

Property Insurance Coverage for Emerging Risk: Underground Climate Change

Dennis J. Artese, Ethan W. Middlebrooks, and Thomas Dupont*

Abstract: Studies have shown that heat emanating from basements, train tunnels, sewers, and other underground systems in major metropolises in the United States and Europe is heating the ground between city surfaces and the bedrock by as much as 27 degrees Fahrenheit. This “underground climate change” is affecting ground soil conditions, causing structural strains on buildings and exacerbating cracks and defects in walls and foundations. Whether property insurance coverage will respond to loss and damage resulting from underground climate change will likely hinge on the application of the “earth movement” exclusion and potential exceptions thereto, in addition to other policy exceptions. Focusing on broad “all risk” commercial property insurance policies, this article analyzes permutations of policy language and state law that may affect coverage for damage caused by underground climate change, including how state law treats anti-concurrent causation clauses, whether “human-caused” exceptions to earth movement exclusions may apply to underground climate change, and whether “abrupt collapse” exceptions to exclusions for building collapse may apply when undetected structural damage triggered by underground climate change triggers collapse.

Introduction

Studies have shown that heat emanating from basements, train tunnels, sewers, and other underground systems in major metropolises in the United States and Europe is heating the ground between city surfaces and the bedrock by as much as 27 degrees Fahrenheit

in some places over the past several decades.¹ This subterranean heating, dubbed “underground climate change” by scientists, is affecting ground soil conditions, causing layers of sand, clay, and rock to expand or contract by as much as half an inch beneath some buildings. These conditions are already causing structural strains on buildings and even exacerbating cracks and defects in walls and foundations. Should the problem go unabated, significantly more structural damage is expected.

Whether property insurance coverage will respond to loss and damage resulting from underground climate change remains to be seen and will likely hinge on the application of the “earth movement” exclusion and potential exceptions thereto, in addition to other policy exceptions likely to be implicated. That analysis involves a careful review of the policy language at issue, which will vary from policy to policy, as well as the application of state-specific rules with respect to insurance causation. Those rules seek to determine the cause(s) of a property damage loss as well as the significance of such cause(s) for insurance coverage purposes. As with insurance policy language, insurance causation rules vary from state to state. Therefore, policyholders should do whatever they can to avail themselves of the jurisdiction they deem most advantageous, as doing so may be outcome determinative.

All-Risk Coverage

This article focuses on broad, “all risk” first-party property insurance policies rather than the narrower “named perils” policies. Many businesses smartly purchase “all risk” property insurance policies. All risk policies generally cover all risks—that is, causes of loss—of direct physical loss or damage unless they are expressly excluded by the policy language.² Conversely, a named peril policy provides coverage only if the cause of the loss is expressly included in the policy as an insured peril.

As with any insurance policy, it is the insurance company’s burden to show that a coverage exclusion applies to preclude coverage under an all-risk property insurance policy.³ Should the insurance company demonstrate that an exclusion applies to a particular loss, the burden then shifts to the policyholder to prove up any

exception to the exclusion. Courts across the country generally apply a strict and narrow interpretation of exclusionary clauses, permitting insurance companies to avoid coverage only where they can demonstrate that the exclusion applies in the particular case and that it is subject to no other reasonable interpretation.⁴ Any ambiguity in exclusionary language generally is construed against the insurance company and in favor of coverage.⁵

Earth Movement Exclusion and Insurance Causation

The so-called earth movement exclusion is commonly written into all-risk property insurance policies, and often asserted by the insurance company to deny coverage for property losses involving structural damage to foundations.

A typical earth movement exclusion states that the insurance company will not pay for any losses resulting from “earth movement,” meaning “the sinking, rising, shifting, expanding or contracting of earth, all whether combined with water or not. Earth movement includes but is not limited to earthquake, landslide, erosion, and subsidence but does not include sinkhole collapse.”

Earth movement exclusions can often act as a formidable barrier to obtaining insurance coverage, because they are often employed alongside anti-concurrent causation (or ACC) provisions. These ACC provisions typically state that the insurance company “will not pay for loss or damage caused directly or indirectly by [earth movement]. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss.” Therefore, if earth movement is found to be even a contributing cause of loss, the ACC clause purports to bar coverage entirely.

But if the property insurance policy at issue does not include an ACC clause, then a court determining whether a covered cause of loss was the reason for the policyholder’s property damage would likely apply one of two “causation” tests.

The majority of states apply the “efficient proximate cause rule,” under which policyholders’ property losses are deemed covered if the efficient proximate cause of the loss is a covered peril under

the policy. In making this assessment, courts may consider what a reasonable businessperson would conclude was the cause of the damage. By way of example, one case involved a frozen pipe (an excluded cause of loss) that resulted in water damage (a covered cause of loss), and the New York Court of Appeals held that the water was the dominant and proximate cause of the loss and found it covered.⁶ Other courts have found the originating cause of loss to be the dominant and efficient proximate cause. Courts have not reached consensus on what “proximate cause” means for insurance purposes and have employed a variety of criteria over the years, including substantial factor, most direct and obvious cause, pre-dominate cause, prime cause, moving cause, and cause that triggers a chain of events.

The second commonly applied test for insurance causation is the “concurrent cause rule,” under which policyholders’ losses are deemed insured if at least one of the causes that contributed to the loss is a covered peril under the policy. For example, in the case of buildings suffering structural damage resulting from underground climate change, if a court finds that earth movement (an excluded cause of loss) partially caused the loss, while rising underground temperatures (a non-excluded and therefore covered cause of loss) also partially caused the property damage, then the loss is covered in any jurisdiction employing the concurrent cause rule.

Exceptions to the Earth Movement Exclusion

Many exclusions in insurance policies contain ensuing loss provisions and exceptions that bring the loss back within coverage. The earth movement exclusion is no different, and there are express and legally recognized ensuing loss and other exceptions to that exclusion. Exceptions to the earth movement exclusion that might apply when damages result from underground climate change include the following.

Many policies provide coverage where fire or explosion ensues from excluded “earth movement.” In such cases, policies typically state that the insurance company will pay for the loss or damage caused by that ensuing fire or explosion. This provision might result in coverage for resulting damages, but not for damages directly

caused by earth movement itself. Thus, unless a resulting fire or explosion damages, for example, a building's foundations, the damages to the foundations from earth movement may not be covered.

Further, depending on the applicable jurisdiction and the policy language at issue, whether earth movement is human caused or natural might matter. In the majority of jurisdictions, damages resulting from human-caused earth movement might be covered if an exclusion does not expressly state that it applies to human-caused earth movement.⁷ This is in line with the generally accepted rule of policy interpretation that exclusions must be construed narrowly and applied only where no other reasonable interpretation is offered.

Some courts have cited policy reasons in finding in favor of coverage for human-caused earth movement. For example, the Florida Supreme Court observed that “[w]hen losses are caused by human activity, insurers have the opportunity to recover some of the payments made to their insured by asserting subrogation rights against the entity responsible for the activity.”⁸ While courts may point out that subrogation rights may not be available in instances of naturally occurring earth movement, their holdings in favor of coverage for human-caused earth movement are firmly rooted in well-settled rules of policy interpretation that, in order to bar coverage, exclusions must unambiguously apply to the loss at issue and any ambiguity in the exclusionary language must be construed against the insurance company as the drafter of the ambiguous policy language.⁹

Indeed, where a policy's earth movement exclusion contains lead-in language such as “any of the following, whether naturally occurring or due to man-made or other artificial causes,” or states that damage from earth movement is excluded “regardless” of cause, coverage is likely to be precluded.¹⁰ In the latter case, the policy's ACC language may prevent coverage for man-caused earth movement.¹¹

Studies have shown that underground climate change is occurring due to human causes, including building mechanical systems located in basements, train tunnels, man-made sewer systems, and other man-made underground systems. Whether damage resulting from this man-made underground climate change results in covered

property damage as human-caused earth movement will be determined based on policy language and the interpretation of courts following what is likely to be widespread litigation. In those jurisdictions that may be concerned about an insurance company's potential for recovery of payments through subrogation, policyholders may have difficulty pinpointing a specific responsible party causing the increase in underground temperatures. Classic tenets of insurance policy interpretation will be important in those coverage cases.

Coverage for an “Abrupt Collapse”

Another policy exception (sometimes called an “additional coverage”) that should be considered is the exception/coverage addition for an “abrupt collapse,” which generally is not listed as an exception to the earth movement exclusion. “Abrupt collapse” instead is commonly listed either as an exception to the collapse exclusion typically contained in first-party property insurance policies, or as an additional coverage in either the policy form or in a standalone endorsement to the policy.

An “abrupt collapse” typically is defined within a policy and applies if it results from delineated causes, which often include a variation of the language “building decay that is hidden from view, unless the presence of such decay is known to the Insured prior to collapse.” If underground climate change is causing unknown, hidden damages to a building's below-grade structure and an “abrupt collapse” of the building results, there is an argument that the damages from the abrupt collapse are covered, notwithstanding the presence of an earth movement exclusion in the policy. Indeed, if there is an abrupt collapse as a result of underground climate change under a policy containing an earth movement exclusion, construing the policy as a whole and giving effect to all terms wherever possible should, at a minimum, result in an ambiguity in the policy that is construed in favor of coverage.

Conclusion

There are numerous arguments in favor of coverage under all-risk property insurance policies for losses related to underground

climate change. In order to determine if a particular loss is covered or not, the specific language in the property insurance policy at issue must be examined in conjunction with state-specific rules of insurance policy interpretation, insurance causation, and other insurance-related jurisprudence in connection with the earth movement exclusion, collapse, and other policy provisions. Should underground climate change go unabated, it is likely that these issues will be presented for resolution in most if not all states with major cities and underground systems within the next decade.

Policyholders faced with property damage and business interruption losses resulting from underground climate change should consult experienced insurance coverage counsel to analyze their property insurance policies and consider the impact of potentially applicable jurisdictional rules, which may be outcome determinative.

Notes

* Dennis Artese (dartese@andersonkill.com) is a shareholder in the New York office of Anderson Kill. His national practice concentrates on all types of insurance recovery litigation, with an emphasis on securing insurance coverage for property and business interruption losses stemming from natural disasters and other perils as well as for construction-related first-party property losses and third-party liability claims. Ethan Middlebrooks (emiddlebrooks@andersonkill.com) is a shareholder in Anderson Kill's New York office, where he concentrates his practice in insurance recovery, exclusively on behalf of policyholders. Tom Dupont (tdupont@andersonkill.com) is an attorney in Anderson Kill's New York office. He focuses his practice on insurance recovery, exclusively on behalf of policyholders.

1. See Raymond Zhong, *Underground Heat Is Shifting Chicago's Foundations*, N.Y. TIMES (July 11, 2023), <https://www.nytimes.com/2023/07/11/climate/chicago-underground-heat.html?smid=nytcare-android-share>.

2. See, e.g., *Vision One, LLC v. Phila. Indem. Ins. Co.*, 174 Wash. 2d 501, 513 (2012) (*en banc*).

3. See, e.g., *Vardanyan v. AMCO Ins. Co.*, 243 Cal. App. 4th 779, 798 (2015).

4. See *Pioneer Tower Owners Assn. v. State Farm Fire & Cas. Co.*, [12 N.Y.3d 302](#), 307 (2009).
5. *Dean v. Tower Ins. Co. of N.Y.*, [19 N.Y.3d 704](#), 708 (2012).
6. See *Album Realty Corp. v. Am. Home Assur. Co.*, [80 N.Y.2d 1008](#), 1010 (1992).
7. See e.g., *Miller v. Am. Fam. Mut. Ins. Co.*, [104 F. Supp. 3d 1232](#) (D. Colo. 2015); *Bentoria Holdings, Inc. v. Travelers Indem. Co.*, [20 N.Y.3d 65](#) (2012); *Powell v. Liberty Mut. Ins. Co.*, 127 Nev. 156 (2011); *Fayad v. Clarendon Nat'l Ins. Co.*, [899 So.2d 1082](#) (Fla. 2005).
8. *Fayad*, 899 So.2d at 1086.
9. See *id.* at 1089.
10. See, e.g., *Bentoria Holdings*, 20 N.Y.3d at 68; *Fayad*, 899 So.2d at 1087.
11. See, e.g., *Thurston Foods Inc. v. Wausau Bus. Ins. Co.*, No. 3:15cv14 (WWE), 2019 WL 2075880, at *4 (D. Conn. Mar. 6, 2019).