



Tornado Preparedness and Recovery: A Guide for Commercial Properties

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Introduction

Tornadoes are among the most destructive natural disasters in the United States, capable of leveling commercial properties, disrupting business operations, and endangering lives in a matter of minutes.

As severe weather events become more frequent and intense, commercial facilities face increasing exposure. According to the National Weather Service, the U.S. experiences an average of about 1,000 tornadoes per year, with 1,500 injuries, 80 deaths, and billions in property damage annually.

For businesses, the stakes are high: lost revenue, damaged infrastructure, employee safety, and long-term reputational harm can all follow a single storm. Preparation is not just a precaution — it's a business imperative. This whitepaper is designed to help business owners, property managers, and facility teams understand the full scope of tornado risks — and to equip them with the knowledge needed to prepare for, respond to, and recover from these powerful storms.

In 2024,

1,810

**Tornadoes
arose in
the U.S.**

Source: Insurance Information Institute



Understanding Tornadoes

Tornadoes are among the most violent and fast-moving weather events on Earth. Their ability to develop rapidly, strike with little warning, and leave behind a path of destruction makes them uniquely dangerous — especially for communities and businesses in high-risk regions.

Understanding how tornadoes form, how they're classified, and where they commonly occur is the first step in preparing for these powerful storms.

HOW ARE TORNADOES CLASSIFIED?

Meteorologists measure tornado strength using the Enhanced Fujita (EF) scale. This scale classifies tornadoes based on the type and severity of damage they inflict rather than just wind speed alone. Here's a breakdown:

EF Rating	Wind Speed	Potential Damage
EF-0	65-85 mph	Light Damage Shingles blown off, branches snapped
EF-1	86-110 mph	Moderate Damage Roof damage, overturned mobile homes
EF-2	111-135 mph	Considerable Damage Roofs torn off, large trees uprooted
EF-3	136-195 mph	Severe Damage Entire stories of homes destroyed
EF-4	166-200 mph	Devastating Damage Houses leveled, vehicles thrown
EF-5	200+ mph	Catastrophic Damage Well-built homes swept away, steel-reinforced structures severely damaged

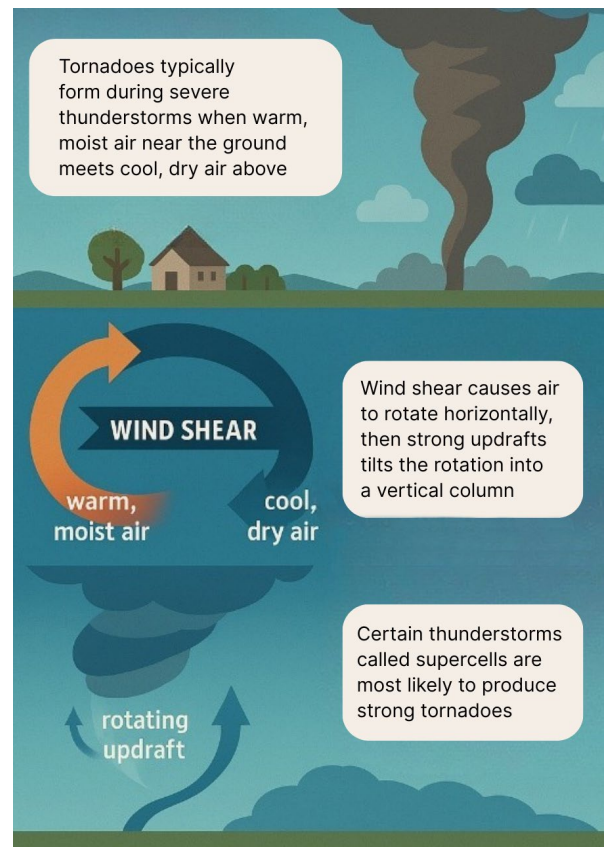
Although EF-0 and EF-1 tornadoes are more common, the higher-rated tornadoes — while less frequent — cause most property losses and fatalities.

WHAT IS A TORNADO?

A tornado is a rapidly rotating column of air that extends from the base of a thunderstorm down to the ground. While tornadoes can vary in size, strength, and duration, they are known for their intense winds, which can exceed 200 miles per hour. In their path, they can uproot trees, flip vehicles, destroy infrastructure, and level entire buildings — especially those not built to withstand such extreme forces.

Tornadoes can last for just a few seconds or persist for over an hour. While most are relatively weak and short-lived, the most severe can leave swaths of destruction for dozens of miles.

HOW DO TORNADOES FORM?



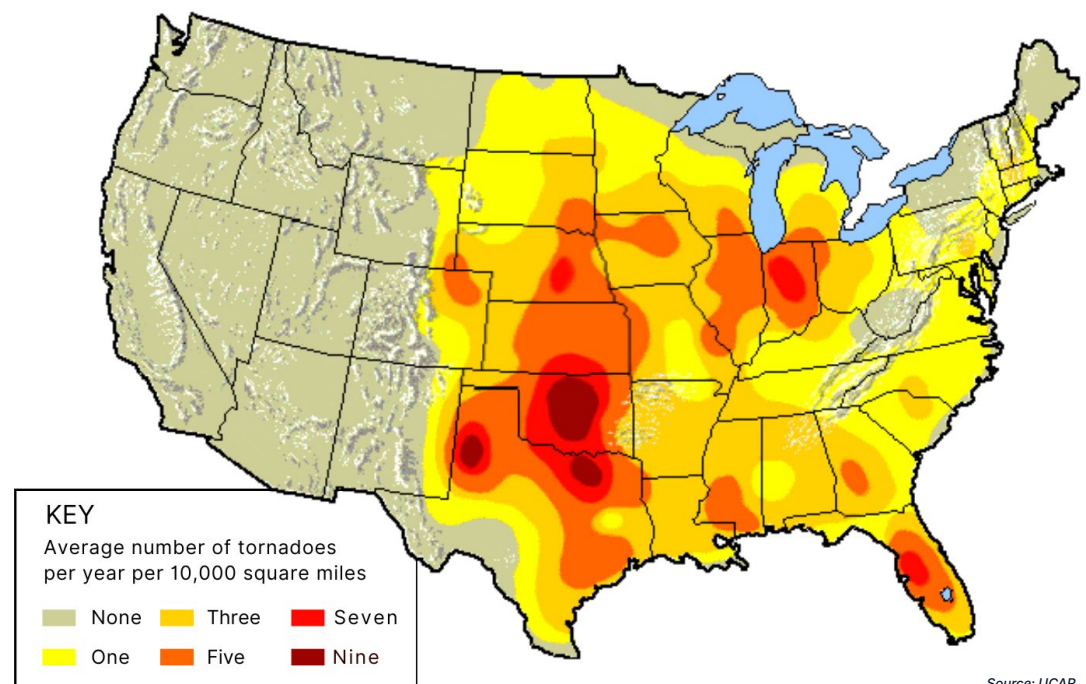


WHERE DO TORNADOES STRIKE?

Tornadoes can technically strike anywhere in the world, but they are most common in the United States, which experiences more tornadoes than any other country. The region known as “Tornado Alley” — which includes parts of Texas, Oklahoma, Kansas, and Nebraska — is well-known for frequent and intense tornado activity due to its geography and weather patterns.

However, recent years have shown an eastward shift in tornado frequency and intensity. States in the Southeast and Midwest, including Mississippi, Alabama, Tennessee, Kentucky, and Indiana, are now experiencing more frequent outbreaks. These areas can face additional risks due to higher population density, older infrastructure, and terrain that makes radar tracking and visual confirmation of tornadoes more difficult. Moreover, nighttime tornadoes — which are more common in the Southeast — tend to be deadlier because people are sleeping and less likely to receive or respond to warnings.

Average Number of Tornadoes per Year





How Tornadoes Impact Commercial Properties

While the dramatic images of structural collapse often dominate news coverage, the true cost of a tornado extends far beyond physical destruction. For businesses, the financial and operational impacts can be deep, widespread, and long-lasting — especially without a well-prepared response and recovery plan.



DIRECT PHYSICAL DAMAGE

The most visible and immediate impact of a tornado is the physical damage to buildings and infrastructure. Tornadoes can tear off roofs, shatter windows, collapse walls, and scatter debris across entire properties. For commercial buildings — especially large warehouses, factories, healthcare facilities, and office complexes — this kind of damage can be devastating.

In many cases, essential systems like HVAC, electrical, water, and data lines are compromised, making the building unsafe or unusable. Even if a structure remains standing, it may be condemned due to hidden damage or code violations following a storm.



INDIRECT AND OPERATIONAL IMPACTS

While physical damage is the most obvious, indirect impacts can be just as disruptive and far more costly over time:

- Operational Downtime
- Loss or Contamination of Inventory and Data
- Supply Chain Disruptions
- Employee Displacement
- Loss of Customer Confidence



How Commercial Properties Can Prepare for Tornadoes

No amount of preparation can stop a tornado, but every business can take steps to reduce risk, protect employees, and speed up recovery. Tornado preparedness isn't just about safety — it's a critical investment in operational continuity.

Below, we break down key areas every commercial facility should address to prepare for tornado season.

CONDUCT A RISK ASSESSMENT

Preparedness starts with understanding your facility's specific risks. Every building has vulnerabilities — from outdated roofing systems to large glass façades, unanchored equipment, and unsecured rooftop HVAC units.



RISK MANAGEMENT



Structural Assessment

Working with a structural engineer to evaluate the structure's wind resistance



Hazard Identification

Identifying potential hazards both inside and around the property (e.g., loose outdoor signage, tree limbs, and unreinforced walls)



System Vulnerability Mapping

Mapping out vulnerable systems such as data servers, power infrastructure, and utilities



Risk Research and Data Analysis

Reviewing resources such as the NOAA [Storm Events Database](#), National Centers for [Environmental Information database](#), and FEMA's [National Risk Index](#)



Expert Consultation

Engaging structural engineers or restoration professionals to evaluate tornado resilience



Insurance Review

Ensuring you have the proper insurance coverage for the types of losses you may experience



DEVELOP A TORNADO PREPAREDNESS PLAN

After evaluating the risks, businesses must create a clear, actionable preparedness plan. This plan should include these elements:

- Evacuation routes and procedures
- Designated safe zones (interior rooms without windows, preferably on the lowest floor)
- Roles and responsibilities for team leaders
- Procedures for accounting for employees and visitors during an emergency
- Communication protocols to notify staff, emergency responders, and stakeholders

Facilities should document this plan and review and update it yearly.



BUILD RESILIENCE INTO THE PROPERTY

Physical reinforcement can significantly reduce tornado damage, especially for commercial properties with large footprints or aging infrastructure. Upgrades such as installing impact-resistant windows and doors, reinforcing or replacing older roofs with wind-rated materials, and securing rooftop equipment and signage can help structures withstand high winds and flying debris. Additional protective measures — like storm shutters or exterior shielding systems — provide further defense against breakage and water intrusion. In tornado-prone regions, investing in storm shelters or safe rooms can offer lifesaving protection for occupants.

Even small upgrades can make a difference. For example, adding hurricane clips to roof structures or anchoring storage racks and equipment can help prevent secondary damage inside the building during a storm. Preparedness, however, isn't a one-time project — it requires ongoing attention. Regular maintenance ensures that all protective features perform as intended when a tornado strikes. At least once a year, businesses should conduct a tornado-specific inspection, checking these items:

- Roof integrity and drainage
- Anchors and tie-downs for outdoor structures
- Door and window seals
- Functionality of backup power systems



How to Start Post-Tornado Recovery

Tornadoes can devastate a commercial property in minutes — but recovering from the damage can take weeks or even months. Once the immediate danger has passed, businesses must shift focus to assessment, restoration, and rebuilding. The sooner you take action, the faster you can resume operations and protect your bottom line.

Here's what an effective post-tornado recovery process looks like — and how a strategic approach can minimize downtime and long-term losses.

1

ASSESS THE DAMAGE

Before any repairs begin, a thorough property inspection is critical. Safety comes first, so do not enter until first responders have cleared the building for entry. The next step is to confirm that all power, gas, and other utilities are turned off.



- Take high-resolution photos and videos of all visible damage — interior and exterior.
- Log damaged equipment, furniture, inventory, and structural components.
- Pay attention to less obvious issues like roof punctures, water intrusion, or foundation shifts, which may not be immediately visible but can lead to bigger problems later.

It's best to work with a commercial restoration expert who can walk the facility with you, help identify hidden hazards, and provide a comprehensive damage assessment. Professionals have tools like moisture meters, 3D scanning, and thermal imaging to uncover what the eye might miss.



2

RESTORATION AND RECONSTRUCTION

Once damage is assessed, it's time to move quickly into restoration and reconstruction. This process often includes steps like these:

- Emergency mitigation, such as tarping roofs, boarding windows, and removing debris
- Water extraction and drying, particularly if the storm brought rain or flooding
- Structural repairs, from roofing and walls to electrical and mechanical systems
- Interior reconstruction, including flooring, ceilings, fixtures, and furnishings

For large or complex facilities — such as warehouses, schools, hospitals, or manufacturing plants — this process must be carefully phased and coordinated. Rebuilding isn't just about restoring the physical space; it's about getting business operations back online as efficiently and safely as possible.

3

WORK WITH YOUR INSURANCE COMPANY

Tornado recovery is also a financial challenge — and working with your insurance provider efficiently can make or break your ability to recover fully. Here are a few best practices:

- Notify your insurance company immediately after the storm and file a claim promptly.
- Submit detailed documentation, including photos, video, written inventories, and receipts for emergency repairs.
- Keep a running log of all communications with your insurer and restoration provider.
- Consider hiring a restoration contractor that can assist with the claims process, helping ensure that your estimates and scopes align with policy coverage and expectations.

The insurance process can be complex and time-consuming — especially if your business is one of many impacted by a widespread storm. Having a knowledgeable restoration partner by your side can simplify the process and help you restore your property back to pre-loss conditions or better.



Check out these resources to learn more about preparing for tornadoes:

- [NOAA Storm Events Database](#)
- [NOAA Storm Prediction Center](#)
- [Be Prepared for a Tornado, a Ready.gov guide](#)
- [National Weather Service Tornado Safety Tips](#)
- [National Centers for Environmental Information database](#)
- [FEMA National Risk Index](#)

ATI: Your Partner in Tornado Recovery

Tornado recovery is rarely something a business can manage alone. With the right preparation, team, and plan in place, commercial properties can recover not just faster — but smarter. And when you're backed by experienced professionals who understand the demands of large-scale recovery, you're never alone in the process.

Experienced restoration teams know how to assess structural integrity, manage complex repairs, and comply with local building codes. They also provide critical support in navigating insurance processes, minimizing business disruption, and ensuring long-term resilience.

Now is the time to assess your facility's vulnerabilities, create or update your emergency plans, and establish relationships with trusted restoration professionals.

ATI specializes in commercial property recovery, offering a full range of services from emergency response to complete reconstruction. With national coverage and rapid mobilization, we help businesses stabilize quickly, avoid secondary damage, and return to operation as soon as possible. For clients with an Emergency Response Agreement (ERA) in place, we provide priority service, pre-disaster planning, and streamlined communication — ensuring a faster, more coordinated recovery when it matters most.

If you're interested in learning more about preparedness planning and how ATI can support your business before and after a disaster, contact us for a consultation.

With 70+ Locations Nationwide

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



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