



# Environmental risk bulletin

## Mold and water intrusion prevention for building owners and property managers

**This bulletin highlights many of the significant program elements your business should have in place to address water intrusion and mold prevention.**

Controls will differ from company to company; however, it is generally agreed that a Program Coordinator should be designated with overall responsibility for implementation of a water intrusion and mold prevention program. A written Operations and Maintenance (O&M) Plan that ties together various prevention, risk transfer and response protocols has become the Standard of Care for building owners and property managers. Training of key personnel that focuses on the specific responsibilities and actions outlined in the O&M Plan is also a best management practice.

A comprehensive water intrusion and mold prevention program should build upon existing company practices and protocols. Development of new program elements may require an additional investment of resources; however, this pales in comparison to the time and expense associated with potential property damage and litigation.

### **Organizational structure and communication**

A Program Coordinator who is responsible for the overall implementation and effectiveness of the water intrusion and mold prevention program must be designated. Other key in-house staff (i.e., building maintenance staff, engineers, property managers, etc.) must be identified and their responsibilities

clearly delineated. An internal hierarchy of communication should be established. Staff responsible for contacting outside parties should be identified and protocols for engaging subcontractors, insurance companies, and tenants, must be established. Company expectations for prevention and response to water intrusion and mold events should be created and reviewed with third party property managers, consultants and subcontractors.

### **Preventative maintenance (PM)**

A proactive PM program designed to prevent water intrusion and maintain the integrity of the building structure (roof, windows, doors, and other openings) and external drainage features is critical. Maintenance protocols should be established for heating, ventilation, and air conditioning (HVAC) systems, plumbing systems, and general maintenance/housekeeping of building interior and exteriors. It is recommended that indoor spaces should be maintained at a constant temperature above 65°F with relative humidity between 45% to 55%. A written O&M Plan incorporating industry best management practices should be in place to address key responsibilities, maintenance requirements, management systems and documentation.

## Inspections and prevention protocols

Documented inspections should be conducted on a regular basis (quarterly at a minimum) so that the building is reviewed during various seasonal and operational conditions. It is also prudent to have an inspection protocol following severe weather events (thunderstorms, windstorms, ice storms, etc.) or power outages. The building interior and exterior should be inspected for signs of water intrusion and mold growth. Unusual odors in indoor spaces may also be a sign of developing problems. Crawl spaces, basements, and attics may be difficult to access, but are common areas for water intrusion and mold. HVAC and plumbing systems should be visually inspected for obvious signs of damage, leaks or other problems. Vacant spaces should also be included in inspection protocols.

## Documentation and management systems

A Water Intrusion Event Form and a Mold Incident Report Form should be created to document tenant complaints, building impacts and corrective actions associated with each individual event. Some firms may combine these reports; but regardless of the format, reports should clearly outline decision making and actions associated with water intrusion or mold events. Documentation should be based on known facts, and care should be taken not to incorporate unqualified or uninformed opinions that could be discoverable during litigation. Completion of follow-up actions and communication with effected parties will ultimately be the responsibility of the Program Coordinator. Photographs are highly recommended to supplement incident reports. Company response protocols should reinforce responsibilities for communication and documentation.

## Mold complaints and claims

Notification must be made to insurance companies before undertaking work and accruing expenses associated with mold claims; however, emergency response actions necessary to prevent further property damage or bodily injury should be taken immediately. Insurance company claim reporting requirements should be clearly established in the response protocols. Generally, if a tenant complaint or claim has not been received, a building owner should take appropriate actions to correct water intrusion problems or remediate mold.

## Response protocols

A quick response within 24 to 48 hours of water intrusion events is key to minimizing damage. A qualified contractor network should be established and available to correct the source of water immediately. Under the advice of a qualified professional, water damaged materials may be removed and replaced, with residual water extracted from the area using pumps, dehumidifiers, and fans. Mold abatement can typically be performed by trained in-house staff for areas involving less than 10 square feet, but professional vendors should be utilized when this is exceeded. Pre-qualified mold remediation firms should be utilized. Generally, mold testing (air or wipe samples) should not be conducted until after abatement is completed; however, professional firms employing qualified industrial hygienists should be relied on to prepare an abatement and testing plan.

“ Designate a Program Coordinator who will be responsible for the overall implementation and effectiveness of the water intrusion and mold prevention program ”

## Risk transfer programs

Building owners should work with legal counsel to incorporate standard language into lease agreements that address water intrusion and mold events. Lease agreements should outline tenant responsibilities and liability for maintaining temperature and humidity controls, performing visual inspections of the leased space, and reporting any problems throughout the lease term (including extended vacancies). Building owners should establish written contracts with all third party property managers, building subcontractors, and mold remediation vendors, who address water intrusion and mold issues. Contract language should be monitored to avoid accepting liability for third party acts or omissions leading to mold problems. Protocols for qualifying third party vendors and subcontractors should be established to ensure appropriate qualifications and experience. Subcontractors with professional liability policies including mold coverage are preferable.

## Construction/renovation

Construction projects present a unique set of challenges, which should be given additional scrutiny. Pre-qualification of subcontractors should include a review of water intrusion and mold prevention programs and insurance coverages associated with design and construction phases. Building materials and spaces must be kept dry during construction and renovation activities. Inspection of building materials and routine inspection of the premises should be conducted throughout the life of a construction/renovation project. HVAC systems should be routinely operated to control temperature and humidity.

## Tenant communications

In addition to lease language, supplemental educational materials are recommended for distribution to tenants at the time of signing the lease. Such materials should clearly delineate responsibilities for maintaining the tenant's premises and immediately notifying building management of water or mold problems. Complaint and response protocols should include a standardized Tenant Notification Letter that acknowledges the water intrusion or mold event was investigated and appropriate corrective actions were taken. This notification should also include any additional tenant responsibilities and reinforce reporting protocols if problems persist. Promises should not be made regarding testing/sampling or the level of cleaning/abatement. Verbal follow-up is strongly recommended to ensure tenants

are confident and satisfied with the building owner's response. Ultimate responsibility for the satisfactory closure of water intrusion and mold events lies with the Program Coordinator.

## Training

Internal staff training on water intrusion prevention and mold awareness should be completed to assure competent and qualified decisions. Training should be tailored to address the specific responsibilities, actions, and management protocols outlined in the O&M Plan. It is recommended that training for key management personnel be conducted annually, with a focus on lessons learned and what is or is not working. Training programs may also be expanded to third party property managers and other subcontractors.

## Program review and continual improvement

Annually, the Program Coordinator should update the O&M Plan and conduct a critical review of the implementation and adequacy of controls in-place. This internal "audit" should include a review of documentation and the knowledge/awareness of the program demonstrated by key personnel. Feedback from annual training sessions should be used to improve water intrusion and mold prevention programs.

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## Resources

Centers for Disease Control and Prevention; National Institute for Occupational Safety and Health – Preventing Occupational Respiratory Disease from Exposures Caused by Dampness in Office Buildings, Schools, and Other Nonindustrial Buildings

<https://www.cdc.gov/niosh/docs/2013-102/pdfs/2013-102.pdf>

New York City Department of Health & Mental Hygiene – Guidelines on Assessment and Remediation of Fungi in Indoor Environments

<https://www1.nyc.gov/assets/doh/downloads/pdf/epi/epi-mold-guidelines.pdf>

Occupational Safety and Health Administration, A Brief Guide to Mold in the Workplace

<https://www.osha.gov/dts/shib/shib101003.html>

United States Environmental Protection Agency – A Brief Guide to Mold, Moisture, and Your Home

<https://www.epa.gov/sites/production/files/2016-10/documents/moldguide12.pdf>

United States Environmental Protection Agency – Indoor Air Quality in Large Buildings – Indoor Air Quality Building Education and Assessment Model (I-BEAM)

<https://www.epa.gov/indoor-air-quality-iaq?indoor-air-quality-building-education-and-assessment-model>

United States Environmental Protection Agency –

Indoor Air Quality – Mold Home Page and Mold Resources

<https://www.epa.gov/indoor-air-quality-iaq> and <https://www.epa.gov/mold>

United States Environmental Protection Agency – Mold Remediation in Schools and Commercial

Buildings EPA

402-K-01-001

<https://www.epa.gov/sites/production/files/2014-08/documents/moldremediation.pdf>

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