



WATER DAMAGE RECOVERY GUIDE

KEY STEPS FOR A FAST RECOVERY

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

WATER CAN CAUSE SERIOUS DAMAGE.

PREPARATION CAN PROTECT YOU FROM THE WORST.

From small leaks to severe floods, water can wreak havoc on buildings and properties. Whether it's a broken water line, weather-related flood, a drain back up, or another cause, water in buildings can become a major problem, fast. It can disrupt operations, ruin furnishings and important documents, destroy equipment, and even present health risks for you and your employees. It can also threaten the structural integrity of your building.

THE QUICKER YOU RESPOND, THE BETTER

A rapid response to water damage—even minor incidents—can make a major difference in speeding up recovery, reducing damage and associated costs, and protecting the health of everyone involved. The longer water is left to sit, the higher the risk of staining, swelling, rusting, microbial growth, and other issues.

DID YOU KNOW?

It's a good idea to be ready to respond to water damage within 24-48 hours

Having a contingency plan in place is your best bet for a safe, efficient, and quick recovery. But with such a wide variety of potential water damage situations, it can be challenging to know exactly where to start preparing. That's where we come in.

This guide was created by the water damage professionals at FIRST ONSITE to help you get smart and get prepared for a seamless recovery from water damage—no matter what. It is based on decades of experience helping clients across North America restore, rebuild, and rise following disasters of all kinds.

ARE YOU CURRENTLY FACING WATER DAMAGE?

A rapid response is the best way to reduce damage, costs, and downtime. We offer 24/7 emergency service, anytime and anyplace.

877.778.6731



**FIRST
ONSITE**
PROPERTY RESTORATION

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24-hour emergency response line
877.778.6731

WATER DAMAGE 101

THE 3 CATEGORIES OF WATER DAMAGE

Not all water damage is created equal. Understanding the three different categories of water damage can help you understand the best way to handle repairs and recovery. We've included a brief description of each category in this guide. For more in-depth definitions, ask your FIRST ONSITE project manager—we're always here to help.

1 CATEGORY 1: **CLEAN WATER**

If the water in your building is coming from an overflowing sink, a broken water or steam line, or even rainwater, you are most likely dealing with a Category 1 water damage situation. While the health risks associated with this category start out low, it's essential to respond within 24-48 hours, as clean water can quickly become contaminated, especially in older buildings.

FAST FACTS:

- ✓ Once clean water leaves its source, it becomes rapidly exposed to a wide range of contaminants.
- ✓ Contact with building materials can turn Category 1 water into Category 2 water.
- ✓ Beware of microbial growth after 24-48 hours.

WHERE IT COMES FROM

- ✓ Sink overflow
- ✓ Treated water lines
- ✓ Appliance or fixture supply lines
- ✓ Rainwater infiltration

HOW YOU CAN TELL

- ✓ Originates from a sanitary source
- ✓ Appears mostly clear
- ✓ Lacks strong odor

WHAT IT MEANS

- ✓ Low health risk
- ✓ Easier to clean up
- ✓ Less risk of contamination if cleaned up within 24-48 hours

WATER DAMAGE 101

THE 3 CATEGORIES OF WATER DAMAGE



CATEGORY 2: GRAY WATER

Category 2 covers a broad spectrum of water sources. It can have slight to severe contamination due to its source, microbial growth, or from exposure to contamination after initial release.

FAST FACTS:

- ✓ As a result of higher contamination levels, both direct and indirect exposure to Category 2 water might cause health issues and create problems salvaging materials.
- ✓ A wide variety of water sources makes this category unpredictable and dangerous.

WHERE IT COMES FROM

- ✓ Storm drain backups
- ✓ Treated cooling water
- ✓ Some surface water
- ✓ Fire suppression systems
- ✓ Discharge from equipment

HOW YOU CAN TELL

- ✓ May appear cloudy or clear
- ✓ May carry an odor

WHAT IT MEANS

- ✓ Indirect and direct exposure may cause increased health risk, including potential disease and infection.
- ✓ Some materials may not be salvageable.

WATER DAMAGE 101

THE 3 CATEGORIES OF WATER DAMAGE



CATEGORY 3: **BLACK WATER**

When water from sewers, rivers, and the sea flow into a building, it is often highly contaminated with infectious viruses, bacteria, parasites, and toxic and allergenic materials. This is the most dangerous category of water damage, with high risk of disease, infection, and irreparable damage.

FAST FACTS:

- ✓ Highest danger and health risk—always use special caution when dealing with Category 3 water
 - ✓ Most materials may need to be replaced following Category 3 damage
-

WHERE IT COMES FROM

- ✓ Sewers
- ✓ Drain backups
- ✓ Some rivers
- ✓ Seawater
- ✓ Some surface water

HOW YOU CAN TELL

- ✓ May be cloudy
- ✓ Could contain debris
- ✓ Likely has a strong odor

WHAT IT MEANS

- ✓ Extreme caution must be taken
- ✓ Extremely high health risk
- ✓ Most materials may not be salvageable

YOUR 5-STEP WATER DAMAGE RESPONSE PLAN

1 STEP 1: PROTECT THE HEALTH AND SAFETY OF YOURSELF AND OTHERS

When dealing with water damage, safety comes first. Your primary responsibility should be to ensure that you and your employees, and/or tenants stay safe. As discussed in the previous section, some types of water can carry infectious disease, allergens, and toxic materials. Always err on the side of caution and keep people away from affected areas until you have identified the category of water damage.

USE CAUTION

It's important to have a designated person in charge of turning off circuit breakers supplying electricity to wet areas. Do not use any heating systems or appliances until electrical components have been thoroughly dried and inspected by a qualified electrician.

All individuals on site should avoid contact with contaminated materials and wear protective gear, including respirators, eye protection, boots, and gloves. Exercise extreme caution when it comes to cuts, abrasions, and other exposed wounds, as these can make people more vulnerable to infection.

SEAL OFF AFFECTED AREAS

To prevent the spread of contamination, it is important to seal off the affected areas. In some cases, it may be necessary to isolate or shut down the HVAC system to prevent the spread of contaminants. In other cases, the HVAC system can help with the drying process. Our indoor air quality professionals can help you determine the best approach.

ASSESSING HEALTH RISKS

SOURCE: Where is the water coming from? Is it from a pipe, drain line, sewer, etc.?

Know where your main water valve is located in the building, so you can shut it off if necessary.

APPEARANCE: Is the water cloudy or clear? Is there debris in it?

ODOR: Does the water have a smell?

YOUR 5-STEP WATER DAMAGE RESPONSE PLAN

2 STEP 2: PREVENT ADDITIONAL DAMAGE

Once you've taken the proper safety measures, your next step should be to turn off the water valve or source of the water if possible. If you cannot locate the source, or if the water flow cannot be stopped, try to redirect the water into drains or out of the building. Keep in mind that health codes and hazardous waste regulations may require specific containment and disposal methods for Category 2 and 3 water.

IF POSSIBLE, TRY TO SAVE FURNISHINGS AND OTHER ITEMS:

- ✓ Remove small furnishings, breakables, moisture-sensitive materials and high-value items
 - ✓ Place electronics and small items onto desks, tables, or counters
 - ✓ Keep the legs of chairs and desks away from wet surfaces by wrapping the bottoms with foil, or placing each leg in a plastic cup or bowl
-

PROPER WATER DISPOSAL: IT'S THE LAW

Flood water can pose a serious risk to your building and the surrounding area. Contact your state's hazardous waste program to find out how to properly dispose of contaminated floodwater. It's ideal to be knowledgeable and aware of this *before* an emergency strikes.

YOUR 5-STEP WATER DAMAGE RESPONSE PLAN

3 STEP 3: REMOVE CONTAMINATED WATER

Any type of water carries a risk of contamination, especially if it sits for longer than 48 hours. That's why it is essential to eliminate excess water and to disinfect the area before starting the drying process.

WATER REMOVAL METHODS

METHOD		WHEN TO USE IT...
Pumping	→	Large volumes of water
Wet vacuums	→	Medium to large volumes of water
Mopping	→	Limited to smooth, hard surfaces
Repeat flushing	→	When dealing with contaminated areas

For Category 2 and 3 water, it may be necessary to flush out the area repeatedly with clean water, removing the excess water each time. In many cases, biocides are needed to sanitize contaminated materials and slow microbial growth until the drying process is underway. We can help you determine whether the building meets health requirements and assist you with the necessary steps to safely clean the site.

BIOCIDE USAGE

Biocides are often necessary to sanitize and slow microbial growth—however, exercise caution when using. Biocides can cause eye and respiratory track irritation, and may spread strong, unpleasant odors. Always refer to the product label for proper usage instructions and safety guidelines.

YOUR 5-STEP WATER DAMAGE RESPONSE PLAN

4 STEP 4: DRY THE SITE

Once excess water is out of the way, it's time to begin the drying process. The drying process requires careful management of air movement, humidity levels, and temperature with the intent of creating a steady supply of dry air to remove moisture.

There are several variables to take into account when determining what equipment to use, and what drying approach to take. When dealing with water damage, our team considers the following:

What is the specific humidity level? Measure the moisture content of the air with hygrometer or psychrometric charts to pinpoint humidity.

How wet are the walls and other structural elements? Moisture meters (both penetrating and non-penetrating) and infrared cameras can be used to measure hidden moisture.

What is behind the walls? Check wall cavities for porous materials that hold moisture, such as insulation, sheetrock, and vinyl wall coverings.

LGR DEHUMIDIFIERS

- ✓ Portable
- ✓ Ideal for smaller losses
- ✓ Less electricity needed

DESICCANT DEHUMIDIFIERS

- ✓ Ideal for large losses
- ✓ Move large volumes of air
- ✓ Work by absorbing humidity

USE CAUTION WHEN OPENING WINDOWS

It is often a first instinct to open windows to support the drying process—but it's not always a good idea. Mechanically ventilated buildings rely on constant indoor pressure levels to regulate the flow of air, and any changes in pressure can upset that flow. Weather conditions can also affect the drying process. For example, letting in warm and humid air is not helpful in wet conditions, and cold weather can lead to added condensation. Open windows can also pose a security risk for your building.

YOUR 5-STEP WATER DAMAGE RESPONSE PLAN

5 STEP 5: SALVAGE MATERIALS

After water is removed and dried, there are still difficult decisions to make. We can work with you to determine which materials are worth salvaging and whether it is better to repair or replace. It's important to weigh the costs and time investment involved with both options. In some instances, water-damaged materials are not salvageable and will need to be removed prior to drying. In this case, structural drying will still need to be conducted once water-damaged materials have been removed.

Materials with limited damage and high value may be salvaged cost-effectively. However, materials that came into contact with Category 2 or 3 water will probably require extensive drying, cleaning, and sanitization. You also may need to test for asbestos-containing material (ACM) and the presence of lead before you can judge salvageability.

✓ **BASE MOULDING**

You will need to remove base moulding to inspect the base of walls for water damage. Often, it is more cost-effective to simply replace the baseboards. Expensive wood mouldings can be cleaned and dried. If you opt to save them, mark the location of each piece on the wall for easy reinstallation.

✓ **CARPET**

In most situations, carpet replacement is the most cost-effective option. Carpet should always be replaced after Category 2 or 3 flooding, or if more than 48 hours have passed. Do not leave furniture or colored rugs on top of wet carpeting. Remove them until the carpeting is completely dry.

If you salvage the carpet, lift it to allow air circulation, and take special care to avoid damage to seams and attachment points. You may want to have a professional dry, clean and sanitize carpeting. Reinstall only after the area is completely dry.

✓ **CARPET PADDING**

Always replace carpet padding if the flood was Category 2 or 3, or if more than 48 hours have passed. It is especially important to replace padding made of natural fibers, foam rubber, or skinned pads. In most cases, it is cheaper and easier to discard carpet padding than to salvage.

Continued on next page

✓ CEILING TILES

Always replace ceiling tiles if they are sagging, if they have been damaged by Category 2 or 3 water, and/or if they have been wet for more than 24 hours.

✓ DRYWALL

Drywall can often be salvaged if you respond promptly to flooding. Assess the condition of drywall using a moisture meter. If it is wet but structurally sound, open weep holes to release trapped water and ventilate the inner wall. If there is wet insulation behind the wall, you may need to remove sections of the drywall to dry or replace the insulation. Cut weep holes into walls or ceilings where there are sagging or delaminated sections in order to let trapped water escape.

✓ PLASTER

Some older buildings still have plaster walls. Heavily painted plaster can be difficult to dry. To salvage it, you may need to drill holes to allow for ventilation.

✓ RUGS

Depending on the size and value of the rug, and the contamination level of the water damage, a rug can be cost-effectively cleaned, dried, and returned to the site. If salvaging, lift the rug so air can properly circulate. Do not leave furniture on wet rugs, and do not attempt to clean upholstery, rugs, or other potentially color-staining fibers with ordinary household cleaners.

✓ WALL COVERINGS

If your building has vinyl wall coverings, you may need to remove them to allow walls to dry. Perform this step after you have removed base mouldings. More permeable paper or cloth coverings can be left in place while drying. It is possible to salvage wall coverings, but you may encounter problems with staining. Make sure to keep extra stock on hand for small repairs.

GUIDE TO STRUCTURAL DRYING CALCULATIONS

DO NOT ENTER
CONTAINMENT

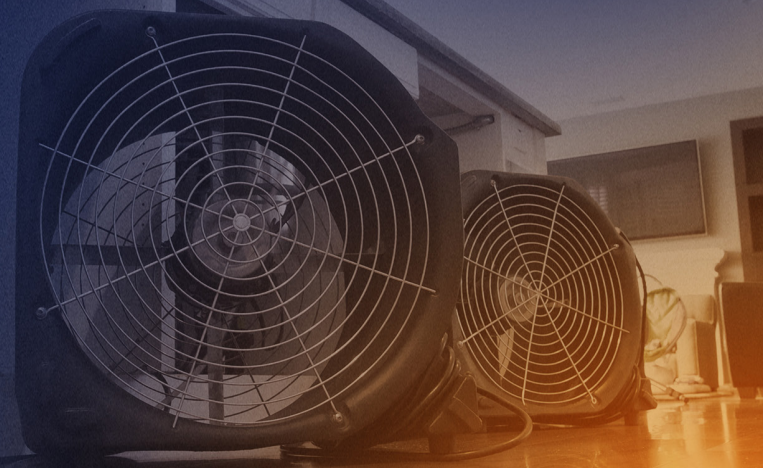
NOTICE

MOLD
REMEDIAION
PROJECT

VOLUME OF AIR	Length X width X height (measured in feet)
AIR CHANGE PER MINUTE	Air volume / 60 (cubic feet processed per minute)
REQUIRED AIR CHANGES PER HOUR (WHEN USING A DESICCANT DEHUMIDIFIER)	This number will vary from ½ to four air changes per hour, depending on moisture load and density. A professional can help determine the best approach.
AIR MOVER SIZING	Use one air mover for every 15-25 square feet of floor, depending on moisture load and density, plus one air mover for every 10 to 14 linear feet of wall.
DRYING TIMELINE	Varies with different levels of moisture and air density

DRYING EQUIPMENT EXAMPLES

- ✓ Fans and blowers
- ✓ Building ventilation systems
- ✓ Desiccant humidifiers
- ✓ Refrigerant dehumidifiers



DO YOU HAVE WATER DAMAGE?

KEY QUESTIONS TO ASK

- 1 Are there any life and safety concerns? Have you notified employees, tenants, or patrons of the potential safety hazards?
- 2 Have you notified your insurance company?
- 3 Are there critical, valuable, or irreplaceable contents that need to be protected or removed immediately?
- 4 What is the source of water? Has the source been stopped, diverted, or contained?
- 5 Is the power still on in the building? If so, will there be any power constraints in operating the necessary restoration equipment?
- 6 What is the total square footage, ceiling height, and linear footage (walls) of the affected area? What is the total drying space, including both affected and unaffected areas, up to the containment wall?
- 7 Are there any unique structural or topographic variables to be considered? (For example, first floor versus 24th floor)
- 8 What type of building materials and contents have been affected? Are they worth saving?
- 9 Are there any local, state, or federal regulations to be considered in mitigating the loss?
- 10 Does the building have to remain occupied during cleanup? Are there any critical time constraints or operational deadlines that will require acceleration of the mitigation process or result in interruptions or incompleteness?



BEFORE AND AFTER WATER DAMAGE, WE'RE HERE TO HELP

Now that you're familiar with the basic principles behind water damage recovery, you probably have a good sense of what types of damage your team can handle. Every emergency is different, and every team is unique. Preparation and planning for different water scenarios can go a long way in keeping your team ready to respond and keeping your property protected from the worst damage.

Simple Category 1 situations may be relatively easy to clean up in-house, as long as you can respond within 24-48 hours. However, there are times when water damage is not so simple to address. In the case of a Category 2 or 3 flood, you will want to call in an emergency restoration partner like FIRST ONSITE, even if you have the in-house resources to tackle the job. With an advanced understanding of health and safety regulations, and the experience to handle any water damage situation, we will help get you back to normal as quickly, safely, and cost-effectively as possible.

24/7 EMERGENCY SERVICE RESPONSE

FIRST ONSITE provides leading restoration and reconstruction services across North America. Our comprehensive coverage and 24/7, 365 days per year emergency response means we're ready to power you through any challenge—whenever, wherever, no matter what. When disaster strikes, we're the first to respond with everything it takes to help you **Restore, Rebuild, and Rise.**

**24/7 RAPID
EMERGENCY
RESPONSE**

**COMPREHENSIVE
NORTH AMERICAN
COVERAGE**

**POWERED BY PEOPLE
COMMITTED TO DOING
THE RIGHT THING**

**UNMATCHED
SERVICE AND
EXPERIENCE**

**ONE CALL IS ALL IT TAKES. 877.778.6731
FIRSTONSITE.CA**