



## 1. Purpose

To provide a standardized procedure for responding to Indoor Environmental Quality (IEQ) incidents on Kennesaw State University's (KSU's) Student Housing facilities.

## 2. Scope

This program applies to all IEQ-related incidences in all Housing properties owned, leased, or controlled by KSU and its affiliates.

## 3. Responsibilities

### A. Housing

- Maintain a team of personnel, with appropriate equipment and training, for responding to minor IEQ events.
- Respond in a timely manner to reported IEQ incidents and take immediate appropriate actions to contain the situation to minimize damage, including identify and eliminate the source of the water intrusion or mold.
- Promptly report significant IEQ incident to Environmental Health and Safety (EHS) in accordance with this procedure.
- Retain the services a qualified remediation contractor to respond to water incursion event or mold problem, when necessary.
- Communicating with the affected student(s) and or their parents regarding the incident.

### B. Environmental Health and Safety and Risk Management

- Evaluate the extent of the water incursion or microbial growth, recommend the appropriate course of action, and provide instruction as appropriate.
- Ensure effectiveness of remediation work by conducting pre- and post-remediation assessments, including overseeing the work of the remediation contractor(s).
- Advise Housing leadership on safety protocols necessary to ensure safety of the students and KSU personnel.
- Manage the insurance process associated with the incidents to ensure claims are appropriately and consistently recorded and settled, in the best interest of the University.
- Update this procedure as necessary.

### C. Remediation Contractors

- Furnish all labor, materials, facilities, equipment, services, insurance, licenses, and incidentals necessary to perform the remediation work.
- Comply with industry standards, safety regulations, and use acceptable materials and products throughout all phases of the project.

- Establish barricades, post warning signs, and contain the project area.
- Appropriately coordinate with the Housing representative to plan and schedule the work activities to minimize the impact of the remediation work on Housing's activities.
- Ensure proper disposal of any contaminated materials and other debris resulting from the remediation work, including proper disposal of all water-damaged materials that are unsalvageable.
- Document the response measures including providing before and after reports.

## 4. Procedure

### A. Notifications

All Housing-related IEQ incidents requiring EHS assistance should be promptly reported to EHS through [Reliance](#) in accordance with [KSU procedure for incident report](#). Incidents should be reported no later than 48 hours from time of incident to ensure appropriate response and follow up. Incident requiring immediate EHS response should be reported by calling EHS office at 470-578-3321 or via email at [ehs@kennesaw.edu](mailto:ehs@kennesaw.edu).

*All water incursion incidents that involve sewage, regardless of the extent of damage, require special handling procedures and should always be reported to EHS.*

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### B. Assessment and Response

- Ensure rapid response to prevent water from further spreading, wicking, and causing damage. Immediately establish barricades, post warning signs, and contain the affected area.
- Identify and eliminate in a timely manner the underlying cause of IEQ degradation including, source of the moisture/water incursion, before embarking on significant remediation.
- Using visual observation and instrument (moisture meter or infrared thermography) assess and document the extent and degree of water incursion or water damage from microbial growth.
- Deodorants and other strong-smelling chemicals should not be used to mask potential musty odors caused by mold growth. These chemicals make identifying mold contaminated areas more difficult.
- Water incursion and mold within ventilation ductwork requires prompt attention. The affected section of ductwork should be isolated from the rest of the ventilation system before cleaning begins.
- Occupants should not enter Medium and High damage areas or areas contaminated with sewage until cleaning is completed.
- The extent and degree of damage should be assessed using the following Guideline for Assessing Extent of Water and Mold Damage to Impacted Building Materials in Table 1.

Table 1: Guidelines for Assessing Extent of Water and Mold Damage to Impacted Building Materials

Low	Medium	High
✓ 1 room impacted	✓ Impacts more than 1 room	✓ Fills an entire room, multiple rooms, or multiple suites (vertical movement of water)
✓ Small area of the carpet (<10 sq. ft)	✓ Standing water present	✓ Water impacts common corridors outside of the apartment suite
✓ Little to no standing water	✓ 10 sq. ft. to 50 sq. ft. of wall or ceiling saturated	✓ Greater than 50 sq. ft. of ceilings and/or wall saturated
✓ Walls are dry	✓ Any wicking of moisture in the walls	✓ Sections of furniture, insulation, cushions, and/or bedding are saturated
✓ 1 - 3 ceiling tile involved	✓ 3 - 8 ceiling tiles involved	✓ Moisture remains in structural materials such as plywood, particleboard, structural wood, concrete, or vinyl flooring
✓ No or minimal equipment required (i.e. fan)	✓ AMG* (10 - 100 sq.ft.) <sup>1</sup>	✓ Involves Category 2 or 3 water
✓ AMG* (<10 sq.ft.) <sup>1</sup> , ceiling tiles, small areas on walls and trim		✓ AMG* (>100 sq.ft. in a contiguous) <sup>1</sup> , on separate walls in a single room

\*AMG – Assumed mold growth

<sup>1</sup>Guidelines on Assessment and Remediation of Fungi in Indoor Environments, New York City Department of Health and Mental Hygiene, November 2008

## 5. Remediation

### A. Bulk Water Removal

Standing water should be removed as rapidly as possible using commercial wet vacuuming equipment and other techniques before cleaning and drying begins. If floor tiles are peeling off the floor, it should be assumed that the tiles contain asbestos and contact EHS immediately.

### B. Drying and Material Removal

- From the initial assessment, determine the necessary equipment and drying benchmark. Based on the extent and degree of water incursion, the determination should be made on whether drying will be performed in-house by Housing employees or by the water remediation contractor.
- Dehumidification and air movement should be the primary methods for drying building materials. If appropriate equipment is not on hand in enough numbers to address the extent of intrusion, additional equipment or assistance should be obtained.

- Where necessary, wall cavities can be opened to allow air circulation in concealed spaces and remove moisture from air within the cavities. It may also be necessary to remove water vapor impermeable surface treatments such as vinyl wall coverings to promote drying.
- If the material is suspected of containing asbestos, the material should not be disturbed until an asbestos survey has been completed. EHS should be consulted immediately for further guidance.
- Insulation that has become wet or moldy should be removed and replaced.
- Moisture monitoring should be conducted using a moisture meter to verify drying. Moisture readings should be logged in the field report and used to assess the extent to which materials are getting dried. If appropriate drying has not been attained as expected, additional equipment and or material removal may be necessary.
- To facilitate the drying process, the affected areas should be isolated. Isolation barriers can be created by installing polyethylene-sheeting materials from wall to wall, floor to ceiling, and across doorways or similar openings.

### **C. Occupant Safety**

To ensure the health and safety of the residents and to facilitate the remediation work, occupants of units with extensive mold problem or significant water or fire damage should temporarily be moved to an alternative location.

### **D. Sampling**

Currently, there are no federal or state regulations or standards for mold contaminants. Sampling for mold therefore cannot be used to check a building's compliance with 'mold standards', since such standards do not exist. Instead, detailed visual inspection and recognition of mold or mildew odors should be used to find problems needing correction. Efforts should focus on areas where there are signs of moisture, humidity, or where moisture problems are suspected. The investigation goal should be to locate indoor mold growth to determine how to correct the moisture problem and remove contamination safely and effectively.

The university may select to conduct sampling, on a case-by-case basis, as part of the mold assessment strategy or for post-remediation evaluation. Sampling is conducted by EHS professionals or qualified outside professionals.

## **6. Documentation**

The scope of water incursion, extent of damage, remediation measures, including the name of contractor(s) involved, field log of moisture monitoring, and mold assessment report should be documented and uploaded in the [University Safety Incident Management System \(Reliance\)](#).

## Appendix A: Water Damage Categories

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Category	Water Type	Description
1	Clean	Water originating from a source that does not pose substantial harm to humans. Examples: potable water; broken water supply lines; falling rainwater; melting ice or snow; broken toilet tanks and bowls additives.
2	Gray	Water containing a significant degree of chemical, biological, and/or physical contamination and having the potential to cause discomfort or sickness to humans via exposure or consumption. Examples: discharge from dishwashers or laundry machines, seepage due to hydrostatic pressure, broken aquariums, punctured water beds, overflows from toilet bowls with some urine.
3	Black	Grossly unsanitary water, containing pathogenic agents, arising from sewage or other contaminated water sources and having the likelihood of causing discomfort or sickness to humans via consumption or exposure. Examples: toilet backflows from beyond toilet trap. Flooding from seawater, ground surface water, rising water from rivers or streams. Such water may carry chemicals, pesticides, silt, pathogens, organic matter, and other toxic substances.

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*Recognition, Evaluation, and Control of Indoor Mold*, AIHA 2008