

Mold in Vacant Businesses

As many “non-essential service” businesses across the country are ordered to close to the public in the wake of the COVID-19 health crisis, companies are urgently seeking ways to reduce operating costs until we all can return to business. Buildings that are normally filled with workers and receiving daily attention will sit empty for an unknown period of time. With summer and the warm humid months fast approaching, the potential for mold growth in these dormant buildings poses an additional threat to business continuity. What could be more discouraging than finally returning to work and discovering a mold problem requiring an expensive and lengthy remediation that could even prevent your business from restarting?

A Perfect Situation For Mold Damage...

Preventing mold growth in buildings really boils down to one issue: moisture control. When a building is not in use, the usual maintenance operating conditions that prevent moisture accumulation/intrusion may be suspended. Heating Ventilation and Air Conditioning (HVAC) systems might be turned off or functioning at a reduced capacity that is unable to maintain a proper relative humidity for the indoor environment. Increased relative humidity, temperature fluctuations, and reduced ventilation create a situation for mold to take hold and proliferate in an unoccupied building. The air may become stagnant as the normal activities in the building cease. Without occupants opening doors and closets, running fans, and walking around, the indoor air will not mix and circulate as much creating microenvironments where relative humidity levels may build up.

Moisture-related problems that occur in unoccupied buildings will likely go unnoticed or untreated for an extended amount of time. A building may have a leaky pipe or a window with frequent condensation that occupants normally wipe up. These small, underlying problems may become serious issues when left unchecked for an extended period of time.

Tips For How To Prevent Mold Growth During A Building Vacancy

Most mold problems can be avoided with some planning and good building management practices:

- Perform an initial assessment of the building and local environment. Property managers, maintenance personnel, and other individuals familiar with the building and the local climate should conduct an initial facility assessment to identify possible moisture-related issues. Any observed moisture should be assessed to determine the source, and corrective actions required to remediate it. Corrective actions should be taken immediately to prevent water damage and mold growth.



- Fix existing problems. Common water intrusion problems can be found at the roof, gutter systems, damaged siding, and around windows and doors. Ensure that gutters are clear and drain away from the building, windows have sufficient caulking, any sump pumps are working properly, sprinkler systems are directed away from exterior walls, and all other building water management systems are in good working order. Check interior plumbing for any leaks and consider turning off the water service.
- Ensure sufficient ventilation and circulation. While the HVAC system may be tuned to conserve energy, be sure there is still enough ventilation and temperature control to avoid excess relative humidity and temperature extremes in the building. Consult an HVAC professional for advice on what appropriate operating parameters should be for a specific facility. To facilitate air circulation and mixing, open doors and closets, move objects away from walls (when possible) and operate ceiling or floor fans. During the periodic facility assessments, personnel should obtain real-time temperature and relative humidity measurements to confirm that temporary controls are effective in maintaining acceptable relative humidity and temperature levels. Periodic inspections may be performed by internal maintenance staff or building managers. If necessary, HVAC specialists may be retained to assist in the periodic inspections.
- Use dehumidifiers and chemical desiccants in appropriate areas. The Environmental Protection Agency (EPA) recommends an indoor relative humidity of less than 60%. Assuming good air mixing, a 70-pint capacity dehumidifier should be able to maintain recommended relative humidity levels for 2,500 square feet of floor space. The dehumidifier should be connected to a floor drain for continuous operation over extended periods of time. However, a leak from a dehumidifier can be a serious moisture problem itself so proper installation of the drain line is essential. Carefully follow the manufacturer's instructions or hire a professional to install. Chemical desiccants can be used to control humidity in small enclosed areas where air circulation is poor. These products are commonly used in boat hulls and are found in most hardware stores.
- Monitor the building in-person or remotely. A periodic visual inspection of the building can identify water-related problems before they become extensive mold problems. The building should be checked as soon as possible after a severe weather event. Mold can begin to grow within 48-72 hours after a serious moisture-intrusion event, so early detection is a great advantage. If conditions prohibit surveying the building in person, there are now several cost-effective options to monitor a building remotely. Video cameras may be deployed in strategic areas to identify problems. Multiple relative humidity meters can be situated in the building that will stream real-time data to a smart phone. Any observed moisture should be assessed to determine the source, and corrective actions should be required to remediate it. Corrective actions should be taken immediately to prevent water damage and mold growth.



Mold Prevention, Health and Remediation Sources:

A Brief Guide to Mold in the Workplace, Safety and Health Information Bulletin, OSHA
<https://www.osha.gov/dts/shib/shib101003.html>

Basic Facts about Mold and Dampness, CDC
<https://www.cdc.gov/mold/faqs.htm>

Building Air Quality Guide: A Guide for Building Owners and Facility Managers, US EPA
<https://www.epa.gov/indoor-air-quality-iaq/building-air-quality-guide-guide-building-owners-and-facility-managers>

Mold Prevention and Remediation Policy, National Institutes of Health
<https://www.orf.od.nih.gov/TechnicalResources/ORFPolicies/Pages/MoldPrevPolicy.aspx>

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