



# A Comprehensive Guide to Flood Preparedness and Recovery

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# Introduction

Flooding is one of the most destructive risks facing commercial properties today. Whether triggered by hurricanes, river overflows, flash floods, or overwhelmed storm drains, floods can halt operations in minutes and cause millions of dollars in damage.

Rapid, coordinated action can mean the difference between a quick recovery and months of downtime. A proactive preparedness plan can avoid

long-term business disruption and costly repairs that could have been mitigated.

In this paper, we'll explore why flooding is a top risk, how to assess your vulnerabilities, and what steps to take before, during, and after a flood to protect your people and assets.

**The annual cost of U.S. floods is between \$179.8 and \$496 billion.**

*Source: U.S. Senate Joint Economic Committee*



# Why Flooding Is a Top Commercial Risk

The immediate destruction from floods is just the beginning. The ripple effects can affect every aspect of your business for weeks, months, and even years.



## OPERATIONAL IMPACT

Buildings may be forced to close due to water intrusion or because surrounding access roads are impassable. This disruption can cascade into missed production deadlines, delayed service delivery, and strained client relationships.

Even when the damage appears limited, such as water contained to a single floor, essential systems such as electrical panels, elevators, HVAC units, and server rooms are all vulnerable to floodwater. A compromised electrical system can shut down operations until repairs are complete, and damaged IT infrastructure can result in data loss and service interruptions.



## SAFETY CONCERNS

Floodwaters often carry contaminants, including bacteria, chemicals, and debris, making them unsafe for contact. Electrical hazards can be present even in shallow water.

Prolonged water exposure can also lead to structural instability, weakening foundations, compromising load-bearing walls, and creating hidden damage behind walls or under floors. Additionally, within 24 to 48 hours, lingering moisture can also trigger mold growth, introducing respiratory hazards and requiring specialized remediation before occupants can return safely.



## ASSET VALUE AND INSURANCE COSTS

Significant water damage can lower a property's market value, especially if buyers or tenants perceive the location as high-risk. For insured properties, each claim increases the likelihood of premium hikes and higher deductibles. Repeat flood events can also make coverage more expensive and harder to obtain.

**By 2050, chronic flooding is projected to impact most southeastern coastal areas 30 or more days per year.**

*Source: National Oceanic and Atmospheric Administration (NOAA)*



# Flood Risk Factors for Commercial Properties

Many property owners assume they can ignore flooding because their property sits outside a “high-risk” area, only to be caught off guard by water from unexpected sources. However, property owners should look beyond their map designation and consider a combination of environmental, local, and building-specific factors that can influence a flood’s likelihood and severity.

**99% of U.S. counties have experienced a flood event in the past 20 years.**

*Source: Floodsmart, U.S. Department of Homeland Security*



## Environmental and Localized Risks

**Aging Municipal Drainage Systems:** Reduced capacity or blockages in stormwater networks can cause backups during heavy rain.

**High Concentrations of Impervious Surfaces:** Pavement, rooftops, and parking lots prevent absorption, accelerating runoff into streets and structures.

**Topography:** Low-lying sites or properties downhill from major runoff sources are more susceptible to rapid water accumulation.

**Construction Activity:** Development projects can temporarily alter water flow, block drains, or increase sediment buildup in storm channels.



## Building-Specific Vulnerabilities

**Older Structures:** Many buildings constructed before updated flood codes lack adequate waterproofing, barriers, and drainage designs.

**Below-Grade Spaces:** Basements, underground parking, and mechanical rooms are prime entry points for water.

**Foundation and Material Sensitivity:** Wood framing, unsealed masonry, and some insulation materials may deteriorate quickly when saturated.

**Location of Critical Systems:** Electrical panels, data servers, HVAC units, and elevator machinery placed at or below ground level face higher risk.

**Stormwater Backflow:** Sewer or storm drain backups during heavy rain can flood lower levels.



# Navigating Flood Insurance Coverage

Many commercial property owners mistakenly assume that their standard property insurance automatically includes flood damage, only to discover after a disaster that it does not. Flood damage, defined as water intrusion from outside the property, generally requires a specific flood policy. In contrast, water damage stems from internal causes such as burst pipes, leaking sprinkler systems, and plumbing malfunctions, and typically is included under a standard commercial property policy.

Property owners must also pay close attention to coverage limits and exclusions. Policies may cover the building but not the contents or exclude basements, below-grade mechanical systems, or certain high-value equipment. Exclusions buried in the fine print can create unexpected financial gaps, especially for businesses that rely on specialized machinery or technology. Reviewing limits in advance ensures that they are high enough to cover structural repairs and the replacement of critical assets.

The claims process can also be full of complications for unprepared policyholders. Proactive planning can smooth the process:

- Maintain updated asset inventories with photos and receipts.
- Keep a copy of your policy in both physical and digital formats.
- Identify your insurance carrier's flood claims contact before a disaster strikes.
- Consider an annual policy review with your broker to address changing flood risks and property values.



# Flood Preparedness and Prevention

No property is immune to flooding, but proactive measures can reduce the severity of damage and accelerate recovery as well as result in improved claim outcomes. Key preparedness actions include the following:



## DRAFT A FLOOD EMERGENCY PLAN

Outline who is responsible for specific tasks, list up-to-date emergency contacts, and include evacuation routes for both employees and tenants. Detail shutdown procedures for utilities and critical systems, like elevators and HVAC. Practice the plan through regular drills so when a real event occurs, the response is swift, coordinated, and safe.



## CONDUCT ROUTINE INSPECTIONS AND MAINTENANCE

Inspect roofs, drains, downspouts, and sump pumps regularly to ensure they remain clear of debris and capable of channeling water away from the building.



## INSTALL PHYSICAL BARRIERS FOR PROPERTIES

Install physical barriers for properties in moderate- to high-risk areas. Keep temporary solutions, such as sandbags and portable flood barriers, on hand. Install more permanent investments like flood walls, berms, and flood gates at vulnerable entry points.



## MAKE LONG-TERM INFRASTRUCTURE INVESTMENTS

Elevate critical systems, such as HVAC units, electrical panels, and telecommunications equipment, above predicted flood levels. Properties undergoing renovations or new construction should take flood-resilient design into account, using raised flooring, flood-resistant materials, and site grading to minimize risk.

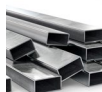
### Common Flood-Resistant Materials



**Concrete and Masonry**  
(Foundations, walls, and floors)



**Tiles**  
(Ceramic, clay, and rubber)



**Metal**  
(Doors, window frames)



**Steel**  
(Infrastructure)



**Treated Wood**



**Cement Board**



## INVEST IN WATER CONTROL TECHNOLOGIES

Use technology to provide early warnings and intervene before damage escalates. Backflow preventers protect against sewage or stormwater entering the building through drains. Sump pump alarms can alert staff to water intrusion before flooding becomes severe, while water detection sensors installed in basements or mechanical rooms can trigger alerts.

Backflow Preventer



Sump Pump



**Mitigation measures can save \$6 to \$8 per \$1 invested for riverine flood events.**

*Source: National Institute of Building Sciences*



# Emergency Response During a Flood

The first hours of a flood event are the most critical for protecting lives, minimizing damage, and setting the stage for a faster recovery.

## 1

### PRIORITIZE SAFETY ABOVE ALL ELSE

- **Evacuate Occupants:** If water levels are rising or there are signs of structural instability, get people out immediately.
- **Shut Off Utilities:** Disconnect electricity at the main breaker, shut down the gas supply, and turn off water to prevent electrical shock, gas leaks, and additional water intrusion.
- **Block Off Hazards:** Prevent access to flooded zones to avoid slips, falls, and contact with contaminated water.
- **Coordinate With Emergency Services:** Notify fire, police, or rescue agencies if evacuation or rescue assistance is required and keep them updated on hazardous conditions, such as exposed wiring or fuel leaks.



## 2

### MITIGATE POTENTIAL DAMAGE

- **Protect High-Value Assets:** Relocate undamaged equipment, inventory, and records to higher ground or unaffected areas.
- **Secure the Site:** Ensure entry points are locked or guarded to prevent theft or vandalism.

## 3

## ENGAGE RESTORATION EXPERTS

- **Contact Your Restoration Partner Early:** The sooner a professional team is on-site, the faster water extraction, drying, and stabilization can begin, reducing secondary damage like mold growth and material warping.
- **Coordinate With Insurance:** Restoration teams can work directly with your adjuster to provide initial loss assessments, saving valuable time.

## 4

## DOCUMENT THE DAMAGE BEFORE MOVING ANYTHING

- **Photograph and Film the Damage:** Capture clear images and videos from multiple angles, including close-ups of affected materials, contents, and systems.
- **Record Flood Levels:** Use a measuring device to document water depth in different areas of the building.
- **Update Asset Lists:** Cross-reference damaged equipment and inventory with pre-existing asset lists to streamline insurance reporting.
- **Preserve Evidence:** Keep damaged items until cleared by your insurance adjuster. You may need them for claim validation.





# Flood Recovery and Restoration

Once the immediate danger has passed and water intrusion has been stopped, the focus shifts to working with your chosen vendor on recovery. The provider must balance speed, safety, and compliance with industry best practices. Rushing the process can lead to hidden damage, future mold outbreaks, and costly rework, while moving too slowly can extend downtime.

Here are the steps that a qualified restoration provider will take.

1

## CONDUCT A COMPREHENSIVE DAMAGE ASSESSMENT

- **Evaluate the Structure:** Inspect the building's foundation, framing, load-bearing walls, and roof systems for water-related weakening or warping.
- **Check Mechanical and Electrical Systems:** Assess HVAC units, electrical panels, elevator systems, and plumbing for flood damage before re-energizing.
- **Review the Interior and Contents:** List damaged furniture, equipment, inventory, and personal property.
- **Map Moisture:** Use thermal imaging and moisture meters to identify hidden water intrusion in walls, floors, and ceilings.

2

## WATER EXTRACTION AND DRYING

- **Remove Water:** Pump out standing water quickly to prevent additional material degradation.
- **Reduce Humidity:** Deploy commercial-grade dehumidifiers and air movers to bring humidity down to safe levels.
- **Dry the Facility:** Use wall cavity injection drying, underfloor drying mats, and other specialized tools to reach concealed moisture pockets.

3

## MOLD PREVENTION AND REMEDIATION

- **Apply Antimicrobial Solutions:** Treat wet surfaces with EPA-approved solutions to inhibit mold growth.
- **Remove Materials:** Dispose of porous materials like drywall, carpet, or insulation if they cannot be salvaged.
- **Test Air Quality:** Confirm that indoor air is safe before reoccupation.

4

## STRUCTURAL REPAIR AND RECONSTRUCTION

- **Replace and Reinforce:** Install new framing, drywall, flooring, and finishes, ensuring all work meets current building codes.
- **Upgrade During Repair:** Elevate critical systems, add waterproofing membranes, or install flood-resistant materials to improve resilience.
- **Coordinate With Tenants:** Work with occupants to minimize disruption during repairs and ensure safe re-entry once clearance is obtained.

5

## CONTENTS RESTORATION

- **Clean Damaged Items:** Use ultrasonic cleaning and other techniques to salvage items.
- **Store Securely:** Protect restored or undamaged items in climate-controlled facilities until the building is ready for reoccupation.

6

## INSURANCE AND DOCUMENTATION SUPPORT

- **Assist With Claims:** Prepare detailed reports for adjusters that include photos and itemized repair estimates.
- **Track Progress:** Maintain clear documentation of restoration milestones for insurance and compliance records.

Around 25% of all flood insurance claims come from areas designated as low to moderate risk.

*Source: FEMA*



# Conclusion

ATI Reconstruction has the nationwide reach, specialized equipment, and technical expertise to respond 24/7 to any flood event. Our teams understand that every hour of downtime affects your bottom line. We are committed to getting you back in business safely and efficiently.

Don't wait for the next storm to test your readiness. Contact us today to discuss a customized flood preparedness and response plan for your property portfolio.

# With 70+ Locations Nationwide

ATI responds to major events and day-to-day  
emergencies across the U.S.



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