

## **MOLD PREVENTION & REMEDIATION POLICY**

### **I. PURPOSE**

In the event of water infiltration in any JCCA facilities, JCCA requires occupants and remediators to take steps to prevent and/or remediate mold growth in order to protect the health of building occupants and first responders. This policy outlines ways to prevent mold growth, the conditions under which remediation must be implemented, and the responsibilities of the affected parties. The goal is to eliminate moisture in less than 48 hours to prevent mold growth or eliminate it if the duration of moisture infiltration is unknown or greater than 48 hours.

The procedures are based on the Environmental Protection Agency (EPA) "Mold Remediation in Schools and Commercial Buildings," Document EPA 402-K-01-001 March 2001.

### **II. SCOPE**

This policy applies to all JCCA staff, as well as contractor activities.

### **III. Background**

Mold is found almost everywhere and can grow on food, wood, carpet, paper, insulation, and most other organic materials if moisture and oxygen are present. When mold spores land on wet or damp areas indoors, they may begin to grow. In locations and on materials where excessive moisture accumulates, mold will generally grow if the moisture remains undiscovered and/or uncorrected. Controlling the moisture in the building can minimize mold growth. Heat, especially moist heat that results from steam leaks, may accelerate mold growth. As the mold grows, it digests whatever it is growing on and gradually destroys it. Even if mold cannot be seen, its presence may be noticed as a moldy or earthy smell.

Building occupants should report any health concerns due to the environmental conditions in a facility to [FacilitiesRequests@jccany.org](mailto:FacilitiesRequests@jccany.org).

### **IV. GENERAL PREVENTION STRATEGY**

The most effective way to control mold is to solve moisture problems before mold growth starts. General mold prevention measures should include the following, but results will depend on specific site conditions. Questions should always be addressed to an expert.

- Fixing leaks as soon as possible.
- Being alert for condensation and wet spots; making sure sources of moisture are fixed as soon as possible.
- Increasing surface temperature or reducing the humidity to prevent condensation that results when surface temperature is below dew point temperature. Surface temperature can be increased with insulation or by increasing air circulation. Humidity can be reduced by repairing leaks, increasing ventilation (if outside air is cold and dry), or by dehumidifying (if outdoor air is warm and humid).
- Keeping HVAC drip pans clean, flowing properly, and unobstructed.
- Venting moisture-generating equipment to the outside, where possible.
- Maintaining low indoor humidity, ideally 30-50%, but at least less than 60% RH.
- Performing regular building/HVAC inspections and maintenance as scheduled.
- Cleaning and drying wet or damp spots within 48 hours.

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- Providing adequate drainage and sloping the ground away from building foundations so they do not stay wet.

### **V. REPORTING PROCEDURES – FIRST 48 HOURS**

Prevention of mold growth is achieved by removal of moisture within the first 48 hours. If water is removed and materials are dried within that time period, then mold abatement is usually not necessary.

1. The first step in moisture removal is to identify and remove the source of water infiltration. JCCA staff are responsible for notifying [FacilitiesRequests@jccany.org](mailto:FacilitiesRequests@jccany.org) to correct and remove the source of water infiltration and to remove water. In addition, the JCCA staff must also notify the Facility Superintendent or Office Manager of their location within 4 hours of the damage for guidance and assistance.
2. Facilities leads in may also need to notify appropriate personnel specified in their lease.
3. Once the source of water infiltration is corrected, clean up needs to start immediately. (See "Facilities Response Procedures: First 48 Hours" for detailed instructions).

### **VI. FACILITIES RESPONSE PROCEDURES – FIRST 48 HOURS**

In the event of water infiltration into building areas, the first 24 to 48 hours are critical in prevention of mold growth.

1. Identify the source of the moisture: Following the discovery of water infiltration into building spaces, the first step is to identify whether the moisture source is clean or polluted water.
2. If the water infiltrating the building is clean (no chemical or biological pollutants or sewage), the sooner repair, clean up, and drying are accomplished, the greater the chances of preventing mold growth.
3. If existing mold growth is found or if the water is polluted, contact the Facilities Superintendent immediately.
  - o Potable, de-ionized (DI), reverse osmosis (RO), and distilled water are considered unpolluted unless they have come in contact with a pollution source. All others are considered polluted.
4. Halt further moisture infiltration: The next step is to halt further moisture intrusion by repairing the defect and conduct an inventory of the water damaged areas, building materials, and furnishings, paying special attention to identifying wet carpet under cabinets, furniture, and furnishings. If it is impossible to determine how long the water infiltration has existed, it should be handled as if it has existed for more than 48 hours.
5. Determining whether materials are "dry" sometimes requires a judgment call. When in doubt, you should use a moisture meter to check drywall in an affected area and compare the reading to a control reading in a non-affected area. Readings should be the same.

Specific instructions: The following are guidelines for preventing mold growth on specific water-damaged materials.

- Ceiling Tiles: Discard and replace. If the tiles are glued onto the ceiling or wall, Facilities Department might need to contact a 3rd party Environmental specialist to analyze samples to determine whether the material(s) contain asbestos.

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- Carpet and Backing: Remove all furniture/cabinets sitting on wet carpet. Remove water with a water extraction vacuum; reduce ambient humidity levels with de-humidifiers; and speed dry by using fans.
- Cellulose Insulation: Discard and replace.
- Fiberglass Insulation: Discard and replace.
- Electrical: Consider all wet wiring, light fixtures, and electrical outlets to be shock hazards. Turn power off in the area until these have been checked by a building inspector or electrician. All electrical circuit breakers, GFI's, and fuses that became wet need to be replaced. All electric motors, light fixtures, and so on that were wet must be opened, cleaned, and air-dried by a qualified person. They must then be inspected to make sure there is no visible moisture in them before they are placed back into service.
- Books and Papers: Non-valuable materials should be discarded. Photocopy valuable/important items and discard originals. For items with high monetary or sentimental value, consult with a restoration/water damage specialist.
- Concrete or Cinder Block Surfaces: Remove water with a water extraction vacuum. Speed dry them with de-humidifiers, fans, and/or heaters.
- Hard Surfaces, Porous Flooring (Linoleum, Ceramic Tile, Vinyl): Vacuum or damp wipe with water and mild detergent and allow them to dry. Check under flooring to make sure it is dry.
- Non-Porous, Hard Surfaces (Plastics, Metals): Vacuum or damp wipe with water and mild detergent and allow to dry.
- Upholstered Furniture: Remove water with an extraction vacuum. Accelerate drying with de-humidifiers, fans, and/or heaters. Drying furniture may be difficult to complete within 48 hours. If any of the furniture is valuable, consult a restoration/water damage specialist.
- Wallboard (Drywall and Gypsum Board): May be dried in place if there is no water stain and/or obvious swelling and the seams are intact. Remove base molding to inspect the wallboard. If the wallboard cannot be dried within 48 hours, measure twelve (12) inches above the water mark/damage and remove and discard wallboard below that point. Remove and discard damp insulation, and ventilate the wall cavity. In some cases it may be difficult to tell if the wallboard has been sufficiently dried. A moisture meter can be used to check for moisture. To use a moisture meter, check the affected area and compare the reading to a control reading in a non-affected area.
- Wood Surfaces: Remove moisture immediately and use de-humidifiers, gentle heat, and fans for drying. Use caution when applying heat to hardwood floors. Treated or finished wood surfaces may be cleaned with mild detergent and clean water and allowed to dry. Wet paneling should be pried away from the wall for drying.

### **VII. Reporting Procedures – After 48 Hours or Unknown Duration**

After 48 hours following moisture infiltration, mold growth is likely to have begun and mold abatement may be necessary.

The first step is to identify and remove the source of water infiltration. JCCA Staff are responsible for the following:

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1. Notifying the Facilities Department at [FacilitiesRequests@jccany.org](mailto:FacilitiesRequests@jccany.org) to correct and remove the source of water infiltration and to remove water.
2. Notifying the Facility Superintendent or Office Manager of that building within 4 hours of the damage for guidance and assistance.
3. Facilities leads in may also need to notify appropriate personnel specified in their lease.
4. Once the source of water infiltration is corrected, abatement must begin immediately.
5. If water infiltration necessitates the replacement of any portion of a gypsum shaft or partition assembly, or any interior wall, ceiling or floor finishes, the Facilities Superintendent or Office Manager will coordinate the repairs/replacement through the Facilities Department. Use of specific materials and construction methods may be necessary to maintain required fire protection ratings of partition and shaft assemblies. U.L. classified wall, ceiling, and floor finish materials may be required in accordance with the International Building Code (IBC), or the National Fire Protection Association (NFPA) 101 "Life Safety Code."

### **VIII. Facilities Response Procedures – After 48 Hours or Unknown Duration**

When water infiltration has remained untreated after 48 hours, mold growth may have begun, and there may be visible evidence of growth or a moldy, damp smell. In these cases, the situation is now one of potential mold remediation, and the building occupant must contact [FacilitiesRequests@jccany.org](mailto:FacilitiesRequests@jccany.org) and the Facilities Superintendent immediately.

Remediation efforts are more intensive than prevention, and they must be designed to protect the health of building occupants and remediation personnel. Recommendations for cleanup or remediation by JCCA Facilities Department will depend on the extent of the damage, the types of materials affected, and the presence/type of mold growth. JCCA Facilities Leaders will make recommendations on whether current occupants should be relocated; on the containment/cleanup methods to be used (including whether remediation can be done by in-house personnel or if professionals are required); and on the types of personal protective equipment required by clean-up crews.

Air handlers (AHUs) servicing the affected area(s) should not be shut down unless gross, visible mold growth has been identified and a containment area cannot be established. A containment area is created by covering the supply and return air openings with 6-mil thick plastic. Having the AHU running helps to expedite the drying process.

Response when mold is suspected on the following items:

- Water Stains: Water stains are commonly found in buildings throughout JCCA Facilities. The following procedures should be followed:
  - If the stain is dry:
  - Carpet: Have the stain cleaned. If it goes away and then comes back, identify and eliminate the moisture infiltration source and replace the carpet.
  - Wallboard: Use a moisture meter to check for moisture behind the wall. To use a moisture meter, check the affected area and compare the reading to the reading in a non-affected control area. If excessive moisture (higher than adjacent walls) is detected, replace the wallboard. If no moisture is detected, clean and paint the wallboard.
  - Ceiling tile: Discard and replace.
  - If the stain is still wet:

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- Carpet or Wallboard: Fix the moisture problem and dry and clean the affected area.
- Ceiling tiles: Discard and replace.
- Mechanical Rooms: Mechanical room leaks, standing water, consistent humidity levels above 60%, and condensation problems should be fixed as soon as they are detected.
- Contaminated Water: If the water infiltrating a building area is polluted, the Facilities Department should be contacted immediately. Potable, de-ionized (DI), reverse osmosis (RO), and distilled water are considered unpolluted unless they have come in contact with a pollution source. All others are considered polluted. Following repairs to prevent any further infiltration, any contaminated ceiling tiles, carpet, upholstered furniture, paper products, or similar materials must be disposed of in sealed containers by personnel wearing appropriate personal protective equipment (protective clothing, gloves, boots, and, at a minimum, a N-95 type respirator). The entire area must be disinfected.
- Moisture Meters: A moisture meter may be useful in the following situations:
  - When a dried stain has been found on wallboard and a decision must be made as to whether the stain can be cleaned or further action is required.
  - To determine if wallboard has been sufficiently dried during the 24-48 hour period. Sometimes it is difficult to determine when wallboard has been completely dried. In these cases, use a moisture meter to check drywall in an affected area and compare the reading to a control reading in a non-affected area. Readings should be the same.
- Biocides: The goal of mold remediation is to remove the mold and prevent human exposure and damage to building materials and furnishings. Remediation should clean up mold contamination, not just kill it. Even after it is dead, the remaining mold fragments are still allergenic, and some are potentially toxic. The use of biocides is not routinely recommended during remediation. However, there may be some instances when the use of a biocide may be justified, such as when immune compromised individuals are present. It is not possible to get rid of all mold spores in a building environment. Spores will be present, but they will not grow if the moisture problem in the building is fixed.
  - Biocides are toxic to humans as well as molds. If biocides are used, occupants must be evacuated from the area, and the area must be properly ventilated. Remediation personnel must wear appropriate personal protective equipment. Since some biocides are registered with the EPA as pesticides, these may only be applied by licensed Federal or State Applicators.
- Mold Sampling: In most cases, sampling for mold is unnecessary even if there are visible signs of mold or moldy, musty odors. In some specific instances such as where litigation is involved, the source of the mold is unclear, or health concerns are a problem, then sampling may be part of the site evaluation. Sampling for mold should only be done after a sampling strategy has been developed. Since no EPA or other Federal Threshold limits have been set for mold or mold spores, sampling cannot be used to check a building's compliance with existing standards.