

ENVIRONMENTAL HEALTH AND SAFETY

ESF – 480 Oak Road Stanford, CA 94305-8007 650.723.0448; fax: 650.725.3468 web.stanford.edu/dept/EHS

Water Damage Response (Mold Prevention)

This document is designed to help facility zone and building managers take proper action when addressing facility water damage incidents. In the event of water damage/intrusion, please refer to the following guidelines.

1. Response and Communication Procedures

Immediately **report any facility-related flood problem to Facilities Operations** – **Maintenance Customer Service** (723-2281), who should then inform the appropriate facilities zone manager and maintenance shop(s).

The Facilities Zone Manager should:

- Determine the type of water damage sustained:
 Clean Water water directly released from instances such as broken water pipes, tub or sink overflows and rainwater, or
 Contaminated Water contaminated with sewage, biological or chemical pollutants.
- 2. Determine the presence of additional facility hazards such as damaged/impacted asbestos containing materials (ACMs**), electrical hazards, special laboratory/research hazards, falling plaster/ceiling tiles, and slippery walkways, and address as appropriate.
- 3. If hazardous materials (radiological, chemical, or biological) are stored or used in the area, contact the lab manager/principal investigator (PI) before proceeding.
- 4. Ensure all clean-up personnel are properly trained and informed of potential hazards before beginning any work. Contractors should speak with their own health and safety department before beginning any work.
- 5. Work with the building manager to facilitate communication with building occupants. Work with EH&S to address health and safety issues.
- **Contact Asbestos Manager (723-0486) to determine if any ACMs are involved, and if necessary, for additional recommendations regarding ACMs.

2. Clean Up – General Recommendations

- 1. Immediately fix the water problem by addressing the source of the moisture. Common problems include water leaks, maintenance issues, HVAC system problems, and humidity and condensation concerns.
- 2. Thoroughly inspect area to determine extent of water intrusion/damage.
- 3. Initiate cleanup and complete within 48 hours. In most cases, on-call campus custodial services can immediately provide initial cleanup (except where ACMs are damaged/impacted).

IH Report #04-010 April 2004

- 4. Relocation of furnishings may be needed to access carpeting and flooring surfaces beneath. Ensure plastic sheeting is placed under any wet materials/furnishings relocated to non-affected areas.
- 5. A disinfectant cleaner (indicated as a bacterial, virucidal, and fungicidal) that is safe for indoor use may be applied to affected surfaces (e.g., floors, walls, furnishings) per manufacturer's instructions.

3. Specific recommendations: Clean Water and Contaminated Water

Clean Water

Based upon the discretion of the zone manager, recommendations listed below in Table 1 may not be necessary for 'small scale' clean water intrusion, as long as the source of intrusion is fixed, clean up is quickly achieved and occupied areas are completely dry. Small scale is defined as when the water intrusion is of relatively small quantity, well contained and easily cleaned up within 24 hours, and building materials do not have to be disturbed or replaced.

Table 1

Water Damaged Material	Actions
Books and Papers	For non-valuable items, discard books and papers
	Photocopy important/valuable items, discard
	originals or
	Freeze in frost-free freezer or meat locker and
	consult with a restoration/water damage
	professional.
Carpet and backing – dry within 24-48 hours	Remove water with water extraction vacuum
	Reduce ambient humidity levels with dehumidifier
	Accelerate drying process with fans
Ceiling Tiles	Discard and replace
Cellulose Insulation	Discard and replace
Concrete or cinder block surfaces	Remove water with water extraction vacuum
	Accelerate drying process with dehumidifiers, fans,
	and/or heaters
Fiberglass Insulation	Discard and replace
Hard surface, porous flooring (linoleum, ceramic	Vacuum or damp wipe with water and mild
tile, vinyl)	detergent and allow to dry; scrub if necessary
	Check to make sure underflooring is dry; dry
	underflooring if necessary
Non-porous, hard surfaces (plastics, metals)	Vacuum or damp wipe with water and mild
	detergent and allow to dry; scrub if necessary
Upholstered furniture	Remove water with water extraction vacuum
	Accelerate drying process with dehumidifiers, fans,
	and/or heaters.
	If the piece is valuable, consult with a
	restoration/water damage professional who
	specializes in furniture
Wallboard (drywall and gypsum board)	May be dried in place if there is no obvious swelling
	and the seams are intact.
	If not, remove, discard, and replace
	Ventilate the wall cavity, if possible
Window drapes	Follow laundering or cleaning instructions
	recommended by the manufacturer
Wood surfaces	Remove moisture immediately and use
	dehumidifiers, gentle heat, and fans for drying (use
	caution when applying heat to hardwood floors)

IH Report #04-010 April 2004

Treated or finished wood surfaces may be cleaned
with mild detergent and clean water and allowed to
dry
Wet paneling should be pried away from wall for
drying

Table duplicated from Mold Remediation in Schools and Commercial Buildings, March 2001 (EPA 402-K-01-001)

Contaminated Water

- 1. Fans should not be used until area is cleaned and disinfected.
- 2. Appropriate PPE including rubber boots, rubber gloves, disposable splash-proof coveralls, goggles and masks for eye/nose/mouth splash protection (recommend N95) must be used. Contractors should seek guidance from their own health and safety department regarding appropriate PPE use, training and fit testing.
- 3. Contain limit the spread of contaminated water.
- 4. Remove contaminated water. Contact EH&S for details
- 5. Disinfect non-porous surfaces and discard porous articles (e.g., carpet and furniture).
- 6. Consult with EH&S before attempting to restore any materials damaged by contaminated water.
- 7. Occupants should not be allowed to re-enter the spaces until water source is fixed and clean up has been completed. If occupant requires retrieval of critical item(s), coordinate with supervisor to have response personnel retrieve and disinfect.

References:

<u>Guidelines on Assessment and Remediation of Fungi in Indoor Environments.</u> New York City Department of Health, 2001

IICRC Standard and Reference Guide for Professional Water Damage Restoration (S500-94)

Mold Remediation in Schools and Commercial Buildings, EPA (402-K-01-001)

IH Report #04-010 April 2004