PROACTIVE PROPERTY MANAGEMENT: MINIMIZING THE RISKS OF MOLD, BEFORE OR AFTER STORM IMPACTS

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Whether constructing/renovating or buying/renting property, or, more recently, responding to emergency storm damage, many factors must be considered in order to reduce the risk of mold contamination. These include:

- Preventive maintenance of HVAC, plumbing and other building systems can reduce the potential for mold growth. Owners that disregard maintenance of basic HVAC components – such as filter and condensate drains – face increased risk. HVAC systems that cycle off during non-occupancy hours to save energy can create fluctuations in temperature and humidity conditions, which may promote mold growth. Undersized and oversized HVAC systems are also associated with inadequate moisture control (ASHRAE 62-2001).
- Roof leaks, plumbing leaks, sewer back-ups or storm related damage that allow water into the structure often trigger a mold and bacteria problem. Water intrusion that occurs during construction and renovation is also associated with uncontrolled mold growth. The key to mold risk reduction is preventive maintenance of building systems, as well as regular inspections to identify leaks. Thorough planning prior to construction activities can prevent moisture from entering the structure. Consideration should also be given to protecting construction material from precipitation once the material arrives on site. Additionally, building openings should be protected when possible to reduce the amount of moisture that enters the interior of the structure during the construction process.
- Local weather conditions influence the degree of mold risk. Buildings located in areas with high precipitation or persistent high humidity must defend against outdoor conditions. To control indoor mold growth, the relative humidity should remain below 60 percent (ASHRAE 55-1992). Properties located within a flood plain may also need special design considerations such as sump pumps, moisture barriers and exterior grading to prevent rising surface and groundwater from entering the structure. Properties in a 100-year flood plain should be evaluated for suitability. (Remember, damage resulting from rising water due to storm surge is not normally covered under most insurance policies.) Basements and crawlspaces that are persistently high in humidity can be sources of mold which can damage stored contents as well as structural integrity.
- Interior moisture sources can also contribute to humidity levels within a structure. Indoor pools, spas, laundries or other wet processes add a significant moisture load. Therefore, HVAC systems should be designed to remove this extra moisture from the structure.
- Buildings with a history of water leaks present a high degree of mold risk as well as persistent small leaks that are not resolved – such as roof leaks or leaks around window frames – are commonly associated with uncontrolled mold growth. More extensive leaks (such as those caused by storm damage) that take more than two days to clean up and dehumidify are also high-risk indicators. If porous or semi-porous materials have been wetted and remain within the building, these materials are likely to harbor mold growth. Buildings constructed of biodegradable materials are also likely to harbor biological activity as the building envelope and structure members can absorb moisture.

To reduce the risk of indoor mold contamination, consider the following when purchasing and managing properties:

- Avoid buildings with basements.

- Do not locate properties within a flood plain.
- Any visible mold should be less than 10 sq. ft.
- Design HVAC systems to handle excess humidity sources.
- Maintain roofs and plumbing systems to prevent sudden or chronic leaks.
- Choose non-biodegradable building materials.
- Avoid properties that have a history of water leaks and/or significant storm damage.
- Ensure that recent renovations have not allowed water intrusion or used wetted construction materials.
- Ensure that recent storm related repairs and construction/renovations have been performed in accordance with approved remediation procedures (such as but not limited to the American Industrial Hygiene Association Assessment, Remediation, and Post-Remediation Verification and/or New York City Department of Health Guidelines on Assessment and Remediation of Fungi in Indoor Environments) and not allowed subsequent water intrusion or used wetted construction materials.
- Ensure that HVAC systems are maintained and run continuously to control temperature and humidity levels.
- Respond to a water intrusion event within 48 hours using documented procedures for containment dehumidification, and disposal of wet porous and non-porous materials.

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