

Risk Control

Water-Fed Appliances

Essential Water Damage Prevention Strategies

Water-fed appliances – such as dishwashers, washing machines, ice makers, coffee makers, refrigerators, soda or water dispensers, humidifiers and water heaters – are essential conveniences in residential and commercial settings.



These appliances enhance comfort and efficiency. However, water-fed appliances are prone to leaks and failures over time, which can cause significant water damage if not detected and addressed promptly.

Effective Mitigation Strategies

- Install leak detection systems. These systems can identify leaks early, automatically shut off the water supply when a leak is detected and prevent extensive damage.
- Equip the water faucet feeding the appliances with automatic shutoffs, flow restrictors or flow regulators. These devices detect unusual water flow – such as that caused by a line break – and automatically shut off the water supply to prevent further damage. Flow limiting devices restrict the flow of water to a predetermined rate, which can minimize the amount of water that escapes in the event of a break.
- Restrict the use of PEX or plastic tubing with compression fittings. Issues with PEX tubing include susceptibility to pinhole leaks and crimp fitting failures. PEX or plastic tubing failures can occur for various reasons, including improper installation, poor quality materials and natural decomposition or deterioration of the plastics due to chemical or UV exposure.
- Implement policies to require the use of copper or braided stainless steel flexible tubing with threaded fittings for all water-fed appliances.

Regular Preventative Maintenance Programs

- Regularly inspect and maintain water-fed appliances to prevent leaks and failures. This includes checking hoses and connections, flushing water heater tanks according to the manufacturer's instructions and inspecting seals for signs of wear and tear.
- Replace washer rubber hoses every 5 to 7 years (on average). Regularly inspect the hoses for signs of wear and tear, such as cracks, bulges, or leaks. If these issues are observed, replace the hoses immediately, regardless of their age. Use high-quality hoses, such as braided stainless steel, for washers to help extend their lifespan and reduce the risk of leaks.



Common Failure Scenarios

- **Burst hoses:** A burst rubber hose on common appliances, such as washing machines, can release hundreds of gallons of water in a short period of time, causing extensive damage.
- **Dishwasher leaks:** Slow leaks that remain undetected for a long period of time can cause mold growth and water damage.
- **Water supply line failures:** Leaks from water lines can damage flooring and surrounding areas. Failures most often occur at connection points.
- **Water heater failures:** Age and lack of proper maintenance/tank flushing are common causes of failure. Water heaters may show signs of failure (such as small leaks below the tank), but failures can occur without warning.

- **Develop and implement an incident response plan** to ensure quick action in the event of a water-related incident. This includes training personnel on how to respond to leaks/flooding, including methods for quickly shutting down water supplies.

Importance of Water Damage Mitigation Programs

- **Prevent structural damage:** Water damage weakens foundations, causes wood rot and compromises electrical systems. Prompt mitigation can prevent further deterioration and maintain a property's structural integrity.
- **Limit mold growth:** Excess moisture provides an ideal environment for mold and mildew to thrive. Mold growth can occur within 24 to 48 hours of water intrusion and can lead to serious health issues and property damage. Proper mitigation techniques, including thorough drying and disinfection, can help prevent mold growth.
- **Preserve belongings:** Water damage can wreak havoc on personal belongings, including furniture, electronics and documents. Effective mitigation efforts can salvage and restore these items, minimizing financial losses and preserving sentimental value.
- **Reduce restoration costs:** Timely water damage mitigation can help keep restoration costs to a minimum. By addressing the issue promptly, extensive repairs, replacements and renovations can be avoided.
- **Ensure safety:** Water damage can create slip and fall hazards and compromise electrical systems, affecting a property's safety. Mitigation measures help restore the safety and integrity of the affected area.



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