Actions to Prevent Mold after Water Damage

(rapid response within 24-48 hrs of damage)

Non-Porous Materials

Examples:

Metal, Glass, Hard Plastic
Ceramic Tile
Sealed Concrete
Solid wood with urethane coating

Actions:

- Use HEPA Vacuum
- Damp wipe with water and appropriate cleaner.
- Scrub if necessary.

Semi-Porous Materials

Examples:

Brick
Cinder Block
Linoleum/Vinyl Flooring
Wood Furniture

Actions:

- Use Water Extraction Vacuum
- Dehumidifiers, fans.
- Check to ensure underflooring is dry (dry if necessary).

Porous Materials

Books and Papers: Valuable Items

Actions:

Rolvaag Library will oversee this response:

- Attempt to dry with fans.
- Photocopy.
- Freeze (in frost-free freezer) or freeze-dry.

Books and Papers (cardboard, etc.): Non-Valuable Items

Actions:

- Remove & Dispose.
- Replace.

Carpet and Backing

Actions:

- Use water extraction vacuum.
- Accelerate drying process with fans and dehumidifiers.
- Use moisture meter to confirm “dryness.”

Ceiling Tiles; Insulation (Cellulose or Fiberglass)

Actions:

- Remove & Dispose.
- Replace.

Upholstered Furniture

Actions:

- Use water extraction vacuum.
- Accelerate drying process with fans and dehumidifiers.
- May need outside contractor help.

Wallboard; Composite Wood Flooring

Actions:

If no obvious swelling and seams are intact:

- Dry in place (use fans, dehumidifiers).

If obvious swelling/damage:

- Remove, Dispose, and Replace.

Window Drapes

Actions:

- Follow manufacturer cleaning instructions.

Wall Paneling; Engineered Wood

Actions:

- Ventilate wall cavity, if possible.

If obvious swelling/damage:

- Remove, Dispose, and Replace..

If Mold is Found – Part 1

Step 1

Discuss with Supervisor:

- Do not attempt to clean up the mold until you receive authorization.
- Turn off fans (fans move active mold spores around).
- Have Supervisor confirm that no loosened asbestos is present.

Step 2

Determine Extent of Contamination:

- Confer with EHS and use the table below to determine if mold contamination is Level 1 or Level 2.
- If contamination is Level 3 then an outside contractor is required and will be hired to complete the work.

Step 3

Determine if Items can be Cleaned or Need to be Disposed:

- **Non-porous** items can usually be cleaned.
- **Hard-surfaced semi-porous** items can often be cleaned if Level 1 or 2.
- **Porous fabrics/carpets** might be salvageable if Level 1 contamination.
- **Porous construction materials** may need to be removed and disposed, depending on structural integrity and potential for hidden contamination.
- **AC units and ductwork** may need to be removed for cleaning, or disposed and replaced.

Step 4

Develop Remediation Plan:

- Choose the cleaning procedures and identify the size of the containment area to best minimize the release of mold particles.
- Inform building occupants of timeline (areas should be unoccupied during mold cleanup activities).
- Gather all necessary cleaning supplies and PPE.
- Building Services will take the lead on fixing the source of the moisture (know that even lingering piles of damp clothes can cause mold).

	Levels of Mold Contamination		
	1 - Minimal	**2 - Moderate**	**3 - Major**
Amount of Mold *	**Visible contamination is less than 10 ft^2**	**Visible contamination is approx. 10 - 100 ft^2**	**Visible contamination is more than 100 ft^2**
Degree of Contamination**	• Visible growth is scattered; small colonies • Growth is generally on non-porous surfaces; easy to access • Porous materials have no evidence of internal mold	• Non-porous materials are perhaps 50% covered • Visible growth on porous or semi-porous materials is light & spotty • Hidden contamination is possible	• Heavy coverage of mold on any type of surface • Contamination may be well established (long term moisture problem) • Hidden contamination is likely • Negative air handling machine (HEPA) needed
Potential for Release of Contaminants***	• Surfaces can be easily cleaned in place • Small contaminated items can be easily removed and bagged	• Cleaning requires average force (i.e., scrubbing) • Larger items need to be removed before cleaning can begin	• Aggressive force needed to clean or remove contaminated surfaces and items
Who Can Clean the Contaminated Site?	• Facilities personnel • Residence Life personnel (if properly trained)	• Contact your Supervisor • Depending on the nature and extent of the problem, EHS may recommend using a mold remediation contractor	• Contact your Supervisor • EHS will likely recommend using a mold remediation contractor
Containment	• None required	• Locally contain with plastic sheeting • Consider potential for remediator and occupant exposure	• Seal off to prevent exposure to other areas and occupants • Requires professional contractors

* **"Amount of Mold Growth"** refers to the surface area of the contaminated materials.

** **"Degree of Contamination"** takes into account the density of the mold growth and the type of materials (porous, semi-porous, non-porous) with growth.

*** **"Potential for Release of Contaminants"** refers to the amount of disturbance necessary to clean or remove the contaminated material. High amounts of disturbance can lead to the release of large numbers of mold spores.

If Mold is Found – Part 2

Level 1 Cleaning Procedures

PPE:

- Splash-resistant goggles and chemical-resistant gloves.

Cleaning Supplies:

- HEPA vacuum, carpet extractor, Critical Care disinfectant, pop-up wipes, microfiber towels, plastic sealable garbage bags, 4-6 mm poly sheeting and duct tape.

For Items that will be Removed/Disposed:

- Lightly mist with HB Quat to reduce the threat of spore/dust dispersal.
- Place items into garbage bags, or wrap in poly sheeting.
- To close bags, use overhand or gooseneck knot.
- To seal poly sheeting, tape over (seal) the outer edges.

Carpets:

- First Treatment: use HEPA vacuum to remove loose/dry mold.
- Second Treatment: use carpet extractor to do a deep cleaning.
- Place floor fan & dehumidifier in space after treatments are complete.
- If mold returns then replace carpet.

Upholstery/Drapes:

- Steam cleaning or laundering should prove successful.

Non-Porous Materials (also Semi-Porous Hard Surfaces):

- Include the area 2-3 ft beyond visible mold.
- If mold is dry/loose, you can first use a HEPA vacuum to slowly and carefully vacuum up this mold.
- Treat the remaining mold with Critical Care disinfectant. Keep area wet for 5 minutes to kill the mold.
- Using damp pop-up wipes, remove mold using a repeatable pattern of motions, moving from the cleanest areas into the dirtiest. Replace pop-ups frequently to enhance cleaning and prevent redistribution of mold.

Clean Reusable Remediation Equipment and PPE:

- Use Critical Care disinfectant; rinse with clean water.

Collect Soiled Items; Dry the Remaining Items and Area:

- Dry the area with pop-ups; set up fans/dehumidifiers.
- Bag or wrap the soiled cleaning items.
- Place sealed bags/poly into the building's trash dumpster.
- Wash your hands when finished.

Monitor the Area for a Week:

- If mold returns then additional cleaning is required.

Level 2 Cleaning Procedures

PPE:

- Splash-resistant googles and chemical-resistant gloves.
- Long-sleeved tops and long pants; hair and shoe coverings.
- N95 Respirator.

Cleaning Supplies:

- Level 1; plus enough 4-6 mm poly sheeting and tape to create containment barrier/perimeter.

Preliminary Cleaning & Setup:

- You might first need to conduct preliminary cleaning of the floor using the HEPA vacuum or damp mop to ensure freedom of movement throughout the area during containment setup.

Create a Containment Perimeter:

- Use poly sheeting and tape to create a containment perimeter to ensure that mold particles are not carried outside the remediation area by air movement or through the mechanical ventilation system.
- The area should extend a few feet beyond the areas of mold growth.
- Cover uncontaminated items if it is not feasible to remove these items.
- Clean the air supply and return grilles, and then cover them.

Porous Materials (Including Carpets):

- These items likely need to be removed & disposed.
- Lightly mist with HB Quat to reduce the threat of spore/dust dispersal.
- Bag or wrap the items.

Non-Porous Materials (also Semi-Porous Hard Surfaces):

- Follow Level 1 procedure; a soft-bristled brush may also be needed.

Clean Reusable Remediation Equipment and PPE:

- Use Critical Care disinfectant; rinse with clean water.

Collect Soiled Items; Dry the Remaining Items and Area:

- Bag or wrap the containment perimeter plastic.
- Dry the area with pop-ups or microfiber towels.
- Bag or wrap the soiled cleaning items.
- Place sealed bags/poly into the building's trash dumpster.
- Set up fans/dehumidifiers.
- Wash your hands when finished.

Monitor the Area for a Week:

- If mold returns then additional cleaning is required.

How to Properly Seal Bags

Overhand Knot

Step 1: Gather, twist end 8” – 10”

Step 2: Make loop with the twisted end.

Step 3: Loop the end through to create a knot

Gooseneck Knot

Step 1: Gather, twist end 8” – 10”

Step 2: Make loop with the twisted end

Step 3: Seal tightly with duct tape