Bowling Green State University
Campus Operations

Water Intrusion Protocol

Program Goals and Objectives

This program is to serve as a guide to identify, respond to, and mitigate water intrusion events in an effort to prevent property damage and mold growth.

Scope and Application

This program applies to all employees and contractors who respond to, and those affected by, water intrusion events.

Definitions

Reference: American National Standards Institute (ANSI)/IICRC S500-2015, Standard and Reference Guide for Professional Water Damage Restoration.

1) **Category of Water**: refers to the range of contamination in water considering both its originating source and quality after it contacts the materials on the intrusion site
   a) **Category 1** – originates from sanitary source; does not pose a substantial risk from dermal, ingestion, or inhalation exposure
      i) Examples – broken water lines, tub/sink overflows with no contaminants, melting ice/snow, falling rain water, broken toilet tanks that do not contain contaminants or additives
   b) **Category 2** – contains significant contamination and has the potential to cause discomfort or sickness if contacted or consumed by humans; it can contain potentially unsafe levels of microorganisms or nutrients for microorganisms, as well as other organic or inorganic matter (chemical or biological)
      i) i. Examples – discharge/overflows from dishwashers/washing machines, overflows from toilet bowls on the room side of the trap with urine and no feces; seepage due to hydrostatic pressure
   c) **Category 3** – grossly contaminated and can contain pathogenic, toxigenic, or other harmful agents; can cause significant adverse reactions to humans if contacted or consumed; can carry trace levels of regulated or hazardous materials
      i) Examples – sewage, wasteline backflows that originate beyond any trap regardless of visible content or color; pesticides or toxic organic substances

2) **Class of Water:** refers to the range of the approximate wet surface area and permeability of affected materials remaining within the drying environment at the time drying is initiated
   a) **Class 1** – least amount of water absorption and will likely evaporate; materials are predominantly low porosity
      i) Examples – water is retained on the surface, little or no wet carpet or cushion
   b) **Class 2** – significant amount of water absorption and evaporation load; water intrusion has flowed into the area and wet materials are medium to high porosity
      i) Examples – carpet, gypsum wall board
   c) **Class 3** – greatest amount of water absorption and evaporation load; water intrusion where wet, porous materials represent majority of the combined floor, wall, and ceiling surface area in the space
      i) Examples – carpet, gypsum wall and ceiling board

d) **Class 4** – deeply held or bound water resulting in a low potential rate of evaporation after bulk water removal; affected materials are typically low in porosity or the building assemblies may require special methods, longer drying times, or substantial water vapor pressure differentials
    i) Examples – plaster, hardwood, concrete, masonry, gym floors, structural cavities, stone, brick

Responsibilities

Campus Operations

a) Respond to all water intrusion events.
b) Identify and repair the source of the water leak.
c) Assess water intrusion events in order to determine if it can be handled internally or if a contractor is needed.
d) Schedule and coordinate clean-up and remediation activities, if necessary.
e) Notify Risk Management of property damage or indoor air quality concerns.

2) **Risk Management / Environmental Health and Safety**
    a) Manage insurance claims for property damage.
    b) Respond to and investigate reported air quality and/or mold concerns.

3) **Custodial Services**
    a) Ensure good housekeeping practices are used in all buildings.
    b) Provide initial clean up services, determine extent of damage and contract external contractor, if needed.
    c) Report any unsafe conditions, including potential mold or wet conditions that have the potential to promote mold growth.

4) **Contractors**
    a) Remove water according to ANSI guidelines or other known and accepted best practices.
    b) Follow BGSU policies and procedures.

Water Intrusion Assessment Procedures

1) **Initial Response**
    a) Identify the potential source(s) of the flood/intruding water.
    b) Take measure to stop active flooding.

2) **Evaluate Category & Class of Intrusion**
    a) Custodial typically responds to Category 1 & 2 water events.
    b) For Category 3, and/or Class 2 or 3 events, a remediation contractor would most often be utilized.
    c) Identify potential dangers, including electrical shorts, chemical reactions, and soggy fallen ceiling tiles.
    d) Ensure occupants have been notified of the event.

3) **Containment**
    a) For floods overhead, cover valuable equipment and supplies with plastic sheeting if possible.
    b) Efforts should be made to protect all undamaged surfaces and objects in surrounding areas.
    c) It is recommended that containment kits, including socks, buckets, and sand bags, are located and readily accessible in buildings.

Water Removal

Depending on the quantity and location of water that is intruding, follow the corresponding procedures below:

1) **Classes 1 and 2; Category 1 and 2**
   a) Smaller floods will be managed by custodial staff using wet vacuums, absorbent materials, portable fans, dehumidifiers, increasing area ventilation if possible.
   b) To prevent mold/mildew growth and minimize long term damage, all water intrusion events must be cleaned up immediately or within 48 hours.
   c) Additional specialized cleaning should include water extraction from carpets and rugs, HEPA vacuuming, steam cleaning of rugs, and applying an anti-microbial disinfectant cleaner to surfaces (e.g. floors, walls, and furnishings), per the manufacturer's instructions.
   d) Remove and replace all water-damaged materials, including water-stained ceiling tiles.
   e) Personal Protective Equipment is required when interacting with water contaminated with sweage or chemical or biological pollutants.

2) **Classes 3 and 4; Category 3**
   a) Large floods will be managed by a qualified water remediation contractor per ANSI guidelines or other known and accepted best practices.
   b) All water-damaged materials will be removed and replaced by the water remediation contractor.
   c) Upon completion of remediation, Campus Operations will ensure remediation is acceptable.

3) **Follow up or Post-cleanup**
   a) Revisit the area within the near future to confirm the effectiveness of the cleanup and drying steps.
   b) Contact Risk Management if additional verification or testing is requested.

Indoor Air Quality/Mold Testing

The focus with mold is prevention, and when it is found, prompt remediation. There is no "safe" level of mold in the air. The sampling methodology is very subjective in that indoor affected spaces, indoor non-affected spaces, and outdoor levels are compared to one another. There are very few instances where this sampling and subsequent comparison yields a helpful result, therefore, sampling will be managed at the discretion of the Environmental Health and Safety department. For more information, please refer to BGSU's Mold Prevention and Remediation program located on the Environmental Health and Safety website.

Contact

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