

Loss Control

Bulletin

Construction Insurance

Focus on Prevention of Water Damage Losses

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This Bulletin is intended to assist project participants, including project owners, general contractors and subcontractors, reduce the potential for water damage losses to their projects and deal effectively with the aftermath of these unforeseen and costly occurrences.

Definition of "Water Damage" Claim

In the context of this Bulletin, a "water damage loss" is defined as damage to a construction project resulting from the unintended entrance of water through exterior openings or the discharge of water from pipes or services within the structure.

Why Pay Specific Attention to Water Damage Claims?

Extensive insurance industry experience with construction projects reveals that water damage losses are among the most frequent and costly of claims occurring during the construction of building projects.

Here are a few examples of recent water damage losses.

- Water escaping over a weekend from an improperly installed dishwasher fitting caused more than \$2.6 million in damages throughout 17 lower floors of a condominium building and delayed completion of the project by several months.
- A high-pressure sprinkler line on the 23rd floor of a building was damaged during installation. The pipe ruptured when the system was pressure tested. Although the water was turned off immediately following discovery of the leak, escaping water caused more than \$1.5 million in damages to condominium units on lower floors.
- A large communications corporation building sustained more than \$450,000 in damages. Freezing occurred when the contractor failed to ensure adequate heating under very cold winter conditions, and a water supply pipe ruptured, following which the valve was shut. Most of the damage occurred when a worker accidentally reopened the unlabelled valve.
- A condominium project sustained more than \$300,000 in damages throughout several floors when an inadequately secured end cap was forced off a pipe supplying water to the heating system.

Indeed, water is a very powerful element and constitutes a major threat to construction works.

What Is the True Cost of a Water Damage Loss?

Repeated or severe claims can seriously affect the availability, pricing and conditions (such as the deductible level) of insurance for future projects, or of "term extensions" necessary to insure the damaged project through to completion.

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Aside from amounts recovered from insurance, water damage losses result in some or all of the following.

- The immediate need to respond on an emergency basis (often during a weekend or holiday) to stop the discharge or leakage, to clean up water and moisture, and repair or replace materials or other property to minimize damage.
- The expenditure of time and attention to advance, document and settle insurance claims.
- Absorption of costly insurance deductibles (often \$25,000 or more per claim). These can accumulate to considerable sums if a number of claims occur.
- Bearing the cost of any damages that may not be covered by the project policy, such as damage to contractors' equipment and tools.
- Loss of project momentum and the need to reschedule the work to deal with delays and/or penalties for late completion of the project.
- Incurring indirect losses such as those for "soft costs"¹ or "delayed opening"² that may result from late completion of the project. Even if insured, these losses are usually subject to significant "waiting period" deductibles.
- Dealing with project owners or purchasers who are displeased with occupancy delays. In some cases, condominium purchasers may have the contractual right to cancel their purchase agreements in the event of delayed occupancy.
- In the case of phased occupancy of projects, owners who have just moved in incur damage to their units and their possessions. This can result in a liability claim.

Together, these equal: panic, expense, inconvenience, penalties, loss of profits, customer dissatisfaction and lawsuits – at least seven good reasons to adopt practices that will help eliminate water damage losses.

Measures That May Reduce or Eliminate the Potential for Water Damage Claims

The following lists identify some of the measures that can eliminate possible sources of such losses. Each project presents unique exposures. We recommend

you determine in advance which of these or other measures will be appropriate for a specific project. We also welcome information you may wish to share with us about additional measures that may assist other contractors in the future.

Manage

1. Recognize the extent of damage that water can cause and manage this serious exposure.
2. Highlight and delegate the prevention of water damage losses to the individual responsible for overall loss prevention at the site.
3. Discuss the topic of water damage loss prevention at toolbox safety meetings with contractors and subcontractors.
4. Ensure that site inspections (end of work day and weekly tours) focus attention on measures intended to prevent water damage.
5. In the event of labor unrest or strike, increase site security and conduct a thorough inspection at the end of each day to undermine potential water-related sources of vandalism or sabotage.

Protect

1. Check and deactivate/drain existing water lines before cutting or tapping into them.
2. Shield exposed piping from impact while work is being performed in the vicinity, notably the installation of any mechanical or plant equipment.
3. Protect pipes, particularly those for heating systems, from being punctured by screws during the installation of drywall. This can be achieved by pre-planning; marking the locations of piping and informing drywall installers to take necessary precautions to avoid damage to pipes.
4. Install, inspect and test piping to meet or exceed industry standards and practices. Require that supervisory personnel log and sign-off on the completion and testing of each zone.
5. Ensure that modifications and substitutions are approved and signed off by design professionals. Retain written records of such approvals.
6. Ensure that prudent design practices for electrical control rooms have been applied, including ceiling

¹ Insurable "soft costs" may include financial costs such as commitment fees, standby fees, letters of credit, land rent, construction loan fees, additional interest expenses on extension or renewal of construction loans, leasing and marketing expenses due to loss of tenants or purchasers, legal and accounting expenses, and other miscellaneous carry costs such as property taxes, building permits and insurance premiums.

² Insurable "delayed opening" may include loss of rental income or profits to be derived from the completed project. Some types of projects are subject to additional forms of loss due to delay.

protection, floor drains for water escape, and installation of components at recommended heights above the floor.

7. Shut off the water supply to lines (such as service lines to ice-makers, dishwashers, etc. in residential units) after installation and testing, until required for occupancy. When feasible, drain pipes after testing.
8. Protect pipes from freezing by draining them when feasible, and ensure adequate heating, with backup systems. Have temperatures monitored by security personnel or an alarm service. Arrange for the ready availability of ULC approved temporary heating when winter conditions threaten.
9. Clearly tag or label valves that are to be kept shut, such as to piping that has not passed testing or is known to be in need of repair.
10. Safely locate or relocate materials and equipment that may be subject to damage. Schedule deliveries to minimize the inventory of damageable materials and use prudent storage practices (pallets, tarpaulins, etc.) to minimize exposure to construction materials.
11. Protect partially completed installations (such as roofing) with secured tarpaulins, etc.
12. Reduce exposure to building materials and equipment by scheduling delivery or storage until after openings have been enclosed.
13. On an ongoing basis, take into account weather and temperature forecasts when planning work, so as to minimize the potential for damage.

Detect

1. Maintain a presence at the project site at all times, including off-construction hours. Have security personnel patrol the interior of buildings as well as the exterior during off-construction hours. Consider installing water flow switches or moisture detection systems during construction, relayed to a monitoring station.
2. During testing, have personnel present throughout areas being tested and on lower floors. Enable them to communicate efficiently with operators to immediately shut off water supply in the event a leak is discovered.
3. Install and activate monitored alarms on sprinkler systems as early as feasible during construction.

Respond

1. Ensure there is always someone present on-site to respond to the emergency of a leak or accidental discharge. Provide such personnel with the knowledge to locate valves and the authority to shut them to stop water flow. During off-construction hours, security personnel should have these capabilities.
2. Make arrangements in advance with a qualified emergency clean-up service to respond immediately in the event of a discharge. Provide this service company with information of the site. Determine in advance hourly rates for the service, including equipment rental fees.

Report

1. Promptly report water damage losses to your insurer(s) by notifying your insurance broker and your insurance company in accordance with insurance policy conditions. Doing so will permit the insurer(s) to investigate the claim, help ensure that measures are taken to minimize the damage, protect their and your interests, and secure and protect evidence that may help recover the cost of damage from others where this is feasible.
2. *Do not* return to distributors or suppliers parts that are involved in an incident until they have been forensically analyzed. Failure to retain such evidence may imperil the opportunity for recovery of damages attributable to product failure.

We hope the information herein proves useful in helping you prevent and reduce water damage losses, and we invite readers to contribute additional information that may be incorporated into future versions of this Bulletin.



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