

## How to Prevent Liquid Damage Property Losses

1. The leading cause of property losses is from liquid damage. A review of Zurich North America claims data highlights the problem.
2. Water damage originates from a number of sources:
  - Domestic water lines and systems
  - Drains and drain lines
  - Sewage systems
3. Preventing these losses and taking quick and effective action when leakage occurs can help to drastically reduce the number and size of losses. Reducing the likelihood of such incidents also minimizes the disruption to hospital operations and its critical human resources.
4. When leakage does occur, immediate and proper action is vital to preventing further damage and assuring a faster return to normal services.
5. This program kit includes important claims and loss control information, tips and checklists you can use to help prevent and prepare for a common – and potentially devastating – type of loss in your industry.
6. Is there a written plan detailing what to do in the event of a leak and liquid damage?
7. Has the “Checklist for Valuable Equipment Areas” been completed?
8. Is someone immediately available at all times with authorization (24 hours, 7days) to call and bring in the professional cleanup and restoration companies?
9. Are the names and phone numbers for professional cleanup and restoration companies readily available?
10. Is someone available on all shifts trained to respond immediately to any leak?
11. Does the staff have immediate access to a spill response cart or supplies, and emergency pipe for pipe repair supplies?
12. Are pipe diagrams or prints up-to-date, and showing the location of valves for all liquid-carrying systems?
13. Are valves placarded or tagged for easy identification?

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14. Are small leaks promptly repaired? A small leak may be a sign of hidden corrosion or other problem with potential for growing into a catastrophic leak.
15. Is the cause of any leak analyzed to determine if it was an isolated occurrence, or a symptom of a system wide problem?
16. Are housekeeping personnel instructed to immediately notify maintenance when any type of dripping, leakage or clogged drains are found?
17. Are there any floor openings or cracks through which a leaking fluid may pass through and damage areas below? (See Note 2)
18. If any part of the property is exposed to potential flood, is there a formal flood emergency plan or similar flood preparation plan?
19. If your building is in an earthquake-prone area, has your automatic sprinkler system been surveyed by a sprinkler system professional to determine extent of vulnerability for leakage? (see Note 4)
20. Are roofs inspected regularly (minimum of every 6 months, or after severe storms) to check for damage or deterioration such as cracking, splitting, blistering, separation, holes or other potential source of leakage?
21. Are there any roof leaks or evidence of ponding on the roof? If so, indicate reasons and the repair schedule.
22. Are there any areas directly adjacent to the building where rainwater can accumulate during heavy rains? Large landscaping planters built next to grade wall and windows are an example where water can pond and find its way into the building.

### Notes:

1. Liquid-carrying systems may include: sprinkler systems, hot and cold water piping, chilled water lines for cooling, hot water lines for heating, condensate piping, sewer lines, drain lines, fuel oil piping, etc.
2. Floor openings often occur around penetrations made for pipe and conduit. Seal the open space around the pipe or conduit to prevent passage of a liquid. Often, these are penetrations in concrete floors that are required to be fire-stopped anyway. Use a fire-stop that produces a tight liquid seal as well. A fire-stop is an UL-listed fire-resistive material used to fill holes in fire-rated floors and walls. Some types resemble caulk.



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### Notes (continued):

3. Accurate drawings of the underground water mains are important in a large complex with private mains. A leak may occur in an underground pipe near a building. There may be a control valve in the basement or just outside the building. Closing this valve may not stop the leak if the break is upstream of the valve and the water is flowing along the outside of the pipe then into the building. (A plan showing the location of all valves in the system will be needed to quickly locate another valve to shut and stop the leak.)
4. Sprinkler pipes and heads often break during earthquakes as a result of swaying fixtures or ceiling tile systems.



## Liquid Damage Property Losses What to Do in the Event of a Loss

Even a small amount of water or other liquid falling on valuable equipment may result in total shutdown until it has been cleaned, tested and recertified. It's critical to identify sources of water or other liquids immediately above valuable equipment areas.

Once identified, analyze the potential for leakage and wetting. Take measures to eliminate, reduce or protect against possible leakage. Basements are the least desirable locations for valuable equipment.

1. Are there any water lines, drains or other liquid piping in the ceiling directly above the valuable equipment?  
  
If they cannot be removed or relocated, what can be done to determine their integrity?
2. On the floor directly above the valuable equipment room, are there any bathrooms, slop sinks or other rooms with fixtures or equipment containing water, steam or other liquids?
3. Are shutoff valves marked and easily accessible?
4. Does the floor directly above the valuable equipment area contain any poke-throughs (penetrations) for conduit, pipe, cabling, etc., through which water can flow down onto the equipment?
5. Is a spill response kit or cart, including plastic sheeting to cover and protect equipment, readily available?
6. Has the entire staff of operators, been trained to report any type of liquid leak to the maintenance department for immediate attention?
7. Waterproof the floors above areas containing critical and valuable equipment. Completely seal all openings around floor penetrations made for conduit and ducts and other utilities.
8. Consider installing water sensors on the floor for areas containing valuable equipment, or under raised floors of computer rooms.



## Liquid Damage Property Losses What to Do in the Event of a Loss

### FIRST 24 HOUR CHECKLIST

The following actions help your staff begin the cleanup process. Professional cleaners have the equipment necessary to quickly remove large volumes of water, and properly clean and treat buildings and furnishings. Professional equipment restorers bring the experience and resources to effectively clean and repair electronic equipment and get it re-certified if necessary.

### BUILDING

- Remove wet items such as carpeting, padding and ceiling tile, anything that holds moisture to an exterior location or cutoff dock area.
- Use all available and rentable vacuum equipment to eliminate water on floors as soon as possible. Also use squeegees and mops.
- Set up any available dehumidifiers (if outside temperature is greater than 60 degrees F).
- Open any doors and windows to help reduce humidity (if weather is appropriate).
- Use fans to help circulate the air and assist drying.
- Open drawers and closet doors to enhance drying.
- Leave the heat on if damage occurs during a cool season. Utilize air conditioning if incident occurs during warm season.

### EQUIPMENT

- Turn off power immediately – do not energize wet equipment!
- Blow water out with clean compressed air (or preferable liquid nitrogen) and/or hair dryers or a PowerCat.