



# Communiqué

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## Changing climate, changing standard of care?

**As extreme weather events hit more frequently, many observers believe their impact may affect the standard of care for design professionals.**

Last fall, an [analysis](#) by the U.S. National Oceanic and Atmospheric Administration (NOAA) showed that significantly higher rainfall in parts of Texas are redefining 100-year events as 25-year events. This won't come as a surprise to Houstonians, who have seen three "500-year" floods in as many years. And it's not just Texas. In the U.S. and Canada, we're seeing rising sea levels on the East Coast, drought and fires in the West, and more extreme heat, flooding and intense storms in the midsections.

The NOAA Texas analysis is expected to result in updated Federal Emergency Management Agency (FEMA) flood plain maps and revised building codes and regulations in that state.

But what about elsewhere? When maps and codes have yet to catch up to the new reality, what are a design professional's obligations? Is an engineer expected to consider the risk of damages that can result from failure to take into account disasters caused by a changing climate? Is she duty-bound to design for "resiliency" even if codes and maps don't require it? If an architect bases his designs on current maps and codes, is he still exercising the appropriate standard of care? Is there a legal standard that applies to design choices that could be affected by climate change down the road?

Randy Lewis, Vice President, Loss Prevention and Client Education for AXA XL's Design Professional group, expects a growing number of lawsuits against A/Es from clients who claim that their projects should have been able to withstand foreseeable extreme weather events.

"It's possible that knowledge of climate change impacts could be used to establish a legal duty," Lewis says. "If a client claims you were negligent because the structure you designed didn't withstand a 500-year flood, the client's attorney may argue that you based your design on maps you knew—or should have known—were out of date, given climate projections. And it's conceivable that some judge or jury would agree."

**A practice management newsletter for design professionals**

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“It’s possible that knowledge of climate change impacts could be used to establish a legal duty.”

In a recent study, architects and engineers reported that although they recognized that climate change will impact their responsibilities, some are reluctant to raise the issue with their clients. (See the sidebar, “Resources.”) They say that conflicting signals from different levels of the U.S. government, the additional expense to build structures that can withstand extreme weather events, and the fact that codes and regulations have yet to catch up to the prevailing science all make it harder to convince clients of the need for proactive design.

In the U.S., the federal government has sent inconsistent signals. The *Fourth National Climate Assessment*, released in late 2018, reports that, “the evidence of human-induced climate change continues to strengthen and...impacts of climate change are intensifying across the country.” But President Trump has rescinded executive orders that required the federal government to account for climate change and sea-level rise when building [infrastructure](#) and when weighing national security and other issues, although the FY 2019 [National Defense Authorization Act](#) requires the Department of Defense to implement multiple climate and energy resiliency measures and standards. FEMA’s latest four-year strategic [plan](#) deletes mention of climate change and sea-level rise.

### **A changing standard of care?**

“From a risk standpoint, the question is whether the standard of care for the design professions has changed,” Lewis says. “Most observers believe that it has and will continue to evolve to reflect prevailing scientific understanding, data, media reports and our own experience.”

The standard of care, of course, obligates architects and engineers to render their services with the ordinary degree of skill and care that would be exercised by other reasonably competent practitioners of the same discipline under similar circumstances, taking into consideration

the contemporary state of the art and geographic idiosyncrasies.

“There are two important points about the standard of care,” Lewis says. “First, the application of the standard of care is subjective. Codes, regulations and licensing laws form a *framework*, as do the specific circumstances of a project and the work of one’s peers, yet the applicable standard of care continues to change as the practice evolves. What is reasonable reflects the contemporary state of the art. Given Houston’s recent history, for instance, it may not be reasonable to design to a 100-year flood in some parts of the city.

“The standard will vary depending on where the project is located. A/E/s in Boston will need to take into account rising sea levels, for example, while those in, say, Alberta should consider extreme heat and increased fire danger.” Lewis knows of one AXA XL insured in the Midwest who routinely designs for floods 30-percent higher than those anticipated by current flood maps.

The second point, Lewis says, is that compliance with code does not necessarily mean that a design satisfies the standard of care. “Under some circumstances, merely designing to meet code requirements may still be deemed negligent if the circumstances and the applicable standard of care dictate a design solution that clearly exceeds the code,” he says.

### **The moving needle**

Design professional associations, including the American Institute of Architects (AIA) and the National Society of Professional Engineers (NSPE), are helping to move the standard-of-care needle. In [Principles of Climate Adaptation and Mitigation for Engineers](#), Engineers Canada cautions that, “Changing climate conditions, particularly weather patterns that deviate from historical climate ranges, may adversely affect the integrity

of the design, operation, and management of engineered systems. It is the engineer's duty to take all reasonable measures to ensure that those systems appropriately anticipate the impact of changing climate conditions."

The American Society of Civil Engineers (ASCE) has adopted a [policy statement](#) that says, in part: "There is a growing need for engineers to incorporate future climate change into project design criteria." An ASCE [committee](#) has released a manual of practice for climate-resilient infrastructure. (See "Resources.")

Certification organizations are also weighing in. The U.S. Green Building Council (USGBC) and Green Business Certification Inc. (GBCI) have released their newest rating system, RELi 2.0, which is intended to help "identify and reduce the risk of damage in the event of a natural disaster, economic disruption, resource depletion or other crisis for buildings, homes, neighborhoods and infrastructure."

## What you can do

Lewis believes that A/Es should take steps to address potential climate change impacts on their projects and their liability. He offers these suggestions:

- **Educate your client** about the importance of anticipating severe weather events specific to its geographic area. These factors will not only affect planning, design and construction, but also the maintenance and operation of the project.
- **Do your homework.** In addition to researching codes and applicable state, provincial and federal regulations, you may need to investigate climate impact maps and models, as well as weather data and projections, to determine if a structure should be designed to anticipate highly likely or certain future climate impacts. You may want to retain (or recommend the client

retain) a climate specialist for technical expertise and support. In addition, become familiar with what other design professionals are doing on similar projects in your area.

- **Document your recommendations.** In the event of a dispute, you must be able to demonstrate you made a reasonable, professional effort to explore the suitability, performance and reliability of your design decisions. Thoroughly document your research efforts, correspondence and recommendations.
- **Document any client decisions on those recommendations/options** and ask the client to sign off on its ultimate decisions and, if the client opts to ignore your recommendations, request an indemnification.
- **Carefully review your client contract.** Do any clauses require you to design to withstand a certain storm size or other climate risk? (If you agree, and don't meet those requirements, your client can claim breach of contract, whether or not the client was harmed.) Look, too, at any clauses that pertain to sustainability, resilience or climate change. Your contract should identify and delineate the owner's objectives, clearly specify the roles and responsibilities of each party assigned to help achieve these goals, and recognize and mitigate the potential liability risks and performance limitations that may result.

Your contract should affirmatively state the professional standard of care. In addition, don't guarantee or warrant that you can attain a specific level of performance for the building. Talk to your attorney about adding appropriate waivers of consequential damages, as well as a limitation of liability and indemnity, and be sure the language is coordinated with any sustainability and green design clauses. (See "Resources.")

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- **Stay informed.** Keep pace with climate change analyses instead of basing your solutions on historic weather information. With the help of your professional association (and your professional liability broker and AXA XL's Design Professional team), keep abreast of changes to federal, state, provincial and local codes and regulations as well as applicable court decisions.

As the Engineers Canada report puts it: “The standard of reasonable care is evolving with society’s increased awareness and understanding of potential climate change impacts. It is reasonable

to expect a professional to evaluate those potential impacts and address them in their professional work.”

Lewis agrees. “As A/Es become increasingly aware that relying on past trends to inform their design decisions may not be enough,” he says, “it will be difficult to argue that they didn’t know that climate change might impact their work.”

[Questions/Comments](#)

## Resources

For related information and suggested contract language, see the “Certifications, Guarantees and Warranties,” “Consequential Damages,” “Indemnities,” “Limitation of Liability” and “Standard of Care” chapters in *AXA XL’s Contract eGuide for Design Professionals*, available on the [Learning Management System \(LMS\)](#).

American Society of Civil Engineers: “[Climate-Resilient Infrastructure: Adaptive Design and Risk Management](#),” October 2018.

Architect: “[Rebuild by Design’s Enduring Legacy](#),” April 2017.

Architect: “[The Climate Is Changing. So Must Architecture](#),” October 2017.

Conservation Law Foundation (CLF) and the Boston Green Ribbon Commission: [Climate Adaptation and Liability: A Legal Primer and Workshop Summary Report](#), January 2018.

Engineers Canada: [National Guideline: Principles of Climate Adaptation and Mitigation for Engineers](#), May 2018.

[Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States](#), November 2018.



## Disaster response volunteers needed

In the aftermath of a hurricane, wildfire, flood or other disaster, the affected municipalities need the assistance of skilled, trained and certified building safety professionals. The lack of a central database has often made it difficult for recovery officials to find the right professionals willing to volunteer their services.

Fortunately, the International Code Council and the National Council of Structural Engineers Associations have created a national, digital database of volunteers, which will make it easier for local, state and federal authorities to contact them after a disaster.

If you'd like to help those in need following a disaster, you can learn more about disaster assistance training and sign up for the Disaster Response Alliance database at [disasterresponse.org](http://disasterresponse.org).

*If you're thinking about volunteering your services, we suggest reading the "Pro Bono Services" chapter of AXA XL's Contract eGuide for Design Professionals, and these Communiqué articles:*

["Who Protects the Good Samaritans?"](#)

["The Pros and Cons of Pro Bono Services"](#)

["When \(Natural\) Disaster Strikes..."](#)

All of the above are available on the [Learning Management System \(LMS\)](#).

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