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Managers should consider instituting a mold prevention and management program

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Mold growth is a risk inherent in building management and ownership. Whenever damp conditions prevail, mold can grow, affecting the integrity of the building and the well-being of the occupants. Prudent managers should consider instituting a mold prevention and management program.

Mold Growth

Mold thrives in a wide variety of damp organic materials. Common causes of moisture include building design flaws, poor construction workmanship, plumbing leaks, and malfunctioning mechanical systems. Unfortunately, mold is not always visible. It can be hidden in wall cavities, above ceilings, in heating, ventilation and air conditioning (HVAC) systems, and in other locations not normally visible from inside or outside the building.

Risk Assessment

Although the presence of mold growth is always undesirable, the degree of sensitivity will depend on the actual use and occupancy of the building. Generally, sensitivity to the presence of mold is greater in a hospital or biological research facility than it is in an office building. Before developing a mold prevention and management program,

building managers should perform a cost/benefit analysis.

There are two types of costs: pre-incident prevention costs and post-incident mitigation costs. Ultimately, all buildings will likely incur some level of each, and both can be significant. In general, it is easier to quantify prevention costs in advance.

Examples of prevention costs include:

- Specialized site and function-specific designs created by qualified architects/engineers.
- Mold-resistant materials.
- Training of building management personnel in mold prevention techniques.
- Proactive management inspections and maintenance.

Examples of reaction costs include:

- Restorative drying.
- Microbial remediation, including selective demolition and specialized cleaning.
- Reconstruction.
- Insurance disputes.
- Litigation.
- Loss of revenue.
- Diminishment of reputation.

The building manager should develop a mold prevention and management program that balances these two types of costs.

Key Elements of a Mold Prevention and Management Program

Occupant activities. The building management strategy for mold prevention should take into account building occupants' activities that involve water or elevated humidity and take steps to protect affected areas such as mechanical rooms,

custodial closets, kitchen areas, laundry facilities, etc.

Awareness and training. Building managers should require mold awareness training to ensure that all personnel, including facilities and maintenance staff, learn the ways in which their work could foster mold growth and how to recognize mold problems in the early stages while they are relatively easy to address. Building managers should also develop a system that requires immediate reporting of water leaks and tracks responses to each incident.

Regular inspections. Periodic inspections should cover the interior and exterior of the building and involve both visual observations and assessment of materials and interior spaces with equipment such as moisture meters and hygrometers. Exterior inspections should focus on the integrity of the building envelope and conditions that could result in water incursion. Interior inspections should focus on plumbing and HVAC systems, porous interior building materials that are vulnerable to mold growth, and equipment that has the potential to leak or produce condensation. The frequency of the inspections will depend on the use of the building and consequent sensitivity to the presence of mold.

Maintenance. The materials and systems present in the building will dictate maintenance requirements. Building maintenance should involve upkeep of the building envelope (e.g., caulking and roofing) and building systems (e.g., HVAC systems). Management should obtain and follow maintenance recommendations from manufacturers, archi-

fects, engineers and general contractors. More sensitive building environments may require more rigorous maintenance schedules.

Incident response. Even the most proactive management strategy will not prevent incidents that can lead to mold growth if not properly managed. It is therefore important to institute procedures to address incidents quickly. Incidents will likely fall into one of two categories: water incursion/damage and mold growth. Response procedures should include a designated team of respondents, communication with building tenants, and description of required actions for each potential type of incident, and post-response assessment procedures to measure compliance and effectiveness.

Be Proactive

The key to damage mitigation is being proactive. Building managers should consider instituting proactive indoor environmental quality monitoring programs to ensure early detection and resolution of problems. This might include visual inspections, humidity and moisture surveys, and air monitoring. Building managers may also want to establish relationships with environmental consultants and restoration and microbial remediation contractors before emergencies arise to ensure rapid response.

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