

Water Intrusion Problems

Description

Guidelines to address Water Intrusion Problems

Uncontrolled water intrusion into a building can originate from numerous sources. The most common sources include:

- Roof leaks and condensation forming above ceilings
- Pipe breaks (potable water, chilled water)
- Sewer line back-ups
- Flooding from outside of the building
- Moisture intrusion through the building envelope

Regardless of the source, water intrusion issues must be addressed in an expeditious manner in order to prevent the development of potentially serious indoor environmental quality (IEQ) problems. The following guidelines will outline actions to be taken when a water intrusion problem occurs.

[su_spoiler style="fancy" icon="chevron" title=" Categories of Flood Waters "] Water causing damage in a building can be assigned to categories depending on its source, and the level of chemical or biological contamination it contains.

Clean water from a sink overflow, broken water or steam line, or rainwater infiltration is referred to as category 1. Water in category 1 represents the lowest health risk to building occupants and clean-up crews. Building materials and furnishings damaged by category 1 water have the best potential for being salvaged.

There is a 24 to 48 hour window of time for the response to damage from water in category 1. After this period of time, the amount of microbial growth begins to lower the water quality to that of category 2.

Category 2 is water in the large range between absolutely clean and absolutely contaminated. This water has a significant degree of contamination due to its source, from microbial growth, or from contamination after the initial release. Sources of category 2 water damage may be storm drain backups, treated cooling water, some surface water, fire suppression systems, and discharges from equipment.

Water in category 2 presents a higher risk of disease or infection to people who come into direct contact with the contaminated area. Because of the additional contaminant in the water, materials damaged by category 2 water are much more difficult to salvage.

Category 3 is highly contaminated water from sewers, some rivers, seawater, and some surface water. This water will likely contain infectious viruses, bacteria, and parasites. It has the likelihood of causing disease or infection from direct or even indirect contact. This water may also contain toxic and allergenic materials.

[/_su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Types of Water Intrusion Problems "]
[_su_spoiler style="fancy" icon="chevron" title=" Roof Leaks and Condensation "]

- Water intrusion of this type usually results in water damaged ceiling tiles. The first step in addressing the issue is to determine the source of the water problem. Work order requests need to be made to Physical Plant or the appropriate department for corrective action as soon as a problem is discovered.
- Water damaged ceiling tiles need to be replaced as soon as possible. Damaged ceiling tiles should not be left in place due to the high probability for mold growth on the tile. In many cases, mold growth will occur on the backside of the tile well before it is visible on the front side.
- Ceiling tiles should never be painted to cover up water stains.
- If ceiling tiles have already become moldy, they must be removed immediately. Removal must be done when the affected area is unoccupied. The moldy tile should be removed with a minimum of disturbance and placed in a sealed bag to prevent the distribution of any spores.
- If large numbers of moldy ceiling tiles are involved, Environmental Health and Safety (EH&S) should be contacted to assess the situation prior to initiating removal.
- EH&S should be contacted if the leaks also resulted in wall or carpet damage.

[/_su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Pipe Breaks "]

- Determine the type of pipe and the location of the break. Make the appropriate work order requests to Physical Plant or the appropriate department. Isolate the area (if needed).
- EH&S should be contacted to assess the affected area and to determine the extent of remediation that is required.
- The extent of remediation is based on a number of factors including the contents of the pipe that broke and the length of time that passed from the actual pipe break until its discovery.
- Generally speaking, any water damaged ceiling tiles will have to be replaced. Water damaged drywall will have to be assessed and possibly replaced. Wet carpet, if it has been wet for less than 48 hours, if it is wet due to category 1 water and if it can be completely dried as rapidly as possible, can usually be saved but this decision is made on a case by case basis.

[/_su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Sewer Line Back-ups "]

- Areas affected by a sewer line back-up need to have restricted occupancy until the problem is addressed and the area cleaned. Work order requests need to be made to Physical Plant or the appropriate department for immediate corrective action.
- Once the blockage is cleared or it has been determined that the problem has been corrected, clean-up of the affected area(s) can begin.
- Any porous item that has come into contact with sewage tainted water is considered contaminated and must be discarded. This includes carpet, drywall and ceiling tiles as well as other items such as books and paper products.
- Non-porous items can usually be cleaned and sanitized.
- EH&S should be notified in the event of any sewer back-up.

[/_su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Flooding From Outside of the Building "]

- Occasionally water will enter buildings from the outside due to poor drainage or particularly heavy rains. Water entering due to flooding is considered to be in the same category as sewage tainted water and the same recommendations apply.
- If only a small area is affected limited remediation is possible. The extent of remediation should

be determined by the EH&S IEQ coordinator.

[/_su_spoiler] [_su_spoiler style="fancy" icon="chevron" title=" Moisture Intrusion through the Building Envelope "]

- This problem will typically occur along exterior facing walls when some aspect of the wall's structural make-up has failed. Water will migrate through the wall over time from the exterior to the interior surface where paint damage will often result. Water trapped behind the paint film, wallpaper or items attached to the wall can lead to mold growth.
- These problems must be individually assessed so that a satisfactory corrective action can be formulated. Repeatedly scraping off the damaged paint and repainting the interior surfaces does nothing to correct the problem.
- A work order request should be made for an assessment of any areas of moisture intrusion and for corrective action.
- If moisture intrusion damage is noted on a wall, material attached to that wall must be removed. Furniture and other items should not be placed directly against a problem wall.

[/_su_spoiler] [/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Guidelines for Salvaging Material Impacted by Clean Water "]

The following table is borrowed from EPA's "Mold Remediation in Schools and Commercial Buildings."

[Mold Remediation in Schools and Commercial Buildings](#)

The preceding guidelines for addressing water intrusion issues are general and do not cover all possible situations. EH&S should be consulted whenever there is a question that cannot be answered by these guidelines.

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Please contact the Environmental Health and Safety IEQ Coordinator at 392-1591 or tladun@ehs.ufl.edu for with any questions or concerns regarding mold clean up or indoor environmental quality in general.