



Builders' Risk: Water Damage or Flood?

Addressing the risks, understanding the coverage for
damage and mitigating the exposures

by Mark Gadaire and Raymond Szczucki

CHUBB®

When water finds its way, and ends up where it doesn't belong, major setbacks and costly damage may follow, with claims that often run into the hundreds of thousands of dollars...and even higher.

Whether it's a slow leak or a sudden flood, water can cause extensive and expensive damage to a construction project. Although it may not draw the headlines of an accident like a crane collapse on a busy city street, water can be highly destructive. The causes vary widely – from human error, such as an ill-fitted plumbing connection or an accident that triggers a sprinkler system, to a local water main break or a region-wide heavy rain event, with or without storm surge. Water may enter the project at one point and cause problems at another. When water finds its way, and ends up where it doesn't belong, major setbacks and costly damage may follow, with claims that often run into the hundreds of thousands of dollars...and even higher.

When it comes to property insurance, where the water comes from and how the damage occurs can make all the difference in respect to policy coverage. Too often, policyholders do not recognize the differences in policy wording that determine what and how much coverage is provided. It is important to understand the differences in how a policy distinguishes between water damage, flood or storm surge before obtaining your coverage, not after a loss.

Policyholders should also be aware of the proactive steps they can take to reduce the likelihood of water damage caused by incidents on the site and to protect against damage from internal and external sources. Regardless of how well a project is managed, damage can still occur. By recognizing the numerous sources of water damage, understanding the variances in coverage, and building a comprehensive plan to proactively address potential exposures, builders and contractors may be able to reduce the likelihood of a loss, and limit the financial impact should loss occur.

Recognize the Source

Water damage sources may be internal – that is, within the building envelope or on the site – or related to weather and other external causes. Complicating the matter is the fact that construction sites vary greatly in size, from compact city lots to campus-like settings that encompass hundreds of acres or several mile long civil projects. Whatever the cause, water damage may lead to lengthy delays in a construction schedule. Sometimes the damage is direct, such as when a pipe breaks and damages property on the floor or in the same area. It may also be indirect, such as when water leaks from a broken pipe on an upper floor and travels down to several floors below.

External sources can also cause damage. An example of this is leaving materials uncovered and exposed to rain in a building that doesn't yet have a roof or complete curtain walls or a facade. Simply leaving exterior windows or doors open overnight can cause problems from wind-blown rain, such as mold growth, which may require extensive cleanup and remediation.

Locally heavy rain can lead to sheet flow onto a project site and into a building or along the project alignment. A water main break on a local street can cause flooding. Flooding may also be caused by rising rivers or storm surge over a wide area. In the Middle Atlantic to New England area, storm surge can occur from a Nor'Easter or from a high-wind storm that pushes water inland. In Florida, storm surge is likely to arise from tropical storms and hurricanes. In the Midwest, spring snowmelt can lead to flooding downriver. In the West, long dry spells lead to issues with sheet flow once the wet weather returns.

Understand the Policy

Whatever the cause of water damage, policyholders should look carefully at their policies to understand what is covered and which deductibles and limits will apply. Insurance coverage usually distinguishes between damage caused by rising or overflowing water (i.e., by flood and storm surge) and all other water damage, whether it be from precipitation, such as wind-driven rain, onsite sources, or otherwise. Flood and storm surge are not necessarily covered by all policies.

When it comes to floods, insurance purchasers should also understand the definitions in their insurance policy and recognize that flood definitions vary from policy to policy. As an example, the Insurance Service Office, Inc. (ISO) has published a Flood Coverage Endorsement (CP 10 65 10 12) to its Commercial Property Policy. Under this ISO endorsement, flood is defined to mean:

A general and temporary condition of partial or complete inundation of normally dry land areas due to:

1. The overflow of inland or tidal waters;
2. The unusual or rapid accumulation or runoff of surface waters from any source; or
3. Mudslides or mudflows which are caused by flooding as defined in 2. above. For the purpose of this Covered Cause of Loss, a mudslide or mudflow involves a river of liquid and flowing mud on the surface of normally dry land areas as when earth is carried by a current of water and deposited along the path of the current.

Understanding how a particular policy defines flood is critical because it leads to an important consideration: if there are contractual agreements between the building contractor and owner as to who



is responsible for damage caused by flood or water damage, those parties should make sure that the definitions in the contract align with the definitions in the insurance policy being placed. Variances in wording or meaning could lead to disagreements between the owner and contractor as to responsibility for damage after a loss.

The damage from such incidents can be widespread and costly. During Storm Sandy, a storm surge of more than 9 feet hit Battery Park at the southern tip of Manhattan¹, flooding tunnels, subway stations and basements, damaging building electrical systems and other property. One of the costliest storms in U.S. history, Sandy hit New Jersey as a post-tropical cyclone in October 2012, causing \$18.75 billion in insured property losses, excluding flood insurance claims covered by federal flood insurance².

In the spring of 2015, some areas of Texas experienced more than three weeks of rain that broke historical rainfall records and dropped enough water to cover the entire state 8 inches deep³. The Insurance Council of Texas estimated that insured losses could reach \$1 billion for the

month of May, including damage from hailstorms⁴. And in April 2016, Houston experienced intense flooding again - the second major flooding event in that metropolitan area in less than 12 months. Preliminary estimates indicate losses from that event could reach nearly \$2 billion.⁵

Such extreme rainfall events may be growing more frequent. Over the past 30 years, heavy rainfall events have been setting new records beyond that explained by natural variability, according to a study by climate researchers that found a clear trend toward more unprecedented daily rainfall events consistent with rising global temperatures⁶. In the United States, heavy downpours have been increasing over the last three to five decades, particularly in the Midwest and Northeast, and that trend is likely to continue, according to the 2014 National Climate Assessment⁷.

While extreme rainfall may become more common, the process for how claims are handled should remain consistent. For policyholders, the issue often comes down to whether a claim involves flood or water damage and how the insurance policy

responds to those scenarios. One key point is that, on many policies, deductibles are likely to be higher and policy limits lower for flood than for water damage.

The way that the insurance policy in question responds to any type of damage depends on the policy wording. Where water damage (other than flood) is the cause of loss, policies typically provide coverage up to the policy limit, above the main working deductible. Where flood is the cause of loss, the deductible is typically higher and, in some policies, may be expressed as a percentage of property value rather than a specified figure. That percentage deductible is likely to be much higher than a flat deductible for water damage.

On a builders' risk insurance policy, the deductible may be based on the value of the project at the time of loss under a value-at-risk-at-time-of-loss (VARTOL) clause. For example, if only the foundation is completed, the percentage deductible is based on the value of that portion of the project, which is much lower than for a completed building. For instance, on a value in place of \$1 million, a 5 percent deductible is \$50,000; for \$10 million, it is \$500,000. Where large percentage deductibles are part of the policy, policyholders may be able to obtain a separate deductible "buydown" policy.

Time may also be an issue, because damage sustained over a period of days may be deemed multiple occurrences under the policy, depending upon policy language. If, for instance, a flood "occurrence" is defined in the policy as being limited to 72 hours in duration and the flood conditions persist into a fourth day, there may be more than one flood occurrence involved, and the policyholder may have an obligation to pay separate deductibles for each such

occurrence. On the positive side, new limits may be available under the policy for each such occurrence as well. This is of particular concern to companies whose operations spread over a large region or a number of states. Policies may also be subject to aggregate limits that set a ceiling on the amount that will be paid over a given timeframe, although policyholders can seek to purchase policies that provide for reinstatement of those limits in some cases.

Whether coverage for storm surge is provided under the flood or named windstorm portions of the policy may also affect the limits. Named windstorm sub-limits of insurance may be equal to the policy limits, while flood sub-limits may be subject to a substantially lower sublimit, or vice-versa.

Identify the Risks

Floods and storm surges can't be prevented, but policyholders can take steps to help mitigate potential losses. Storm Sandy provided an expensive lesson. Following that storm, many contractors and property owners incorporated flood protection into their projects, such as walls or gates. Contractors and property owners may also consider placing portable flood protection equipment, such as inflatable water dams and flood barriers, on their sites. Limiting damage from flood and storm surge is also a priority from a design standpoint. In areas that are prone to storm surge and flood, mechanical and electrical equipment should be placed above projected surge heights. Following Sandy's widespread destruction this has become a particularly hot topic with property owners, insurance carriers, and tenants.

However, floods and storm surges aren't

the only risk factor. Water, from a variety of sources, is a frequent cause of damage at construction sites, as it is able to infiltrate a building through unfinished areas during construction and through defects once the project is complete. Rain can enter a building through open windows, doors, and unprotected/ yet-to-be-completed openings. Interior plumbing and fire suppression systems may leak because of defects or installation mistakes, because they are damaged during construction, or when a system is activated for testing. Valves may simply be left open.

As the number of water sources within a structure increases, so do the potential exposures. During construction, unprotected water lines can freeze in cold weather. Workers moving equipment or adding materials can damage sprinklers, like when drywall installers drill screws into pipes that aren't protected by metal plates. Improperly sealed fittings and incomplete plumbing connections can also cause severe damage.

Because even seemingly small leaks can lead to expensive claims, all signs of water leakage should be investigated promptly and thoroughly to prevent more costly problems, such as damage to mechanical or electrical equipment that voids the manufacturer's warranty. And as buildings include more technology for sophisticated climate control systems, telecommunications and data centers, contractors have to be aware of the potential for damage to even more expensive and hard-to-replace equipment.

Build a Comprehensive Prevention Plan

Having a prevention plan in place can help mitigate potential problems, and limit damage should a problem occur. A comprehensive plan, like the sample below, will incorporate pre-task planning, address proper sequencing of work, and detail robust response measures if leaking water is found.

Pre-task Planning

- Include a review of the building and water system designs, as well as a quality control/quality assurance program.
- For buildings that are geometrically complex, consult an envelope specialty engineer for a third-party opinion on water tightness.
- On renovations or additions, inspect existing structures to identify any pre-existing water problems.
- Schedule pre-installation meetings with all relevant exterior subcontractors, manufacturers, and design teams to verify design intents and confirm product compatibilities between systems.
- Project managers should review water damage protection and quality control measures with their mechanical and fire protection systems subcontractors. Some key concerns are system-testing protocols for leak monitoring after activation, leak detection protocols, alarm systems, flow detection and monitoring, as well as system and component inspections.
- Management personnel should witness all wet system tests to help recognize potential problems. All roofing and waterproofing tests should be carefully documented, and the testing should meet both design and manufacturer criteria.

Proper Work Sequencing

- Schedule the delivery of porous interior materials such as drywall, paneling, ceiling tiles, and wood finishes after the building envelope is completed.
- Store materials off the ground, on dunnage, and away from moisture sources, and cover porous materials with plastic sheeting or tarps.
- Avoid storing anything that can be damaged by water in areas that are not weather-tight.
- Use mold resistant wallboard in central stair shafts, electrical rooms, and other areas that have to be built before floors are fully enclosed.
- Seal intermediate floors to provide a “temporary roof” before the building is topped off and closed in.
- Construct water dams around duct shafts and stair openings.
- Where permissible, use water resistive (W-rated) fire-stopping at horizontal openings, including pipe penetrations and slab to curtain wall/façade edge details.
- At the end of each day, have workers walk the entire project to make sure that all windows and doors have been closed and that all water sources have been turned off.
- When practical, use a nightshift for cleanup labor to keep workers on the site around the clock.

Responding to water damage

- Keep response equipment, such as industrial pumps, vacuums, fans and absorbent materials onsite.
- Make sure employees know where critical shutoff valves are located
- Install water flow detectors on fire and domestic water pumps. If a working telecom system is not yet available, install a cellular network to allow monitoring companies to detect flows outside of typical usage and during off hours.

- Before an incident occurs, identify and establish a relationship with an emergency restoration company to assist with clean-up efforts.

Make Water Damage an Everyday Concern

While a comprehensive risk management strategy can reduce the potential for losses, water damage can still occur at even the most careful sites. In the case of storms and floods, the cause is outside of human control. The large number of potential exposures makes it critical for contractors and builders to ensure that the insurance they have in place offers the most appropriate coverage for their specific project or company. It is essential for policyholders to understand the damages covered by a specific policy and how the policy wording impacts their coverage.

When dealing with water damage, having the right insurance carrier in place is just as important. An insurer with experience in the construction industry has a greater understanding of unique risks contractors and builders face, and is able to offer more tailored, comprehensive solutions to help mitigate those risks. This may include risk and safety engineering services, to help prevent and reduce costly water damage claims before they happen. By proactively ensuring the right coverage is in place, and making water damage prevention an everyday part of project culture, builders and contractors may reduce the likelihood of a claim – and limit the financial impact should one occur.

About the Authors:

Mark Gadaire is Senior Vice President, Inland Marine. Based in New York, Mr. Gadaire serves as Builders' Risk Product Leader, where he maintains overall responsibility for Builders' Risk product management in the United States. He has more than 30 years of experience as a loss control representative, underwriter and underwriting manager, concentrating on construction exposures. Mr. Gadaire earned a BA in Civil Engineering from the University of Lowell in Lowell, Massachusetts.

Raymond Szczucki, P.E., ARM is Account Engineer, Inland Marine. Based in Pennsylvania, Mr. Szczucki is responsible for engineering evaluations and construction risk management services for Builders' Risk and engineered risk accounts. He has extensive experience in this field, having previously held a variety of engineering positions for both risk management companies and engineering firms. Mr. Szczucki earned a BS degree in Civil Engineering from Drexel University in Philadelphia, Pennsylvania and a MBA from Wilkes University in Wilkes-Barre, Pennsylvania.

Endnotes

- 1 NYC Hazards: storm surge, New York City Office of Emergency Management.
See: http://www.nyc.gov/html/oem/html/hazards/storms_stormsurge.shtml
- 2 Hurricanes, Insurance Information Institute.
See: <http://www.iii.org/fact-statistic/hurricanes>
- 3 Texas flooding: Here's a look at the state's rainfall by the numbers, NBC News, May 29, 2015.
See: <http://www.nbcnews.com/news/weather/35-trillion-gallons-water-texas-record-rain-numbers-n366541>
- 4 As Texas dries out, accounting of damage begins, Dallas Morning News, June 1, 2015.
See: <http://www.dallasnews.com/news/state/headlines/20150601-as-texas-dries-out-accounting-of-damage-begins1.ece>
- 5 Houston flooding could cost up to \$1.9 billion, BBVA Compass economists say, April 22, 2016. See <http://www.prnewswire.com/news-releases/houston-flooding-could-cost-up-to-19-billion-bbva-compass-economists-say-300256077.html>
- 6 Record-breaking heavy rainfall events increased under global warming, Potsdam Institute for Climate Impact Research, July 8, 2015.
See: <https://www.pik-potsdam.de/news/press-releases/record-breaking-heavy-rainfall-events-increased-under-global-warming>
- 7 2014 National Climate Assessment, U.S. Global Change Research Program.
See: <http://nca2014.globalchange.gov/report/our-changing-climate/heavy-downpours-increasing>



Chubb. Insured.SM

Chubb is the world's largest publicly traded property and casualty insurance group. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. Chubb Limited, the parent company of Chubb, is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index.

Chubb is the marketing name used to refer to subsidiaries of Chubb Limited providing insurance and related services. For a list of these subsidiaries, please visit our website at chubb.com. Insurance provided by ACE American Insurance Company and its U.S. based Chubb underwriting company affiliates.

The opinions and positions expressed in this report are the authors' own and not those of Chubb. The information and/or data provided herein is for informational purposes only.

©Chubb 2016 All rights reserved.

05/2016