Water Damage Prevention



Dangerous and costly, water intrusion can compromise your building's structure and your tenants' personal property, cause mold to grow, or worse, result in personal injuries due to collapsing ceilings or other issues. A sound maintenance program—one that includes regular inspections, timely repairs, and meticulous documentation—can go a long way toward eliminating or reducing water intrusion.

It can also help you defend your organization against claims of improper maintenance should they arise. Here's what you need to know about common systems and their preventative maintenance measures.

Attic-Mounted HVAC and Plumbing Equipment

Equipment drip pans

Widely used to help protect against leaks, drip pans are commonly found below ceiling water heaters, air conditioning units, washing machines, and other equipment where dripping may occur. Improper installation of these pans can lead to issues, though problems more commonly arise when the equipment the drain pans are paired with are not properly maintained.

Suggested preventative measures: To prevent leaks and reduce costly insurance claims, check drain pans periodically. If they're full, look for leaks at the pipe fittings, and tighten them if necessary. Check drain valves and temperature-pressure relief valves as well, and tighten or replace them as needed.



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Driplines

In air conditioning units, which remove humidity from the air and turn it into water, drip lines move the water from the drain pan, where it collects, down the drip line and away from the unit, usually discharging it outside. If the drip line becomes clogged, water can overflow and damage the unit or the building. Clogs, which form when water combines with dust, dirt, and other debris, typically result from poor maintenance, lack of an appropriate drain slope, or an environmental issue such as flooding. Over time, the buildup thickens and can obstruct the line.

Suggested preventative measures: Schedule regular inspections of your air conditioning units to identify potential leaks and moisture issues before they become a problem. Typical signs of a clogged drain include a non-working A/C unit, standing water, a foul smell, a full drain pan, water damage, or in the case of newer units, a notification from the equipment's technology. If you need guidance on developing a maintenance program for your HVAC equipment, ask an HVAC professional or your equipment manufacturer for help.

Sprinkler Systems



Sprinkler systems help protect building occupants from fires, so it's unfortunate that they've become problematic for the housing industry. An inappropriate action from one bad actor can result in a water release that damages structures and property, leading to costly remediation and claims.

Above finished ceilings

Overhead fire suppression systems pose significant risk of water intrusion when the void space, also called a chase, is compromised. If the damage causes your residents to be displaced, it could have catastrophic financial consequences for your organization.

Exposed and open ceilings

With overhead fire suppression systems, your exposure and risk are reduced but not eliminated. Disruptions due to water intrusion can still run into the millions of dollars.

Suggested preventative measures: Inspect sprinkler system components on a weekly, quarterly, and annual basis and include detailed checks during scheduled and unscheduled access to leased spaces. More detail on this inspection schedule can be found in our Sprinkler System resource. Maintain updated infrastructure schematics and share them with your staff.

On the tenant side, create strict lease terms and guidance prohibiting your residents from altering their space and performing unsanc- tioned repairs, and make sure to enforce them. It's also a good idea to provide ongoing education about the disruptive and destructive outcomes that result when water-carrying components are accidentally compromised. Stress that tenants shouldn't hang clothes or décor on pipes and sprinkler heads, since doing so could affect system stability and make water intrusion more likely.

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Water Supply Lines

Copper lines

Copper is the standard pipe used in plumbing projects due to its integrity, durability, and high thermal rating, among other benefits. It tends to cost significantly more than other lines, though, and it cannot withstand acidic water, so a city water supply is essential.

Cast iron lines

While no longer used in new potable water supply applications, iron pipes were used in many older plumbing projects, and some are still in service. The impurities found in the potable water from iron-constructed lines has raised health concerns; iron oxidizes over time, causing adverse human health impacts over the long term, along with integrity issues.



PVC

Compared to copper pipes, polyvinyl chloride (PVC) pipes, which are manmade, allow for better temperature control due to their superior insulation qualities. PVC also offers better sound reduction. In housing projects, where cost is a concern, PVC pipes offer a good balance between cost savings and the physical qualities needed for plumbing projects.

Suggested preventative measures: To reduce potential damages and claims, conduct regular inspections of your plumbing system, even in the absence of suspected issues. When addressing leaks, don't just look at obvious sources—check all accessible plumbing lines and systems near the problem area. And don't simply cover discolored ceilings with stain preventer, since a cover up won't address the real issue and may lead to a claim of personal injury down the road. Tackle repairs and manufacturer alerts/recalls immediately, and keep in mind that small leaks or surface stains may mean a much bigger issue is lurking. Detailed inspections paired with good documentation will help you reduce plumbing system failures and the issues that manifest into personal injury and/or property claims.

Roof Coverings and Downspouts

Between the roof and ceiling

Roof coverings and systems are vital to the preservation of a building's structural members and interior surface coverings. We want roofs to perform as intended, even in extraordinary weather events, since damaged and/or missing roof cover materials create oppor- tunities for building deterioration.

Improperly installed or maintained roof-mounted equipment such as solar panels can also damage your roofing system and lead to water intru- sion. Even small amounts of water can threaten your building's integrity and interior surfaces and lead to big repair bills and claims.



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Flat Roof Systems

Flat or built up roof systems are only effective if you maintain designed sloping and drainage lines. Standing or ponding storm water can com- promise the rooftop covering, leading to piercing or puncturing. More often than not, the water will show up as stains on the interior's finished surfaces.

Gutters /Downspouts

Gutter systems and downspouts support roof-water runoff, especially after heavy rains, when large amounts of storm water would otherwise pool on the roof's surface. When the drainage pathway is obstructed, any other opening becomes a point of exit for water.

Suggested preventative measures: Inspect roof coverings and interiors after major storms, before every new season, and twice annu- ally in addition to seasonal- and storm-related inspections. Monitor the moisture content in the space between the roof and ceiling, and inspect the underside of the roof covering from the attic, if possible. (Don't rely on what you can see outside, since small punc- tures are often camouflaged in an exterior-only inspection.) Remember, what is visible on a wall finish often contains a much larger hidden problem. Seal seams, punctures, and cracks. Document your findings in a written report, and include photographs. And as with any asset, review and analyze your repair log, since past repairs are often good indicators of the repairs/exposures that might be on the horizon.

Bottom line

With advancements in maintenance practices, it is unacceptable for a housing organization to claim it was unaware of deteriorating conditions related to a particular housing asset. These claims affect the entire housing industry's insurance position related to personal injuries in a housing unit. Reducing maintenance exposure leads to a decline in reported incidents and a win for the housing industry as a whole.

Interested in working with HAI Group to manage your agency's risk?

Contact us for assistance and answers today!

Contact Now

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