

## Protecting High-Value Equipment from Water Damage



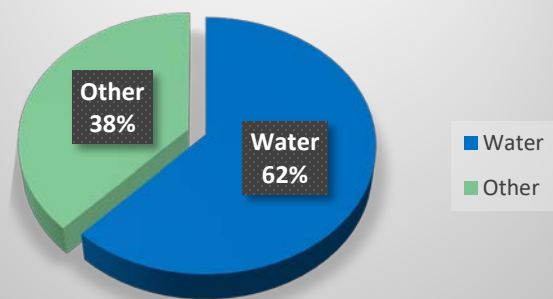
High-value equipment can be defined as equipment with either high replacement value or have high operational impact if damaged. Our universities are comprised of many high value, specialized pieces of equipment, from lab equipment to computer servers. Universities also house artifacts and library collections that are rare and irreplaceable. It is important to review all insurance policies to ensure the applicable policy is responding to the loss. Water losses can also jeopardize the integrity of research being conducted at our schools. Years of hard work could be lost due to the contaminated water exposure. The safe keeping of equipment is important, being proactive in mitigating and managing the risk of water related incidents can reduce the likelihood of such incidents from happening and reduce the size of the loss.

### 62% OF REPORTED CURIE PROPERTY LOSSES ARE WATER-RELATED

Many water losses involve high value equipment, here are a few examples of losses that CURIE has experienced:

1. A fan system in a health science building stopped working and caused the freeze up of the entire building resulting in frozen and burst lines in the sprinkler system, in the domestic water system as well as the heating system. Water went through the building, down the escalators and stairs and into the basement. A total of 73 rooms were affected including computer and science lab rooms. One of the labs had a HVAC system with HEPA filter to control high levels of moisture and dust, the water damage caused a breach in the system and irreparable damage to the nano-flow

### CURIE Property Claims by Frequency



chromatography radiant system with a replacement value of \$2,866,000. The total loss for equipment replacement and building damage was \$3,148,000.

2. A rubber expansion joint on a heating line in a chemistry building failed, a

large volume of boiling water leaked into the hallway right outside the door to a chemistry lab room. The water ran for over an hour before the water line was shut off. Three floors were affected, along with the building damage, three Nuclear Magnetic Resonance spectrophotometers had extensive moisture and corrosion and needed to be replaced. The total loss was \$2,200,000.

3. A heavy rain fall caused a large amount of water which the city sewer system could not handle. This resulted in flooding and sewer backups on university campus. Eleven building were affected. One of the buildings housed medical

research equipment, the equipment sat in two to three feet of water causing most of the equipment to be irreparable, the total cost to replace the various equipment was \$234,000. The total loss was \$1,222,000.

4. A cold-water connection supplying a deck mounted faucet to a lab bench for a Bio Science lab room failed. This caused extensive damage to various microscopes. Engineers were called in to test and determine if the equipment was repairable. Some of the equipment was repaired while other pieces were replaced. The total loss was \$537,000.

We have put together a sample checklist to assist you and your institution in protecting your valuable equipment from being involved in a water loss.

## Mitigation Strategies – Be Proactive

Item	Yes	No	Action/Comments
1. Ensure small leaks are promptly repaired			
2. Analyze any leak and determine if it was an isolated occurrence or a symptom of a systemwide problem			
3. Ensure staff are instructed to immediately notify maintenance when any type of dripping, leakage or clogged drains are found			
4. Determine if the floor directly above valuable equipment/contents contain any penetrations for conduit, piping, cabling etc. through which water can flow down on equipment			
5. Maintain close monitoring of the work of outside contractors that may affect piping systems (sprinklers, domestic water lines etc.			

Item	Yes	No	Action/Comments
6. Be aware of any liquid storage tanks or vessels (hot water, condensate, boilers, fuel oil etc.) inside the building, mechanical penthouse or on the roof			
7. Ensure that pipe diagrams or prints are up to date and show the locations of valves for all liquid carrying systems. Where possible to label piping.			
8. Shutoff valves should be marked and easily accessible			
9. Ensure shutoff valves should be exercised (closed and reopened, lubricated as necessary) at least annually to verify they can be quickly closed during an emergency			
10. Areas that are unoccupied periodically should be provided with water sensors on the floor or excess humidity sensors to provide a signal to a constantly attended position			
11. Computers/hard drives and power bars should be kept a minimum of 50mm (2") above floor level			
12. Paper records and archives should be stored in water sealed containers or elevated off the floor			
13. Staff should be instructed to immediately shut off power (if safe to do) and protect valuable equipment and contents with plastic sheets if leakage is occurring			
14. Avoid locating high-value equipment below grade and below areas where liquid spills frequently occur (e.g. cafeterias, rest rooms and mechanical rooms)			
15. Be aware of water lines, drains or other liquid piping in the ceiling directly above valuable equipment (pay special attention to lines with fittings, valves or other devices)			
16. Utilize secondary containment (e.g. drip pans) and water escape alarms for water lines/pipes located directly above high-value equipment			

Item	Yes	No	Action/Comments
17. Pre-identify and establish partnerships with specialists required to manage water/sewer related events (including cleaning/drying specialist, industrial/occupational hygienists, etc.			

## Post Incident Management

Item	Yes	No	Action/Comments
1. Ensure the use of dry heat rather than wet heat in the remediation process to reduce the chance of mould formation			
2. Ensure the use of mould disinfection on carpeting and drywall			
3. Ensure the replacement of drywall or carpeting that has been wet for 24 hours			
4. Conduct regular monitoring of building moisture levels to ensure that expenses related to drying are limited to those required to achieve normal levels.			