

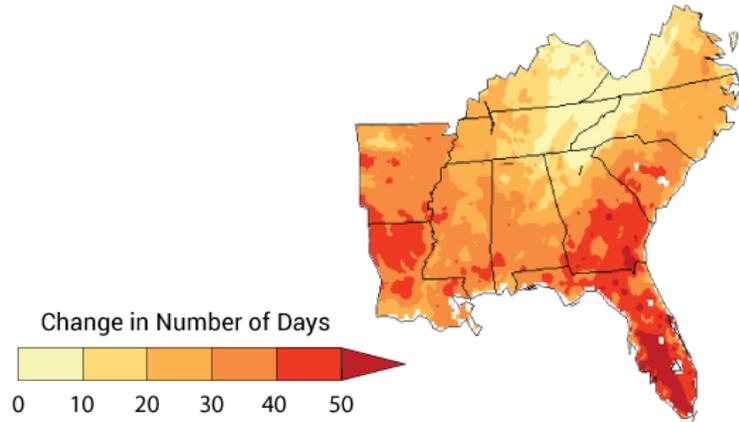
Legal Liability for Failing to Adapt



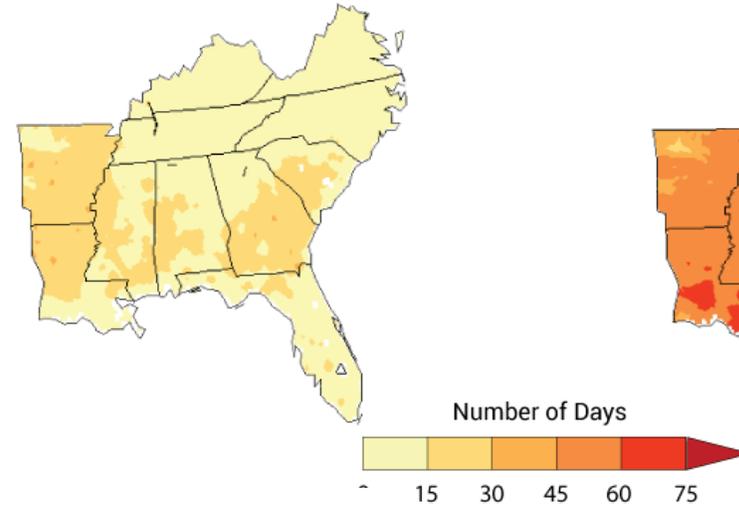
Elena Mihaly, Staff Attorney
Deanna Moran, Director of Environmental Planning
Conservation Law Foundation
April 30, 2018

Projected Change in Number of Days Over 95°F

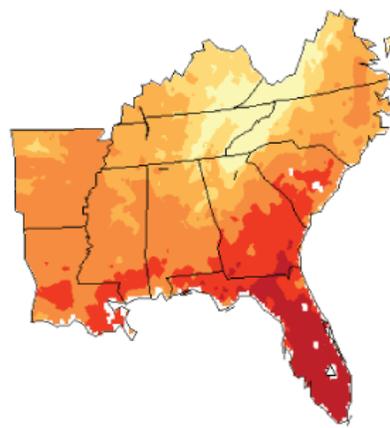
Projected Difference from Historical Climate



Historical Climate (1971-2000)

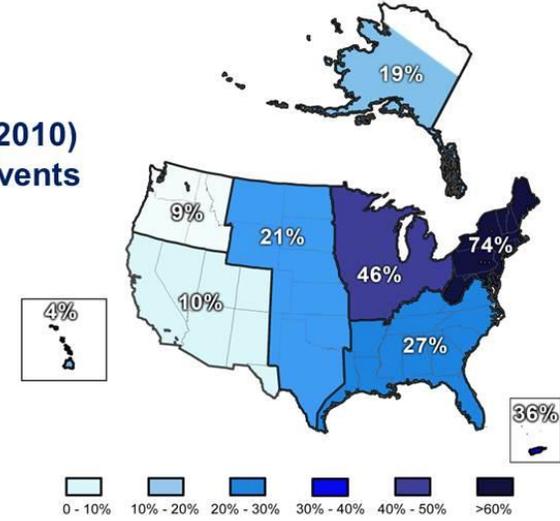


Projection (2041-2070)



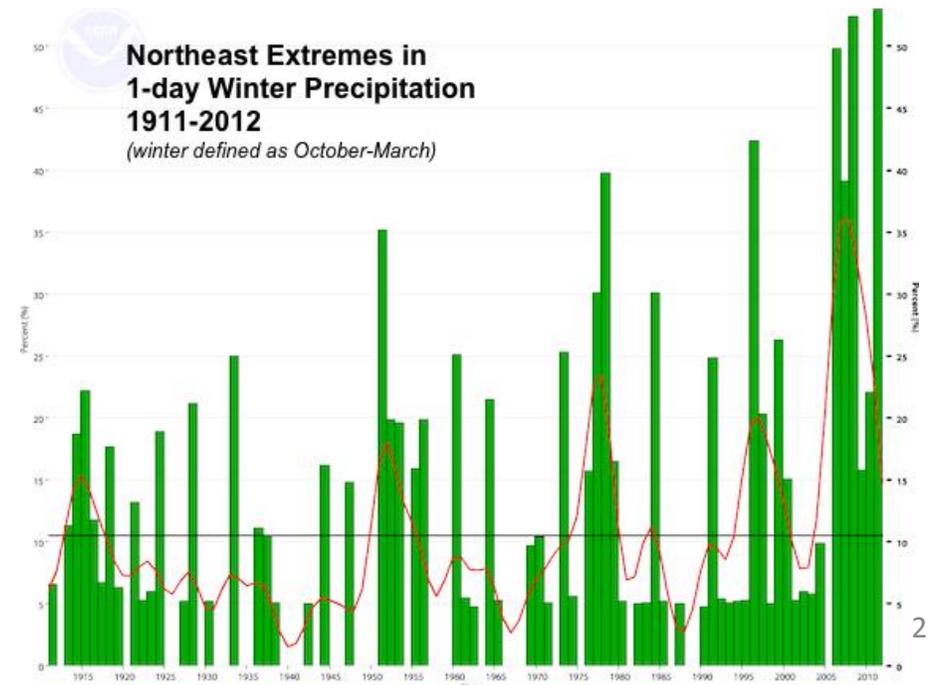
Regardless of Shifts in Total Annual Rain More of It Is Coming in Heavy Downpours

Percent Increase (1958-2010)
in Heavy Precipitation Events
(>2inch/48 hr)



NOAA, provided by A. DeGaetano, NERCC, Cornell

Northeast Extremes in 1-day Winter Precipitation 1911-2012 (winter defined as October-March)



Kivalina v. ExxonMobil (2008)

CLAIM: Public nuisance; GHG emitters unreasonably interferes with P's right to use and enjoy property in Kivalina.

OUTCOME: dismissed; political question and lack of standing.



AEP v. CT (2011)

CLAIM: The lawsuit alleged that five utility companies, which operate facilities in 21 states, were a public nuisance because their carbon-dioxide emissions contribute to global warming.

OUTCOME: "The Clean Air Act and the EPA action the Act authorizes displace any federal common-law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired power plants."

DESIGN → FINANCE → CONSTRUCT → INSURE → SELL → OPERATE → MAINTAIN





Is the “octopus in the parking garage” the new “elephant in the room”?

A photograph of a brick house at dusk. The house has several windows and a front door, all of which are illuminated from within, casting a warm glow. The house is reflected in a body of water in the foreground. The sky is a deep blue, and there are trees and a car visible in the background.

When Rising Seas Transform Risk Into Certainty

Along parts of the East Coast, the entire system of insuring coastal property is beginning to break down.

By BROOKE JARVIS APRIL 18, 2017







The Adaptive Urban Habitat

With its controlled density and the promotion of progressive urban strategies, Red Hook has become an archetype for environmentally-sustainable urban coastal living. These strategies could be applied to greater NYC, as well as all cities facing the threat of encroaching waters. A comprehensive rethinking of all urban systems, from building technology to transit, local ecology and human behavior represents a new mode of conscious urban development. Breaking down the barriers between human habitation and local ecologies reestablishes a symbiotic relationship between people and their natural environment currently missing from modern discourse and practice.

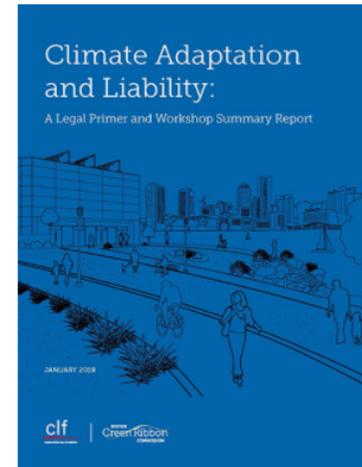




Climate Adaptation and Liability: A Legal Primer and Workshop Summary

JAN, 2018

Climate change impacts are affecting New England communities now, so CLF set out to determine the liability risks of government entities and other decision makers if they fail to prepare for these impacts. The result is the CLF Climate Adaptation and Liability report, which looks at the theories of legal liability for design professionals (such as engineers and architects) or government entities (like a city or a water reclamation district) when it comes to climate adaptation of buildings, roads, and other critical infrastructure.



[DOWNLOAD](#)

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Negligence = Duty + Breach + Causation + Harm

- “The law imposes upon persons performing architectural, engineering, and other professional and skilled services the obligation to exercise a **reasonable degree of care**, skill, and ability, which generally is taken and considered to be such a degree of care and skill as, under similar conditions and like surrounding circumstances, is ordinarily employed by their respective professions.” *Bodin v. Gill*, 117 S.E.2d 325 (Ga., 1960).
- Duty (a.k.a. “standard of care”) established through analysis of:
 1. What’s written in contract?
 2. Knowledge of climate change impacts
 3. Applicable regulations
 4. Industry custom
 5. Foreseeability of harm

1. Are design standards written into the contract?

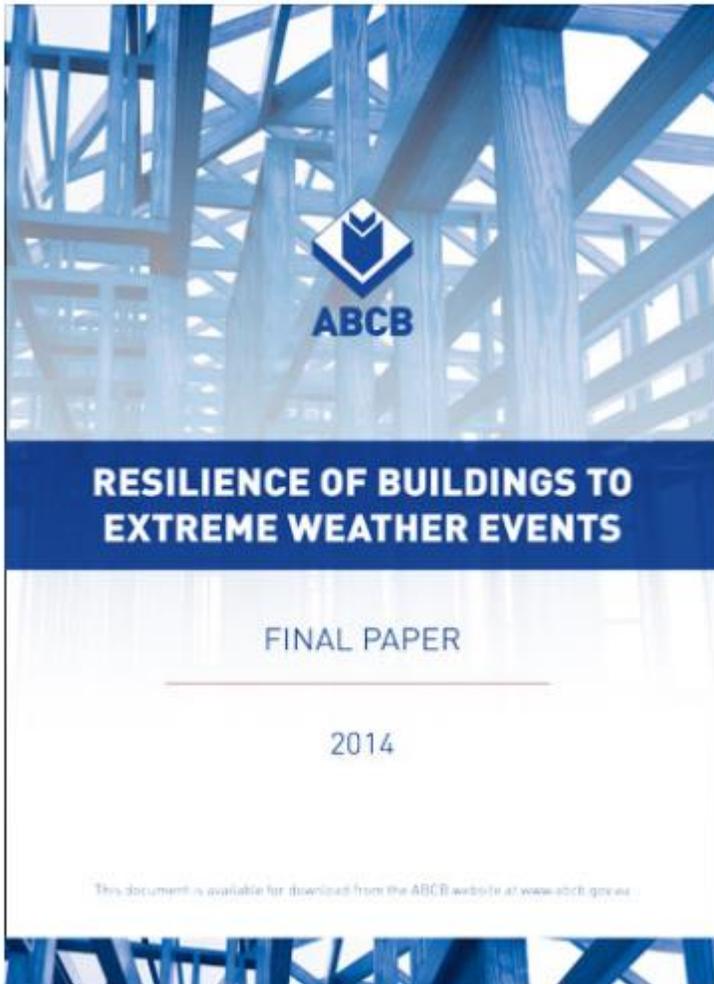
- E.g., Use of particular materials such as “hurricane straps” to insure the roof and structural integrity of a structure
- E.g., Bridge will be built to a 25 year design life

2. Knowledge of Climate Change Impacts

- Was there publicly available flood or storm surge maps for the area or other indications of possible climate related hazards?
- Was there a recent climate vulnerability study for the area?
- Did design professional engage a “climate expert” to provide site-specific advice?

3. Applicable Codes & Regulations

- Applicable industry codes (zoning, subdivision, or building codes) may function as evidence when courts are determining the proper standard of care to be applied.
- BUT compliance is not necessarily a liability shield: do the relevant codes/standards contemplate future climate change?



The Australian Building Codes Board, the body responsible for administering the Building Code of Australia (BCA), published a report finding that “[i]f the climate changes in accordance with high emissions scenarios ..., the current BCA is likely to be deficient in some areas.” The same paper noted that the National Construction Code does not currently address “hail, storm tide, or have specific requirements relating to heat stress.”

Structural design actions

Part 2: Wind actions

Superseding AS/NZS 1170.2:2002

AS/NZS 1170.2:2011

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, BD-006, General Design Requirements and Loading on Structures, to supersede AS/NZS 1170.2:2002.

This Standard incorporates Amendment No. 1 (September 2012), Amendment No. 2 (December 2012), Amendment No. 3 (July 2013) and Amendment No. 4 (August 2016). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide wind actions for use in the design of structures subject to wind action. It provides a detailed procedure for the determination of wind actions on structures, varying from those less sensitive to wind action to those for which dynamic response must be taken into consideration.

The objectives of this revision are to remove ambiguities, to incorporate recent research and experiences from recent severe wind events in Australia and New Zealand.

This Standard is Part 2 of the AS/NZS 1170 series *Structural design actions*, which comprises the following parts:

AS/NZS 1170, Structural design actions

Part 0: General principles

Part 1: Permanent, imposed and other actions

Part 2: Wind actions

Part 3: Snow and ice actions

AS 1170, Structural design actions

Part 4: Earthquake actions in Australia

NZS 1170, Structural design actions

Part 5: Earthquake actions—New Zealand

The wind speeds provided are based on analysis of existing data. No account has been taken of any possible future trend in wind speeds due to climatic change.

This edition differs from the previous edition as follows:

- (a) A torsional loading requirement in the form of an eccentricity of loading is prescribed for tall buildings greater than 70 m in height (see Clause 2.5.4).
- (b) Addition of windborne debris impact loading criteria (Clause 2.5.8).
- (c) Regional wind speeds V_1 , V_{250} , V_{2500} , V_{5000} and V_{10000} have been added for serviceability design requirements, and for compatibility with AS/NZS 1170.0 (see Clause 2.5.2).

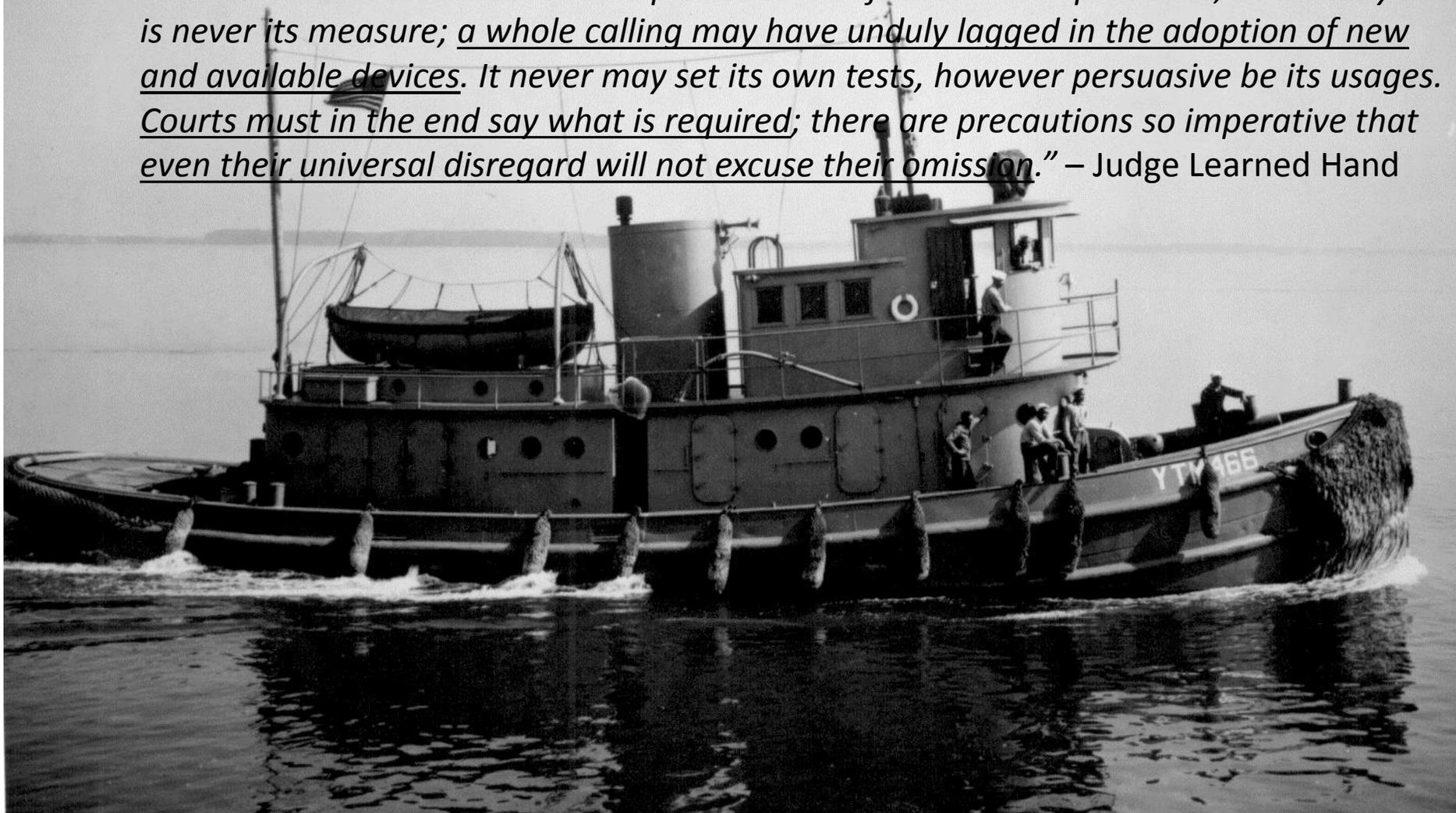
A3

4. Industry Custom

- Industry custom may serve as useful guide to establish standard of care, but court ultimately makes the call.
- Underlying theory: just because many people engage in unreasonable behavior does not make the behavior reasonable.

T.J. Hooper v. Northern Barge Corp, 60 F.2d 737, 740 (2d Cir.) (1932)

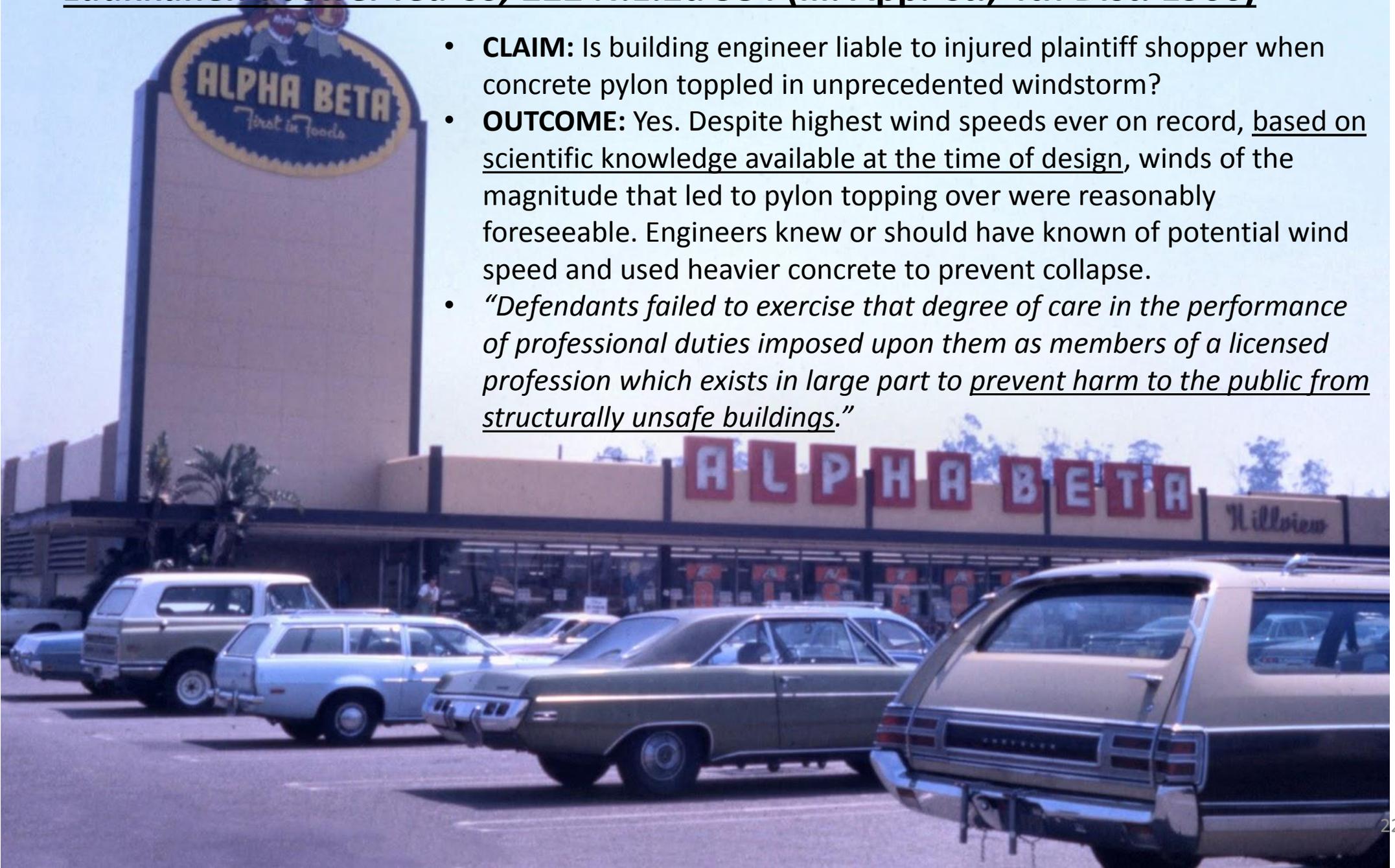
- **CLAIM:** petition by tug-boat owner to limit liability for loss of barges during big storm
- **OUTCOME:** petition denied; tug boat owner liable because it failed to equip its tug boats with radios (which would have provided timely warnings of the approaching storm) although such radios were not in 1928 a common practice on tugs.
 - *“Indeed in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.” – Judge Learned Hand*



5. Foreseeability of Harm

- A reasonable design professional is ordinarily only responsible for injuries or damages which are known or could be reasonably foreseen.
- The test is not only whether he or she did in fact foresee the harm but whether he or she should have foreseen it, given all the circumstances including the expertise of the design professional.
- Even unprecedented events can be determined “foreseeable.”

Laukkanen v Jewel Tea Co, 222 N.E.2d 584 (Ill. App. Ct., 4th Dist. 1966)



- **CLAIM:** Is building engineer liable to injured plaintiff shopper when concrete pylon toppled in unprecedented windstorm?
- **OUTCOME:** Yes. Despite highest wind speeds ever on record, based on scientific knowledge available at the time of design, winds of the magnitude that led to pylon topping over were reasonably foreseeable. Engineers knew or should have known of potential wind speed and used heavier concrete to prevent collapse.
- *“Defendants failed to exercise that degree of care in the performance of professional duties imposed upon them as members of a licensed profession which exists in large part to prevent harm to the public from structurally unsafe buildings.”*

Other Theories of Liability (Against Design Professionals)

- **Nuisance**

- Requires evidence of physical injury to land, or a substantial interference with its enjoyment. Damage must be realized in some way. Injunctive relief (as opposed to compensatory) available for possible future harm.

- **Trespass**

- An actual interference with the right of exclusive possession (called the "entry element"), and intent or negligence. Notably, there is no damage requirement, though pollution and neighbor trespass cases are an exception to this rule (they require a showing of damages). Injunctive relief (as opposed to compensatory) available for possible future harm.

- **Contract**

- Does not require harm to have occurred; just breach of contract.
- Defenses: defects liability period, unenforceable contract, force majeure clause, no implied term of fitness for purpose, privity of contract.

- **General duties contained in Statutes/Regulations**

- E.g., regulations requires engineering plans to be “in accordance with good engineering practice.”

Lawsuit Alleges Exxon Neglects Climate Risks at Mass. Oil Terminal

Conservation Law Foundation says company endangers communities along the Mystic River by leaving facility vulnerable to storms and rising seas.



BY DAVID HASEMYER

[Follow @DavidHasemyer](#)

SEP 30, 2016





Climate Adaptation & Liability Workshop I: Design Professionals

Workshop Agenda – Friday, May 19

Purpose of the workshop: To explore the legal implications of “failing to adapt” to known climate risks and potential obstacles to implementing proactive climate adaptation strategies. We do not expect to come up with solutions over these four hours. Rather, the purpose of these discussions is to determine what the current hurdles to adaptation are and articulate what roles law and policy can play in incentivizing or disincentivizing adoption of climate resilient strategies.

9:00 – 9:10	Welcome/logistics of the day
9:10 – 9:20	Background and Goals of Workshop
9:20 – 9:35	Climate Ready Boston presentation
9:35 – 10:15	<i>Liability for Failure to Adapt: Climate Change and the Evolving Liability of Design/Build Professionals, Developers, Realtors, and Insurance Agents</i>
10:15 – 10:30	Break
10:30 – 11:30	Small group discussion 1: Barriers to Climate Adaptation in Practice

Survey Responses from CLF Workshop with Design Professionals

- 45% of respondents* said they had felt pressured at one time or another to ignore climate-related issues with a project for fear that there would be negative consequences to them as a professional
- 36% of respondents said they routinely employ a climate expert to guide decision-making — More engineers do than architects
- 70% of respondents said they believe both regulation and design are needed to move the needle on climate adaptation — 23% of respondents said regulation alone will move the needle — 6% of respondents said design alone will move the needle

*60 total survey respondents

Recommendations from the Workshop Participants

- **Facilitate** a dialogue between design community and regulators
- **Convene** a stakeholder group to explore standards and codes for climate-resilient construction
- **Explore** current disclosure requirements and consider changes to the existing system
- **Conduct** research on incentives and funding mechanisms for climate adaptation
- **Develop** a climate adaptation “playbook” of policy and legal tools

Conclusions

- The **standard of care** expected of design professionals and others is **rising** due to climate change and improvements in climate science
- Threat of liability is real, and **there is already litigation in this space**
- **Positive opportunity** for the design community and legal community to work together.

Thank you. Questions?

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