

Water Incursion Standard Operating Procedure

Purpose: To provide a standardized procedure in the event of water incursion into any Penn State University facility.

References: “A Brief Guide to Mold, Moisture and Your Home”, U.S. Environmental Protection Agency”, 2002

“Guidelines on Assessment and Remediation of Fungi in Indoor Environments”, New York City Department of Health and Mental Hygiene, 2002

“Water Incursion Check List Procedures”, The Milton S. Hershey Medical Center, College of Medicine, 2001

Responsibilities:

Facility Coordinators and Safety Officers (and at non-University Park locations, Directors of Business Services and Maintenance Supervisors) are responsible for having a mechanism to be notified of water incursion events in their buildings, to notifying The Office of Physical Plant (OPP) or the appropriate maintenance staff that a problem has occurred, and to ensure that the problem is corrected.

OPP or other maintenance staff (i.e., BJC, Auxiliary Services, ARL) is responsible for responding in a timely manner (within 48 hours) to requests from facility coordinators for evaluation and mitigation of water incursion or mold growth events.

Environmental Health and Safety (EHS) is responsible for evaluating the extent of the water incursion or mold growth event, to update procedures as necessary, recommending the appropriate course of action and provide instruction as appropriate, and may conduct pre- and post-cleaning testing to determine the effectiveness of the remediation measures.

Procedure: The source of the water must be identified and the extent of the problem evaluated. Water may enter a building from one of the following sources:

1. breaks or leaks in a potable water line
2. rainwater, sprinkler activation or steam leak
3. sewer line leak or back- up or break
4. condensation of water from uninsulated piping

The extent of damage should be assessed using the following guide:

| Low | Medium | High |
|--|---|---|
| <ul style="list-style-type: none"> - No standing water on floor - No wall or drywall involved - One ceiling tile involved - No/minimal carpet, furniture or equipment involved | <ul style="list-style-type: none"> - Standing water on floor that has not reached walls - Less than 10 sq. ft. of drywall or ceiling involved - More than 1 but less than 4 ceiling tiles involved | <ul style="list-style-type: none"> - Standing water on floor that has reached walls - More than 10 sq. ft. of drywall or ceiling involved - More than 4 ceiling tiles involved - Carpeting soaked |

- Serious attempts should be made to identify and correct the source of the water incursion before any significant clean up efforts are conducted.
- Deodorants and other strong smelling chemicals should not be used to mask potential musty odors caused by mold growth. These chemicals make identifying mold contamination areas more difficult.
- Water incursion within ventilation ductwork requires prompt remediation. The affected section of ductwork should be isolated from the rest of the ventilation system before cleaning begins.
- Insulation that has become wet or moldy should be removed and replaced. If the material is suspected to be asbestos, contact EHS for further guidance.
- All water incursion incidents that involve sewage, regardless of the extent of damage, will require a thorough cleaning of all affected surfaces with a soap and water. Dilute bleach solution (1 part bleach to 10 parts water) or Virex 64 (SC Johnson) should be used.
- Medium and High damage areas will require extraction cleaning of the carpeting; removal of the carpeting may be required depending on the level of contamination. In areas where extensive mold growth is found, special work practices, similar to those used for asbestos abatement may be needed (area containment, negative pressure with HEPA filtration of air, wet methods for cleaning and/or wet cleaning). Such practices may be beyond the in-house capabilities of the University. Furnishings should NOT be placed back onto the carpet until it is completely dried. Floor discharge fans can be used to speed up this process.
- Resilient flooring (i.e., vinyl composition tile, linoleum, terrazzo) should be mopped or wet-vacuumed to remove standing water. If tiles come up from the floor, assume that they contain asbestos and contact EHS.

- Standing water on the floor should be mopped up or wet-vacuumed before any cleaning begins.
- Any ceiling tile that has water stains should be removed and replaced; ceiling tiles should never be painted to cover water stains! Ceiling tiles that show evidence of mold growth should be carefully removed, discarded and replaced. No special disposal procedures are necessary for stained or moldy ceiling tiles.
- Occupants should not enter Medium and High damage areas or areas contaminated with sewage until cleaning is completed.
- Removal and replacement of water-damaged drywall will be required in all High damage areas.
- All furnishings in the affected area should also be wiped down with a soap and water or disinfectant solution (depending on the water source). Electronic equipment should be allowed to thoroughly air dry before returning it to use.
- EHS has a remote visualization system that can be used to look behind walls for potential mold contamination. If mold behind walls is suspected, contact EHS for an evaluation.
- Maintenance Supervisors must be aware that certain University buildings, areas and populations may require higher levels of cleaning (the use of bleach and/or other disinfectants, post-cleaning testing, etc.) than those listed here (i.e., health care areas such as University Health Services clinical areas, child-care facilities, the General Clinical Research Center (GCRC) at Noll Lab, clean rooms, etc.).

Notifications:

When any water incursion is discovered, the Facility Coordinator and the Safety Officer of the affected building must be notified (at non-University Park locations, the Director of Business Services and/or the Maintenance Supervisor must be notified). For Medium and High damage areas, or any area where sewage is involved, Environmental Health and Safety (EHS) must also be notified. Primary contact for these matters is Curt Speaker; secondary contact is Bill Dreibelbis. EHS may conduct pre- and post-cleanup monitoring for airborne microorganisms to validate the effectiveness of the cleaning.

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