

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## 3 Crews should avoid contact with contaminated materials and wear appropriate personal protective equipment (PPE)

- Protective clothing including boots and gloves
  - Eye protection
  - Respirator may be needed
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## 4 Avoid exposing cuts, abrasions or other wounds when to category 2 and 3 water

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## 5 Communicate the health risks to others

- Is the building known to contain lead, asbestos or mold?
  - Is the property build on post tension?
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## 6 Consider the bigger picture

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## STEP 2: PREVENT ADDITIONAL DAMAGE

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- 1 Know your water shutoff and electrical panel locations
  - 2 Turn off the water source If water flow cannot be stopped, redirect water if possible
  - 3 Note the source (pipe, drain line, sewer, etc.) Dispose of water properly
  - 4 Take steps to prevent and minimize damage in and near the exposed areas:
    - Remove and secure small furnishings, breakables, moisture sensitive and high value items
    - Place items onto tables or counters and cover them with plastic
    - Protect chair and desk legs with foil where they contact the floor, or place each leg in a plastic cup or bowl
    - Pin or tie up drapes and furniture skirts
  - 5 Don't forget. Regular interior maintenance is important!
    - Walk vacant units every two weeks
    - If possible, walk occupied units every year to look for signs of leaks
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## STEP 3: REMOVE CONTAMINANTS

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### ✓ Getting rid of contamination and excess water:

- Repeat flushing (for contaminated areas)
- Pumping
- Wet vacuums
- Mopping

Biocides may be necessary to slow microbial growth and aid in sanitizing contaminated materials.

**Caution:** biocides cause eye and respiratory irritation and odor complaints from building occupants Refer to the product label for personal protection requirements and usage instructions. More is not better!

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## STEP 4: DRY THE SITE

### ✓ The drying process:

- Managed through air movement, humidity level, and temperature
- Relies on fans, blowers, carpet dryers, dehumidifiers and/or desiccant systems
- May require venting holes in walls and cabinets to facilitate air movement

## HOW WATER DAMAGE DRYING EQUIPMENT WORKS



### ✓ Structural Drying Calculations

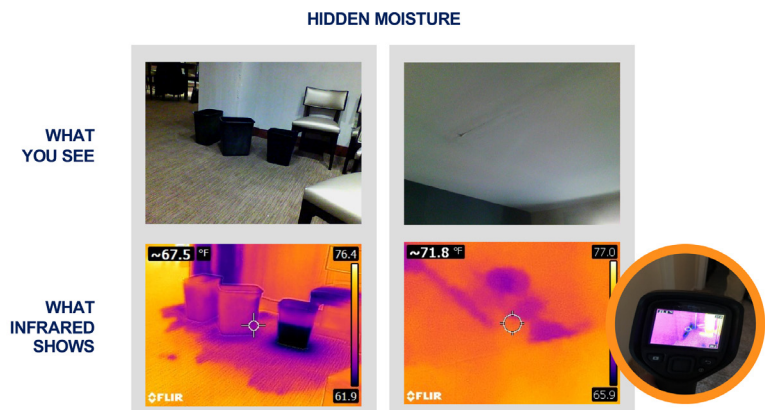
- Cubic Volume of Air = Length x Width x Height (in feet)
- One Air Change Per Minute = Cubic Volume of Air / 60 = CFM (cubic feet per minute)
- Required Air Changes (Desiccant) =  $\frac{1}{2}$  to 4 varies with moisture load and density (air changes per hour)
- Air Mover Sizing = 1 per 15 to 25 linear feet of wall. Varies with moisture load and density
- Drying Timeline = 3 to 21 days. Varies with moisture load and density

## STEP 4: DRY THE SITE

- ✓ **Relative humidity level is the primary factor in determining drying effectiveness.**
- ✓ **Depending on moisture levels, the building's ventilation system may be adequate**
- ✓ **Larger floods require industrial dehumidification or desiccation equipment**
- ✓ **Temperature is a determining factor when deciding equipment type**
  - Below 68° F refrigerant dehumidifiers can ice up so desiccant dehumidifiers may be a better choice
  - Home dehumidifiers are not up to the task; for optimal drying the relative humidity should be kept below 40%

## THE IMPACT OF TEMPERATURE ON DRYING

- ✓ **Higher Temperatures**
  - Increase the amount of water the air can hold
  - Speed up evaporation
  - Accelerate bacteria and mold growth rates, increasing concerns of adverse health effects and odors
- ✓ **Cooler Temperatures**
  - Reduce the microbial growth rate
  - Cause condensation of moisture in the air
  - Affect occupant comfort
- ✓ **Why is opening windows a bad idea?**
  - Impacts airflow and pressure in mechanically ventilated buildings, which can slow drying time
  - In warm months, allows humid air into the building
  - In cold months, can rapidly cool building resulting in condensation of water onto surfaces
  - Presents security concerns
- ✓ **Assessing moisture levels**
  - Penetrating moisture meters
  - Non-penetrating moisture meters
  - Infrared cameras {FLIR}



## STEP 5: SALVAGE MATERIALS

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### ✔ Deciding when to salvage or replace

- Weigh the expense and time to salvage versus replace
  - Materials with limited damage and high value may be salvaged cost effectively
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### ✔ Key factors in salvaging less absorbent materials:

- Cleanliness of the water
  - Time duration until drying begins (sooner is better)
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### ✔ Non-porous materials damaged by Category 2 or 3 water require cleaning or sanitization, plus drying

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## STEP 5: SALVAGE MATERIALS

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### BASE MOLDING

- Remove base molding to inspect for water damage It may be more cost effective to replace the molding
  - Remove and dispose of water damaged MDF-based materials
  - Expensive wood moldings can be removed, cleaned, and dried
  - Remember to mark the location of the molding for reinstallation
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### CARPET

- ✔ **Carpet replacement is cost-effective in most situations Always replace carpet if:**
    - Flood is a category 3, and some category 2 water.
    - More than 48-72 hours has passed.
  - ✔ **Remove carpet applied over a wood floor to allow the wood floor to dry If salvaging, lift the carpet so air can circulate:**
    - Be careful to avoid damaging the carpet seams and attachment points
    - Remove furniture from wet carpet (staining may occur)
    - Dry, sanitize, and professionally clean carpet in a separate area
    - Reinstall only after the area is fully dry
- 

### CARPET PADDING

- ✔ **Always replace padding if:**
    - Water is category 2 or 3
    - More than 48 hours has passed
    - Padding is made of natural fibers, foam rubber or skinned pads
  - ✔ **Remove padding covering wood floors for proper drying**
  - ✔ **Replacing carpet padding is often more cost effective than drying it out**
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### CEILING TILES

- ✔ **Always replace ceiling tiles if they are:**
    - Damaged by category 2 or 3 water
    - Wet for more than 24 hours
    - Sagging
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## STEP 5: SALVAGE MATERIALS

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### DRYWALL

- ✓ Drywall can be salvaged with a prompt response
  - ✓ Use a moisture meter to detect the condition of the drywall
  - ✓ When drywall is wet but structurally sound:
    - Open weep holes to release water and allow ventilation (including in ceilings)
    - Remove insulation inside walls or ceiling (it may be necessary to remove section of drywall to dry or replace insulation)
    - Remove and replace delaminating sections of walls or ceilings
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### PLASTER

- ✓ Heavily painted plaster can be difficult to dry
  - ✓ Open holes as necessary to provide for inspection and ventilation
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### RUGS

- ✓ Rugs may be cost effectively cleaned and dried, in many cases
  - ✓ Key considerations include:
    - Size and value
    - Water contamination level
    - Duration of exposure to water
  - ✓ Always remove rugs applied over a wood floor facilitate faster drying If salvaging, lift the rug so air can circulate:
    - Remove furniture from wet rugs (staining may occur)
    - Dry, sanitize, and professionally clean rug in a separate area
    - Reinstall only after the rug is fully dry
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### WALL COVERINGS

- ✓ Vinyl wall coverings must be pulled back to dry a wet wall
  - ✓ Permeable paper or cloth coverings may be left in place
  - ✓ Staining may be a problem with water damaged wall coverings:
    - Keep proper “attic stock” on hand for small repairs
    - Beware vinyl wallpaper (mold)
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## PLANNING AHEAD

Every emergency is different. Planning for all water damage scenarios can help your team respond early mitigating additional damage that reduces overall business downtime. To keep the recovery process from slowing and to make sure all steps in restoration are done with best practices in mind, you should call your trusted restoration partner.

## WE'RE HERE TO HELP

FIRST ONSITE is uniquely qualified to bring you back from an unexpected property damage incident anytime you need us. Our team in your community specializes in dealing with the region-specific challenges you face while having the support of a nationwide organization at its disposal. With comprehensive coverage and the ability to respond 24/7, 365 days a year, we will be there for you when you need us most, restoring your property quickly and cost-effectively.

## NEED OUR ASSISTANCE?

**CALL US: 800.622.6433**

To learn more about how we can help you overcome the unexpected while keeping your business intact, visit **[WWW.FIRSTONSITE.COM](http://WWW.FIRSTONSITE.COM)**.