

Preparedness

Water Damage Prevention Program



A key component in our Water Damage Prevention Program is preparedness.

Once construction is complete on a new building and operations begin, so does the ongoing preventive and predictive maintenance and emergency preparedness to protect the occupants, building and site from various hazard threats. For some occupancies, this evaluation is part of a Hazard Vulnerability Assessment (HVA) for the Technological Hazard of “Internal Flood.” It is important to treat new and older buildings and their infrastructure equally when it comes to probability and severity. A release of water or other liquid can have significant impacts on both new and existing structures, contents and operations.

Initial Assessment

The Self-Assessment for Prevention of Liquid Damage Checklist should be the starting point for identification of exposures and developing the preparedness elements of the Internal Flood Emergency Operations Plan (EOP).

Building Envelope Assessment

A regularly scheduled Building Envelope Assessment should be incorporated in the preventive maintenance plan, including roof system and drainage, cladding and glazing. The Checklist for a Building Envelope Survey and Roof Survey will assist in developing the preventive maintenance schedules and guide the facility staff and contractors in the assessment processes.

Critical Equipment Areas

Specific mitigation measures for critical equipment areas may be necessary. The Checklist for Valuable Equipment areas will assist in identifying critical equipment that will need immediate attention should a release of water or liquid occur. Equipment and critical areas that may require maintaining extra traps, tape and other forms of cover:

- High valued medical diagnostic equipment
- Data servers
- Telephone switch equipment
- Electrical panels, motor controls and switchgear
- Sensitive process equipment
- Other equipment and critical areas as dictated by type of construction and building use

Preventive Maintenance – Internal Piping and Valves

Preventive maintenance should be done annually on fire protection and other mechanical, plumbing and process piping networks, including valves. Preventive maintenance standards are referenced in this element for additional guidance.

In addition, a regularly scheduled grounds assessment of storm drains during changes of seasons should be initiated. Storm drains should be inspected and debris cleared before and after severe weather events. During the grounds assessment, incoming roadway valves for piping networks, both in the paved surfaces and in the landscaping, should be exercised. Any valves that have been accidentally paved over or covered in mulch or other landscape materials should be cleared immediately. The site utility map should be kept up to date and accessible with the facility’s internal value charts.

When changes occur to the any of the facility’s piping networks, a recommissioning plan should be incorporated into the work project. This will ensure that processes are following as if the equipment was being installed new and commissioning guidelines for new installations are being followed.

Water and Liquid Spill Response Cart

Utilize the water and liquid spill response cart(s) to handle small spill incidents. Spill response cart supplies will contain different equipment based on if the building is under construction or renovation, or normal operations. The Spill Response Cart Checklist in this element is specific to guide users for setting up a response cart(s) during normal operations. Our RiskTopic on Spill Response Cart and Repair Supplies located in the Recovery Element section outlines a more robust equipment list needed for new construction and renovation projects. This checklist can also be used to guide the contractor in making sure the correct equipment and supplies are ready in the event of a water or liquid incident.

Staff and Contractor Training

Staff training on responding to water and liquid damage should be incorporated into the new hire orientation program. Specific areas of a facility may require specific training to respond to critical equipment exposures. Contractors should receive the same orientation training on responding to water and liquid damage losses. Refresher training should be conducted for staff and contractors following changes to the any of the program elements.

Water Mitigation Vendor Contracts

A signed contract with a large loss mitigation vendor is critical to ensure a prompt response in the event of loss. Having a signed contract will also assist in the response to larger localized or natural hazard events. The mitigation vendor should also be made aware of other facilities owned by the insured in the regional area. Engaging with the mitigation vendor in preplanning will expedite the equipment and personnel needed for various size facilities.

Ongoing regularly scheduled inspection, testing and maintenance are critical to reduce the probability of a significant loss and recovering quickly if a loss occurs.



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References

Zurich

Checklist, [Building Envelope Survey](#). Zurich: Zurich, 2024

Checklist, [Building Roof Survey](#). Zurich: Zurich, 2024

Checklist, [Self-Assessment for Prevention of Liquid Damage](#). Zurich: Zurich, 2024

Checklist, [Valuable Equipment Areas](#). Zurich: Zurich, 2024

Checklist, [Spill Response Cart Supplies](#). Zurich: Zurich, 2024

Other

ASHRE 180-2018, [Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems](#), Atlanta, GA, USA; ASHRE, 2018

ASTM E2270, [Standard Practice for Periodic Inspection of Building Facades for Unsafe Conditions](#), West Conshohocken, PA, USA; ASTM, 2019

ASTM E2841, [Standard Guide for Conducting Inspections of Building Facades for Unsafe Conditions](#), West Conshohocken, PA, USA; ASTM, 2019

AWWA M44, [Distribution Valves: Selection, Installation, Field Testing, and Maintenance](#), Denver, CO, USA; AWWA, Third Edition

NFPA 4, [Standard for Integrated Fire Protection and Life Safety System Testing](#), Quincy, MA, USA; NFPA, 2024. Online. 2024

NFPA 25, [Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems](#), Quincy, MA, USA; NFPA, 2023. Online. 2023

NFPA 99, [Health Care Facilities Code](#), Quincy, MA, USA; NFPA, 2024. Online. 2024

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