After the Flood

What to do checklist

Unimutual Limited Suite 11.02, Level 11, 56 Pitt Street, Sydney NSW 2000 | PO Box H96, Australia Square NSW 1215
T: 02 9169 6600 | service@unimutual.com.au | www.unimutual.com
Unimutual Limited ABN: 45 106 564 372 AFS Licence No: 241142

How can flooding and water damage occur?

Water damage to buildings can be caused by a range of different mechanisms including but not limited to:

- Ingress of water during a storm event due to rising water, blocked roof drains or failed window seals.
- Failure of joints in HVACs (heating, ventilating and air conditioning units) pipework.
- Bursting or leaking pipes generally.
- Condensation.
- Sprinkler head activation due to inadvertent contact or malicious tampering.
- Back flow or overflows caused by blockages in the plumbing system.
- Human error such as leaving taps running.
- Build-up in areas prone to collecting water, such as basements, underground car parks and sumps; and
- Faulty or malfunctioning appliances.

The most common form of water damage relates to water ingress arising as a result of storms or flooding, followed by plumbing system and condensation issues or human error, then HVAC failures and finally fire suppression system failures.

Are there any warning signs?

There will always be warning signs in some from, but they may not always be obvious. Storms and heavy rain events are often forecast, and advanced warning is often provided between four (4) to twenty-four (24) hours prior to the anticipated event. Leaks or flooding due to acts of malicious tampering or human error will be difficult to anticipate. Records relating to plumbing, HVAC or fire system maintenance activity or incident reports of previous water damage related events provide some insight regarding possible incidents. However, visibly poor condition of hardware associated with fire or HVAC systems is a classic warning sign that a catastrophic failure may occur in the not distant future.

Should flooding occur in a university building, it will either occur

1. During teaching or business hours when there are people in the building or
2. After hours when the building is unoccupied

From an asset preservation perspective, a failure whilst the building is occupied will likely result in immediate action to identify and isolate the cause of water ingress or flooding and prevent and minimise the extent of damage. Depending upon the nature of the event, it may present health and safety risks to the students, visitors or staff and these will need to be managed first. In this case, a building or floor evacuation may be required.

Should flooding or water ingress occur after hours, there will not be risks to health and safety, nor an evacuation but the potential for extensive damage to the asset increases significantly, particularly in situations where there is no response available to address the source of the water leak or ingress.

Should a water related incident occur in a multi storey residential or dormitory complex, it will result in either full or partial evacuation of the building and likely result in the building or part thereof becoming unavailable for a period of time.

There are three types of water related damage. These are:

1. Clean water
2. Grey water
3. Black water

Clean water is defined as water originating from a source that does not pose substantial harm to humans. Examples of clean water sources include but are not necessarily limited to the following:

- Broken domestic water supply lines.
- Tub or sink overflows with no contaminants.
- Appliance malfunctions involving domestic water supply lines.
- Melting ice, snow, or hail.
- Rainwater; and
- Broken toilet tanks and bowls that do not contain contaminants or additives.

Grey water is defined as water containing a significant degree of chemical, biological and/or physical contamination and having potential to cause discomfort or illness if consumed by or exposed to humans. Grey water carries microorganisms and nutrients for microorganisms. Examples include but are not necessarily limited to the following:

- Discharge from dishwashers and washing machines.
- Overflows from toilet bowls with some urine (no faeces).
- Sump pump failures.
- Seepage due to hydrostatic pressure.
- Chilled and condensate water; and
- Fire protection sprinkler water.

Black water is defined as grossly unsanitary water containing pathogenic agents, arising from sewage or other contaminated water sources and having the likelihood of causing discomfort or sickness if consumed by or exposed to humans. If grey water is not removed quickly, it may be reclassified to black water. Black water includes but is not necessarily limited to all forms of flooding from

- Sewage overflows.
- Sewage/rainwater mixed; and
- Rising water from rivers and streams.

How should this checklist be used?

This checklist is designed to be used by any person or combination of people required to manage an incident which involves flooding or partial flooding of a building, including but not limited to:

- The risk manager
- The insurance manager or claims manager
- Security staff
- Building maintenance staff
- The building owner or occupier

It should be used as a guide to assist the user or users to manage the various stages of an event and to prompt consideration of reasonable actions to ensure occupant and responder safety, manage initial responses, notify relevant stakeholders, establish salvage and clean up priorities, assess the extent of losses, commence the recovery process and manage the resulting insurance claim.

The checklist could be used (as a contemporaneous note) to record details of the event and action taken throughout the response and recovery phases and form the initial documentation on the claim file.

Location and Event Details

University Name	
Campus Name	
Building Address	
Building Name	
Building Number	
Room Number(s)	
Room Use(s)	
Construction Type	
Approximate Building Age	
Date that the event occurred	
Name and Position of Person(s) completing this Checklist	

Danger – make sure everyone is safe **Determine** - if it is a clean water, grey water or black water event					
Step	**Action Required**	**Yes**	**No**	**Time**	**Comments**
1	Was the building occupied by students, visitors or staff at the time of the flooding?				
2	Was evacuation of all or part of the building required?				
3	Were there any injuries to students, visitors or staff arising from the flooding event or the evacuation?				
4	Have immediate risks to people been assessed and action taken to reduce or eliminate the risks – such as isolate the power, shut down the water supply valve or other action.				
Response – have any alarms or warnings been generated as a result of the event?					
5	Have alarms been activated that have notified security?				
6	Have alarms been activated that have notified Fire and Rescue?				
7	Have you identified the source of the leak or water ingress?				
8	Has the site been secured and isolated to				

	prevent further access by unauthorised persons?				
Who should I notify?					
9	Have you contacted Fire and Rescue or the State Emergency Service for emergency assistance (if necessary)?				
10	Have you contacted the building owner and/or facilities maintenance to advise them of the incident and request assistance?				
11	Have you contacted campus security to advise them of the incident?				
12	Have you contacted the room owner(s) (including lecturers or school/faculty operations managers) to inform them that the room is unable to be occupied? *They will need to make alternative arrangements for the conduct of the functions (lectures or research) normally undertaken in that room.*				
Initial Action, Assessment and Triage					
13	Has action been taken to stop water ingress at the source? *This will depend upon the cause of the flooding. Facilities maintenance staff should be able to quickly determine and treat the source.*				
14	Have you performed an initial visual assessment of valuable or immediately salvageable items and prioritised their retrieval?				
15	Do you still have power in the building or the affected room?				
16	Have you contacted a qualified electrician to assess and if required, repair or make available a safe electrical circuit? *The assessment of switchboards and electrical systems should only be undertaken by a qualified electrician. In the event that power will be unavailable take immediate steps to acquire a portable generator.*				
17	Do you have Controlled Environments (freezers containing research samples) that will require back up power? *Arrangements should be made for temporary power or to move critical research samples to an unaffected back up freezer, if available.*				

18	Have you been able to remove excess water? *Hand mopping is the first and most readily available option. More sophisticated techniques include pumping or commercial wet vacuuming. Your contract cleaners should have appropriate equipment available.*				
19	Have you started the process of evaporation or dehumidification? *This is particularly important as it is the first step in the battle against mould. It may be as simple in the first instance as opening of doors and windows in order to permit air flow and movement. This may, however, create a security risk.*				
20	Is the room, building or location connected to the security (intruder) alarm system? *If the location is security alarmed, it may need to be isolated and alternative security arrangements established, as windows and doors may need to be left open for extended periods each day. An assessment by the security team should be undertaken.*				
21	Is the room connected to the Fire Control Panel or EWIS system? *The answer will generally be yes, and action will need to be taken in order to isolate the location on the fire control panel in order to avoid restoration works triggering the fire alarm and evacuation system. This will require that an Impairment Notification form be submitted to Unimutual (and AXAXL).*				
22	Is the HVAC system available or are you able to control the temperature in the affected area? *This is particularly important as temperature control determines the effectiveness of drying and also inhibits the growth and spread of mould and other microorganisms. If the HVAC is unavailable, portable temperature control units may be required.*				
23	Have you estimated the quantum of the potential loss against your deductible? *You will need to establish relatively quickly if you consider that the event will go close to or exceed the protection excess. If you believe it will, a loss adjuster should be appointed. They will do the majority of the building and damage assessment work for you.*				

24	Have you notified Unimutual? *You should notify the potential for a claim if you consider that the cost of repairing the damage will come close to or exceed the property protection excess. It is worth noting that claims costs can escalate quickly where mould is involved.*				
25	Have you set up an incident/claims file in order to record all aspects of the claim/incident? *A little work now could save significant cost and effort later.*				
Assessing contents damage and Action					
26	Have you taken photographs of the damage? *Establish a photographic record of restoration work including photographs before the clean-up work begins and continuing throughout the process.*				
27	Is the flooring covering carpet or other material which will absorb or has absorbed water? *Waterlogged carpet will need to be removed. A carpet specialist can do this for you, possibly dry the carpet and reuse it. Alternatively, they can provide a quote to relay new carpet. Photograph it.*				
28	Has there been damage to furnishings? *It is often difficult to recover soft furnishing which have been exposed to water. Record the type and nature of all affected furniture. Photograph it.*				
29	Has the water damaged records, files, books or other documents? *If documents have become wet, it is important to triage them in order to determine which documents should be retrieved and which can be discarded. There are a number of document recovery specialists who may use vacuum freeze-drying techniques. This is expensive and should only be applied to important documents. Photograph the documents.*				
30	Has the water penetrated the server room, desktop computers, keyboards, phones, other electrical appliances or laboratory equipment? *Specialist firms will be required to determine whether computers and other electrical equipment are salvageable. Photograph any damage to the server room or higher value*				

	electrical items.				
31	Has the water damaged fine art, other valuable artefacts or high value equipment? *Specialist firms will be required to determine whether fine art, artefacts and high value equipment are salvageable, and which techniques should be employed. Photograph damage to fine art and artefacts.*				
32	Are you keeping a record (written and photographic) of all items (contents) which are disposed of?				
Structural Damage Assessment and Action					
33	Do the ceilings display signs of water damage or water ponding or is there evidence of leaking at the intersection of ceiling and walls? *Water may be trapped in the ceiling cavity, particular if flooding occurred on the floor above and water ingress occurred through expansion joints. It may be necessary to dry out the ceiling cavity using specialised equipment. Often a ceiling will suffer damage as a result of increased humidity and may need to be replaced. Photograph stain marks or drip points.*				
34	Do the walls display signs of water damage or are there water marks which indicate the level of flooding? *Water may penetrate into the wall cavity or travel up the wall via capillary action. It may be necessary to dry out the wall cavity using specialised equipment. If walls are of gypsum board construction and have been exposed to water for greater than 2 hours, they will most likely need to be replaced. Photograph water level marks.*				
35	Is insulation in the wall or ceiling cavity wet? *Insulation presents a perfect medium for mould and microorganism growth and if it cannot be adequately dried must be removed from the building and the area thoroughly cleaned, disinfected and dried.*				
36	Have built in furnishings and fixtures been damaged? *If these items are constructed of wood, they will need to be properly dried in order to avoid mould developing. If they are of laminated plywood, they most likely will need to be replaced.*				

37	Were structural or load bearing elements in the floor or walls (wood) exposed to water for an extended period of time? *These structural elements (wood) may prove difficult to dry properly and whilst dry to touch may contain unsatisfactory levels of moisture which can result in a reduction in their structural integrity as well as faults such as warping of floors and door jams.*				
38	Could water have entered HVAC ductwork? *Duct work may need to be flushed and disinfected in order to remove bacteria and germs that can introduce illnesses into the structure when the system is utilised.*				
39	Could water have entered the gas system? *Water can collect in gas lines, causing the pilot lights to burn improperly and in some cases go out. Gas can escape if there is a faulty valve or thermal couple. The gas system should be checked.*				
40	Did the water rise above the level of the electrical wall outlets and switches? *The electrical system should be checked thoroughly. Silt can collect in wall outlets and sockets and cause short circuits. Absolute precaution should be taken in relation to electrical systems.*				
Project and Contractor Management					
41	A decision will need to be made regarding whether to repair the damage or demolish and reconstruct. Irrespective of the strategy, the work should be treated as a project and the principles of project management applied. If the project is to demolish and reconstruct, it would ideally be procured under a single tender process and contract.				
42	Has a program of works and list of contracts been developed for the project? *The program of works should identify the nature of activities and tasks required, the order in which they are to be undertaken and those firms with the capability to deliver individual contracts.*				

43	Has a scope of works been prepared for each contract which details the deliverables required and their timing? *The deliverables should be based upon recognised standards for the work being undertaken and any specific needs or outcomes required by the institution.*				
44	Have quotations been obtained for those tasks which are not subject to tender?				
45	Do all contractors have current and appropriate insurance coverage?				
46	Does the contractor have safe systems of work appropriate for managing the risks which the work presents?				
Document the Claim – Basic information to ensure is on the claim file					
47	Location of the building and building name or number				
48	The room number or name				
49	Photographs of the building or room and of damaged items				
50	An inventory of all items removed from the building				
51	Loss adjusters estimates and correspondence				
52	File or contemporaneous notes of conversations with stakeholders and contractors				
53	Copies of invoices relating to all services provided				
54	Details of progress payments				
55	Copies of memos and e-mail communications				