



# Climate Risk & Liability: What Design Firms Should Know

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1

**SETTING THE STAGE: THE CLIMATE CONTEXT**

What the science tells us

2

**INDUSTRY INSIGHTS**

How Industry Practices are Responding

3

**SHIFTING GROUND ON STANDARD OF CARE**

How Courts Frame “Reasonable”

4

**LEGAL CASE STUDIES**

Foreseeability

5

**LEGAL CASE STUDIES**

Use of Climate Projection Data

6

**MOVING FORWARD**

Risk Management in an Uncertain Future

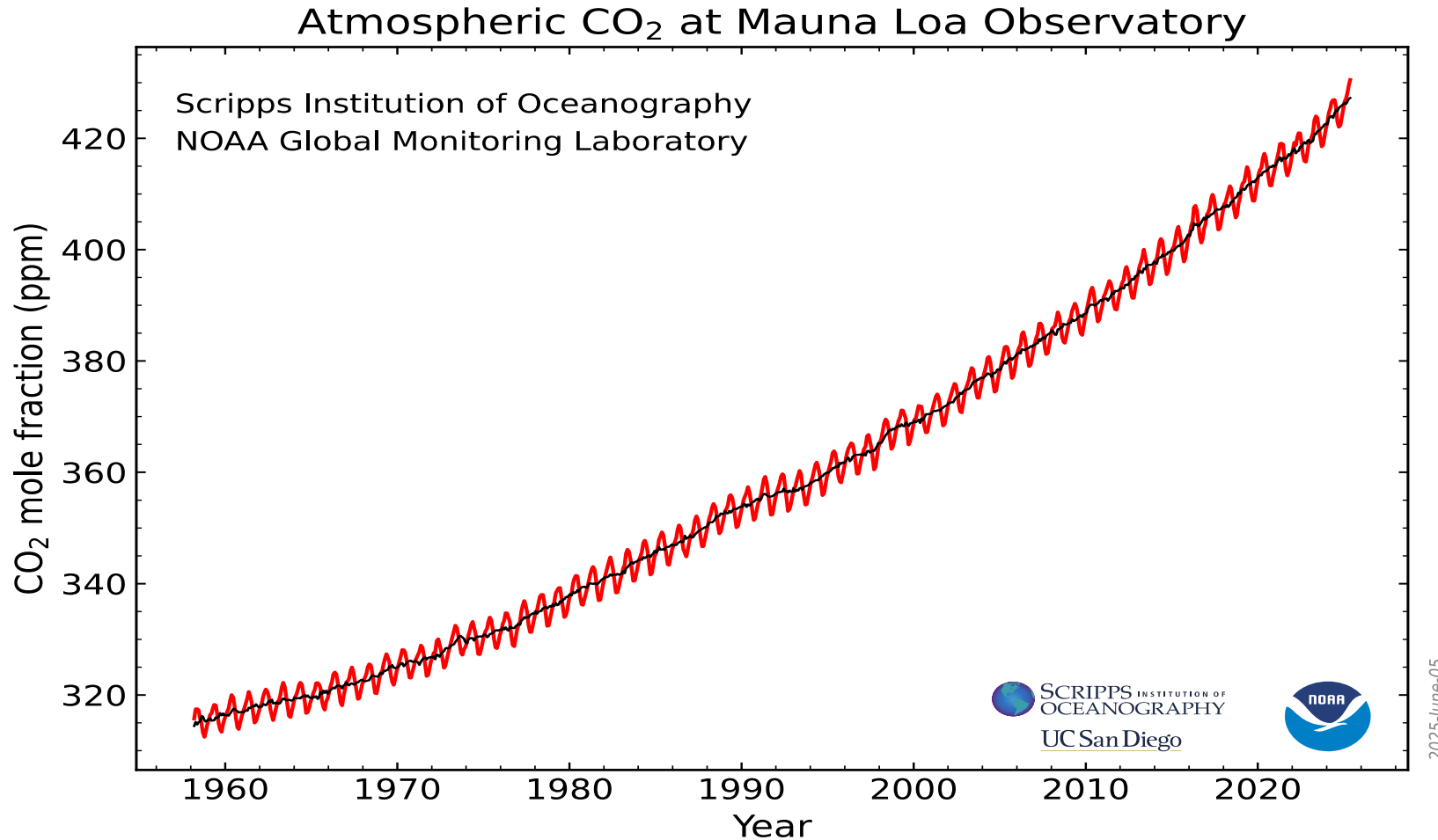
# Agenda

# **SETTING THE STAGE: THE CLIMATE CONTEXT**

What the Science Tells Us



# CLIMBING GREENHOUSE GAS EMISSIONS

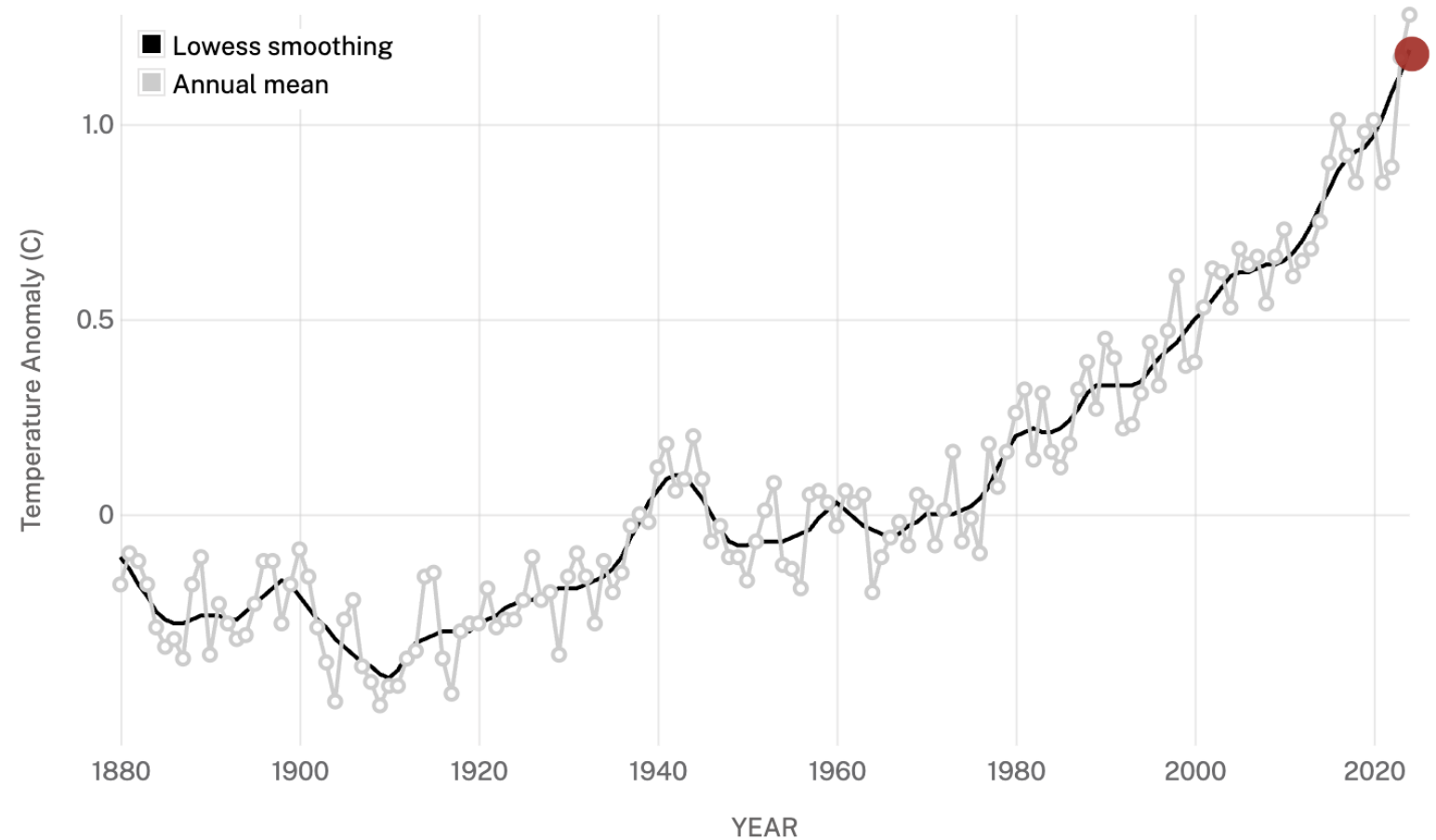


# GLOBAL TEMPERATURE TRENDS

## GLOBAL LAND-OCEAN TEMPERATURE INDEX

Data source: NASA's Goddard Institute for Space Studies (GISS). Credit: NASA/GISS

- Warming is not a distant future issue.
- We've already warmed the planet to 1.6°C.
- Each fraction of a degree brings more physical risks.

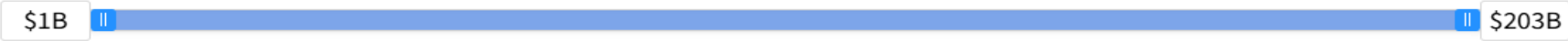


# BILLION DOLLAR DISASTER EVENTS

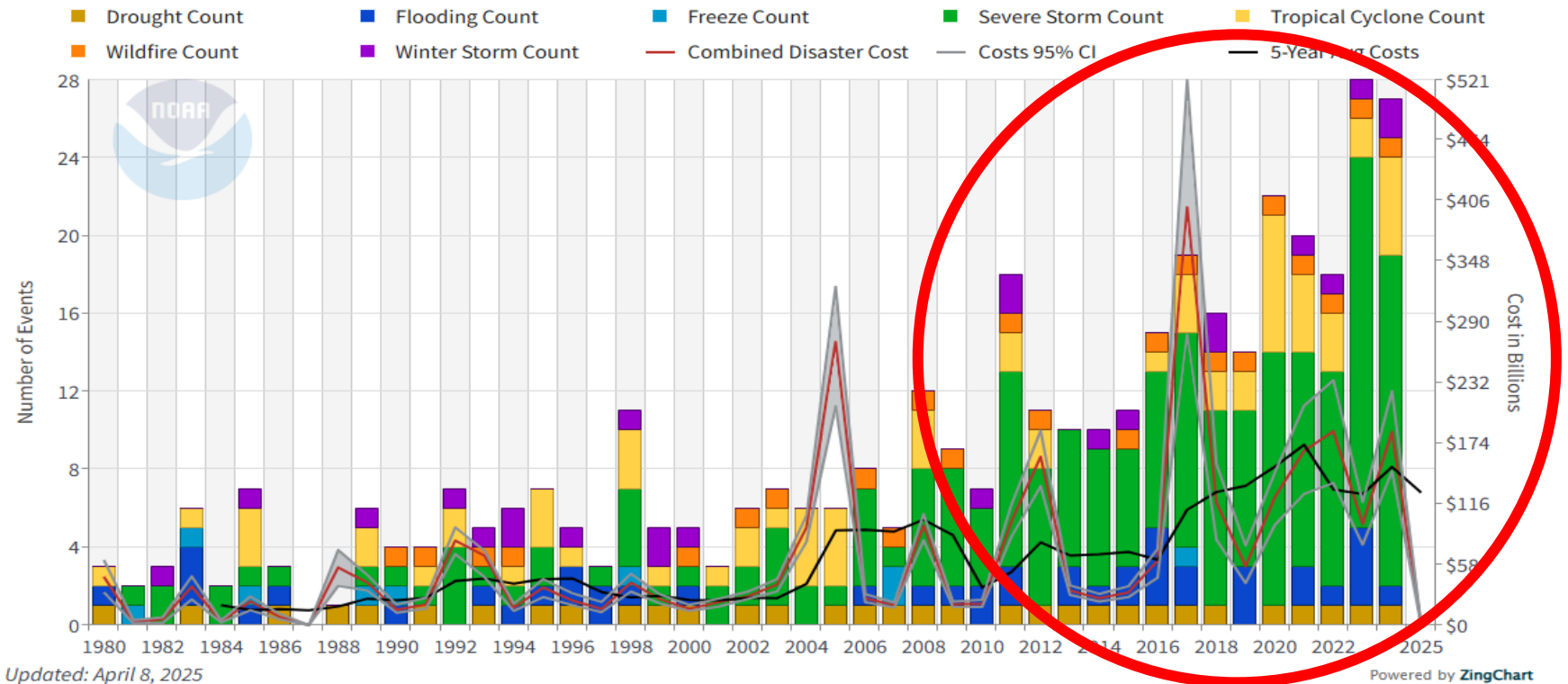
All Disasters
Drought
Flooding
Freeze
Severe Storm
Tropical Cyclone
Wildfire
Winter Storm

United States  Cost  Update
CPI-Adjusted Unadjusted

Event Total Cost Range Filter:



United States Billion-Dollar Disaster Events 1980-2025 (CPI-Adjusted)



# FACTORS THAT INTENSIFY DISASTERS

- Higher concentrations of people and assets in hazard-prone areas
- Ageing infrastructure
- High rebuilding costs



## **INDUSTRY INSIGHTS:**

How Industry Practices are Responding



# INDUSTRY KNOWLEDGE IN RESILIENCE

## Resiliency in the Built Environment: Current State, Considerations, and Influence Factors

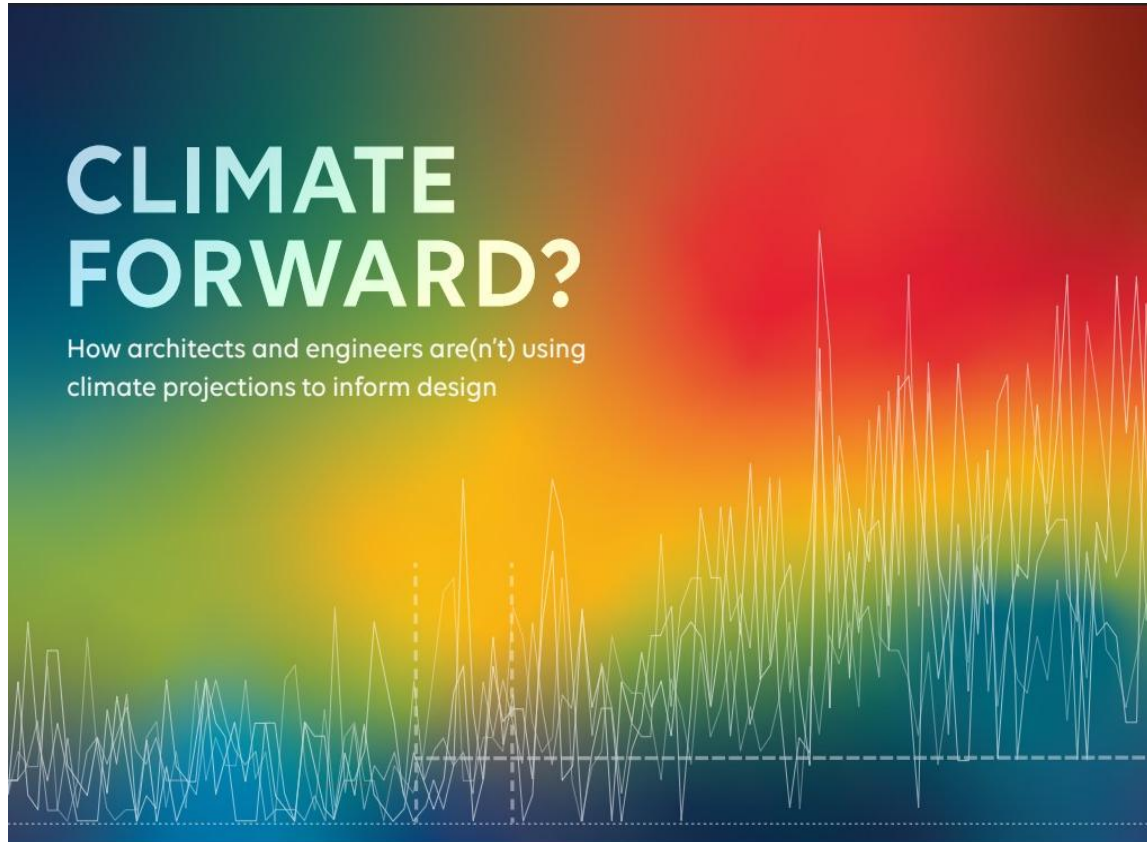
A new market research study by AIA,  
in partnership with Owens Corning



- Vast majority of architect-respondents believe code does NOT make a building resilient enough for its location and will not enable buildings to withstand all likely hazards in their locations
- Interesting contrast, vast majority of clients and contractors believe the exact opposite (above)
- Architects reported that site exposure to natural hazards/climate impacts was ranked as one of the more important considerations, ranking it 3<sup>rd</sup> out of 13 resiliency considerations
- 37% of architects reported that they are relying on climate projection data
- ¼ of projects reported going beyond code

Source: [Resiliency in the Built Environment Research Report](#), by The American Institute of Architects (AIA) and Owens Corning

# CLIMATE DATA USAGE IN THE INDUSTRY



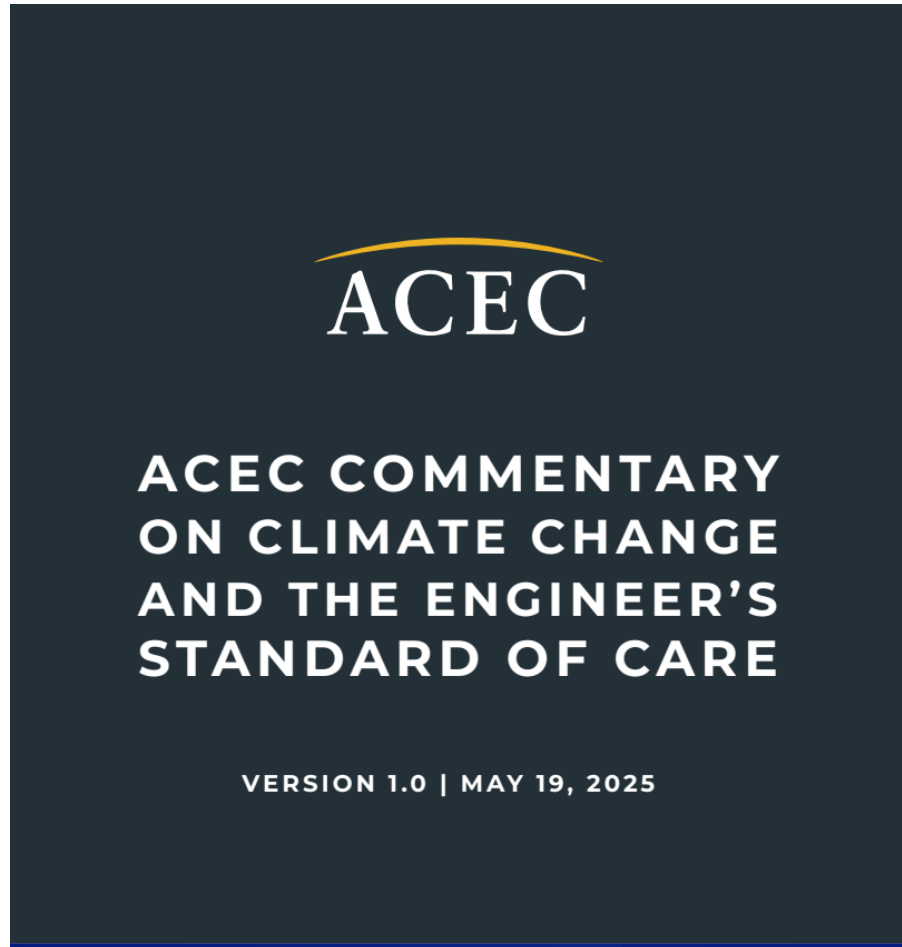
- 36% respondents offer climate resilience/adaptation planning and design services
- 93% noted some familiarity with climate-future projection data (34% use this data to inform design/planning)
- Majority of respondents are using future-forward data from publications (IPCC and regional fact sheets), not raw scientific data
- Biggest use case for climate projection data: to inform conversations with client, climate risk assessments and site/building design strategies (slightly less so for system sizing)
- Biggest barrier in using future-forward climate data is that clients aren't asking for it

HGA

Source: [Climate Forward? How Climate Projections Are\(n't\) Used to Inform Design](#), by HGA and the University of Minnesota Climate Adaptation Project

# AMERICAN COUNCIL OF ENGINEERING COMPANIES

## 2025 Member Guidance



[acec.org/resource/acec-commentary-on-climate-change-and-the-engineers-standard-of-care](https://acec.org/resource/acec-commentary-on-climate-change-and-the-engineers-standard-of-care)

- **Codes lag reality** – Standard of care evolves with knowledge of risks and practices, not just historical code baselines.
- **Know your role** – Use climate data, advise clients, and document; ultimate risk decisions belong to the client.
- **Evolving practices** – Stay alert to emerging resilience measures and apply sound judgment until standards mature.

**SHIFTING GROUND ON STANDARD OF CARE:**  
How Courts Frame “Reasonable”



**Q:** Has the standard of care changed in reaction to climate change?

**A:** Design practice and the standard of care is evolving out of necessity, to account for climate-driven extreme weather.



# STANDARD OF CARE

What the Courts Expect from You

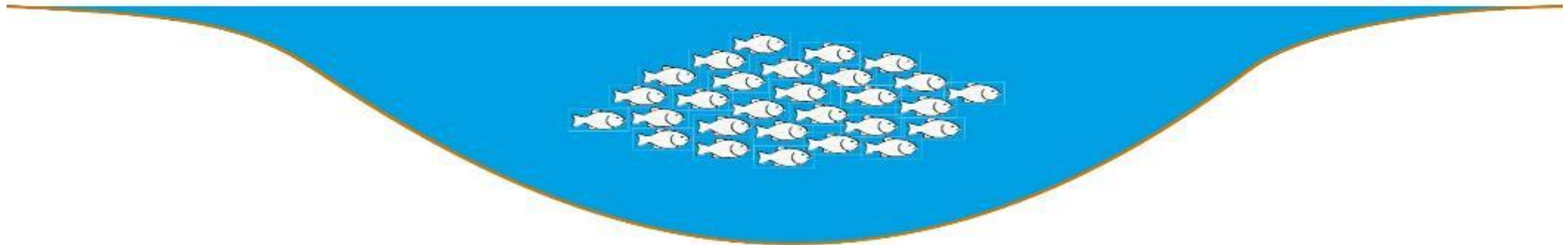
## Reasonableness

that you are doing what any reasonable **engineer** would do, in the same situation, at the same time, and in the same location

Reasonable Standard

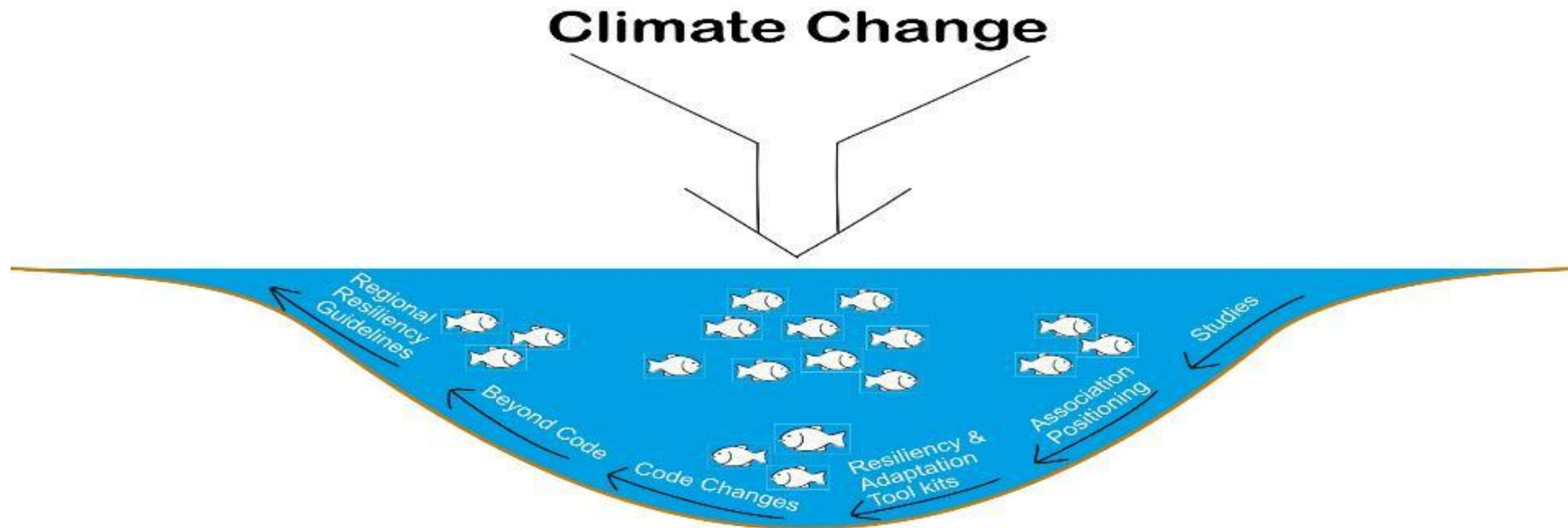
# WHAT COURTS ASSESS IN NEGLIGENCE CLAIMS

## School of Fish Metaphor



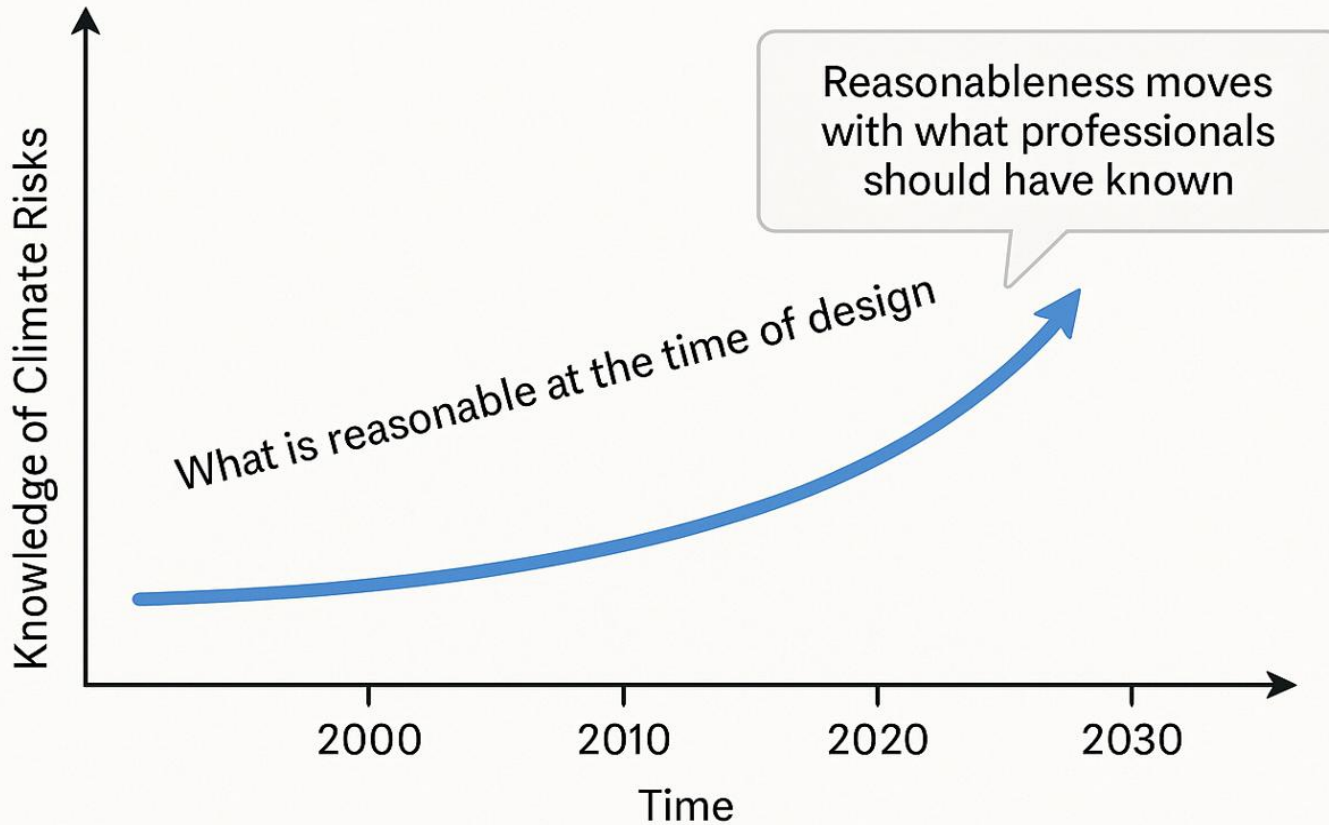
# CHANGES IN INDUSTRY PRACTICE

Beware of the “Undercurrents”



# GROWING KNOWLEDGE, RISING EXPECTATIONS

## How Knowledge Shapes the Standard of Care



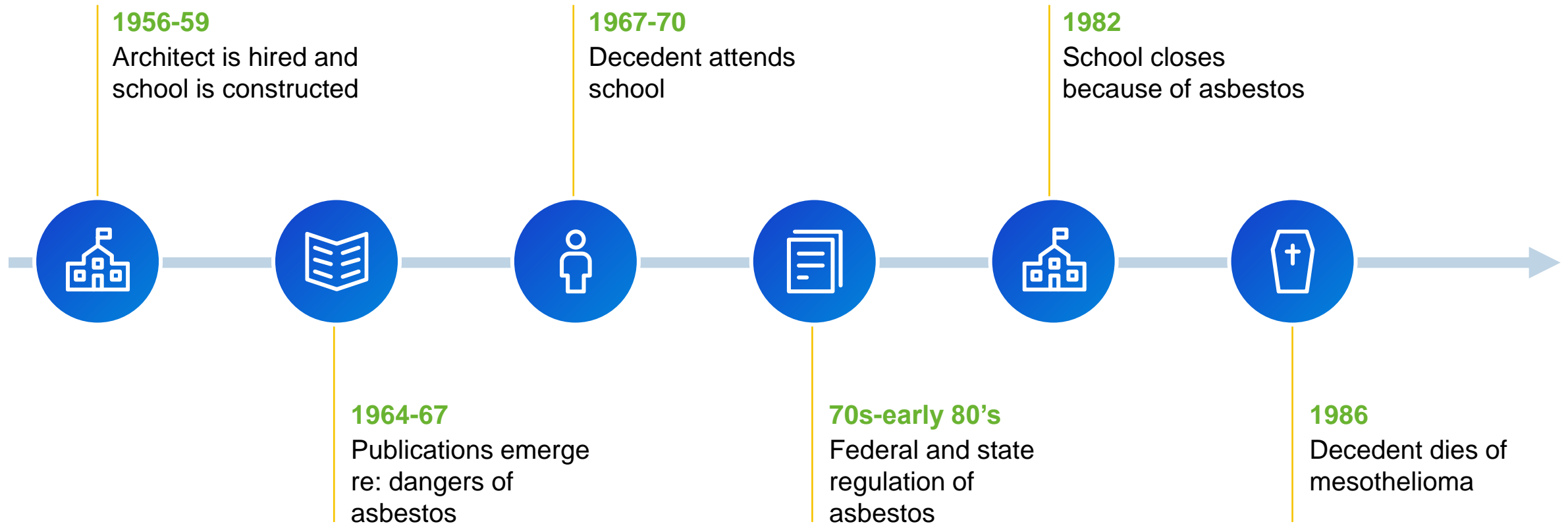
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# **LEGAL CASE STUDIES**

Foreseeability



# BARNETT V. CITY OF YONKERS



# BARNETT V. CITY OF YONKERS

## School project



### Problem

- Asbestos exposures from student's attendance at a school were the known cause of death.



### Missed step

- Plaintiff argues that the architect **could or should have known** about the dangers of asbestos based on scientific articles emerging during the 1960s and 70s.



### Court's reaction

- Ruled in favor of the architect asserting that the use of asbestos at the time of the design/construction aligned with professional standards and risks were not known so architect could not have known of the risks.

*"[architect] could not reasonably have been expected to know of the deleterious effects of asbestos between 1956-59..."*



### Takeaway

- Once risks are known, or reasonably discoverable, courts may hold design professionals accountable for ignoring them.

# “ACT OF GOD”

- **Historically** – could say: event was rare/extreme and no one could have seen it coming
- **Today** – sophisticated climate-future projection data available and free
- **Client’s decision to invest**
- **Courts will ask:** What *could* the professional have known? What did they do to learn and incorporate that information?



## **LEGAL CASE STUDIES**

Use of Climate Projection Data

# 5

# CONSERVATION LAW FOUNDATION V. EXXONMOBIL

## Petroleum Storage Facility

Exxon's 110-acre Facility



NPDES Permit Requirement



"Good Engineering Practice"



Stormwater Pollution Prevention Plan

# CONSERVATION LAW FOUNDATION V. EXXONMOBIL

## Petroleum Storage Facility



### Problem

- CLF sued ExxonMobil over the company's continued operation of a coastal petroleum terminal near Boston, arguing that **the facility was unprepared for foreseeable climate-related flooding and storm surge**, posing risks to public health and the environment.



### Missed step

- Exxon argued that its permit didn't explicitly require it to consider climate change. The company failed to demonstrate that it had adequately assessed or planned for future flood risks, despite being aware of rising sea levels and intensifying storms.



### Court's reaction

- Court rejected narrow reading of permit. It stated that "good engineering practice" includes anticipating and addressing reasonably foreseeable risks — including those posed by severe weather and climate change. Court found that failing to plan for such risks could constitute a violation of environmental laws.

"... EPA guidance and practices of engineers in the field as alleged are sufficient to state a plausible claim that 'good engineering practices' include consideration of foreseeable severe weather events, including any caused by alleged climate change."



### Takeaway

- Courts are signaling that climate-informed due diligence is part of professional responsibility. You don't need to prove climate change causes a specific event — but **you are expected to anticipate and plan for worsening conditions using available science and guidance**. 'We didn't know' won't be a strong defense going forward.

# BATTERY PARK CITY NHBD ASSN V. BATTERY PARK CITY AUTHORITY

## Public Park

**Location:** New York City, NY

**Objective:** Provide flood and storm surge protection

**Key Features:**

- Flood walls
- Elevated parkland
- Demolition/reconstruction of park pavilion
- Incorporation of 2050 sea-level rise projections (30")

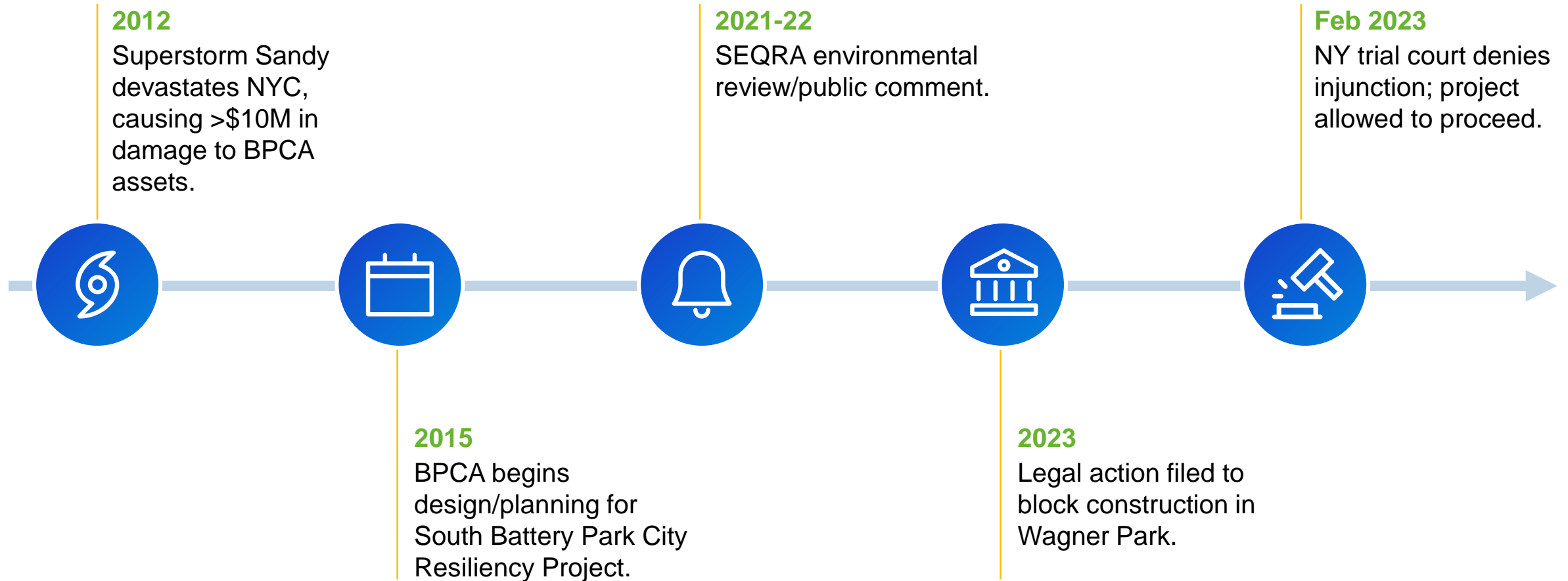


UCL-NY Climate & Sustainability Council

AECOM

# PROJECT TIMELINE

## Wagner Park/Battery Park City Resiliency Project: 2015 – ongoing



# BATTERY PARK CITY RESILIENCY PROJECT

## Public Park

*“The public interest here is incontestable. One of the fundamental purposes of the Project is to ensure that [it] can be enjoyed by generations to come.”*



### Problem

- Superstorm Sandy exposed flood risks and future model showed rising sea levels and stronger storms threatening the park.



### Missed step

- Opponents to the project were concerned more about the short term; their use of the park and not future generations. Argued that government was overreacting.



### Court's reaction

- Authority properly exercised discretion to prioritize long-term resilience and public safety even if it means “substantial alterations” to the park.



### Takeaway

- Where public money is concerned, courts value long-term planning and will defer to government decision-making.

# ARGOS PROPERTIES II V. CITY COUNCIL (VA BEACH) AND CITY OF VA BEACH

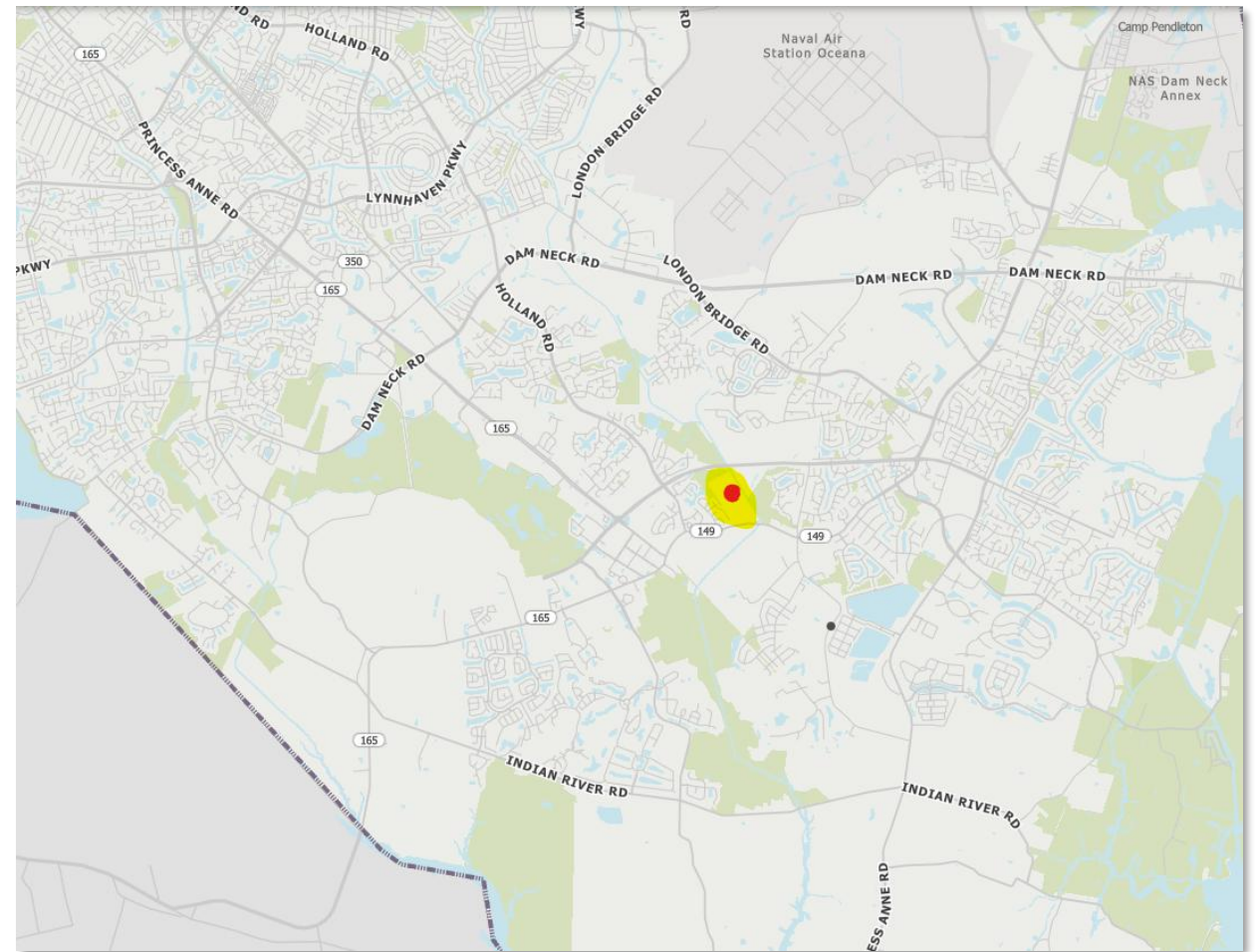
## Housing Development

**Location:** Virginia Beach, VA

**Objective:** To build a 32-home subdivision in Virginia Beach in “Holland Swamp”.

### Key Features:

- Rezoning of land from agricultural use.
- Project located in low-lying area near wetlands/flood-prone neighbourhoods.
- Only one point of access/known to flood.
- City had adopted forward-looking policies requiring review of future flood risk (1.5 feet sea level rise & updated rainfall patterns).



# ARGOS PROPERTIES II

## Housing Development



### Problem

- Proposed neighborhood would have been built on flood-prone land and climate projections showed worsening conditions.



### Missed step

- Single point of access currently flooded, even without integrating future sea level rise and increased rainfall.
- Developer refused to submit additional analysis/solutions.



### Court's reaction

- Court ruled that City had authority to factor in future climate conditions (e.g. sea level rise), even if not codified in codes/ordinances, when deciding whether new housing was safe.



### Takeaway

- Courts will defer to governments who are trying to plan for future conditions.

# SAVE THE COLORADO V. U.S. ARMY CORPS OF ENGINEERS

## Dam Expansion Project

**Location:** Boulder County, CO

**Objective:** Increase water storage capacity to meet future demand.

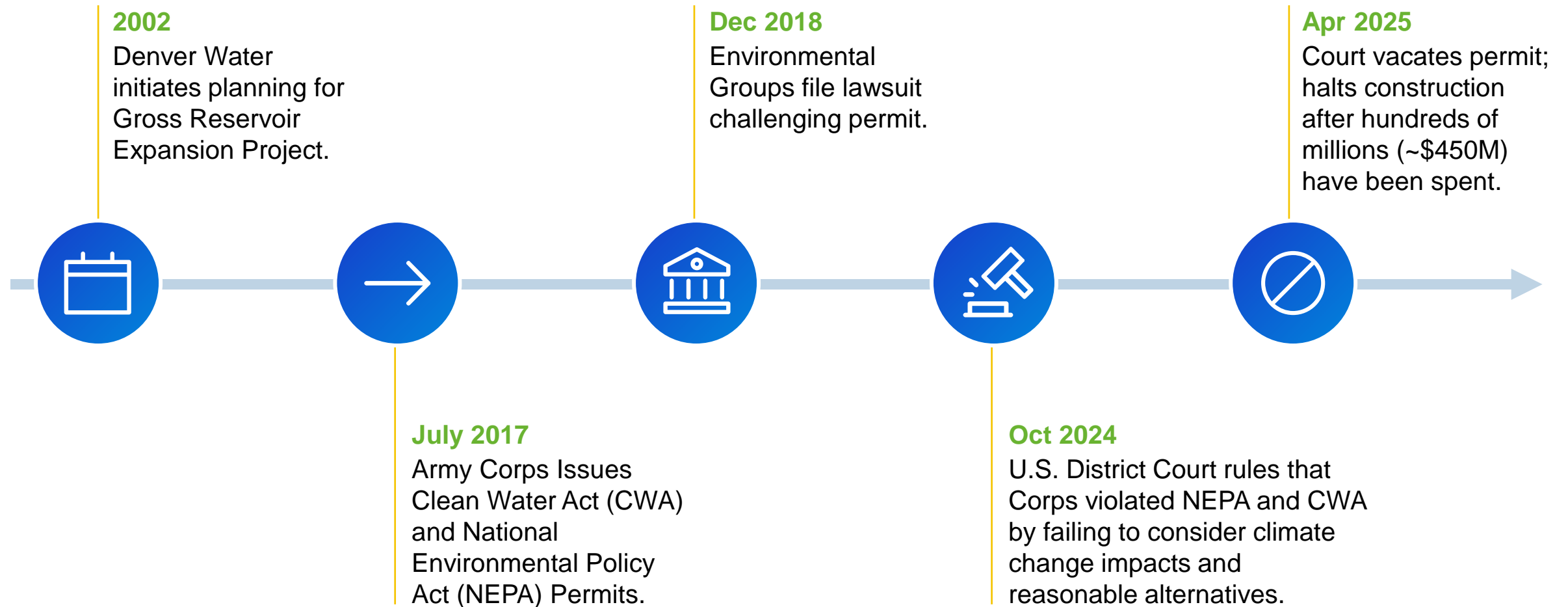
**Key Features:**

- Raise dam height by 125 feet.
- Triple reservoir capacity.



# SAVE THE COLORADO V. US ARMY CORPS OF ENGINEERS

## Dam Expansion Project (2002 – ongoing)



# SAVE THE COLORADO V. US ARMY CORPS OF ENGINEERS

## Dam Expansion Project



### Problem

- Army Corps acknowledged that future climate conditions (higher temps, more evaporation, less streamflow) could shrink water supply and reduce purpose of project.



### Missed step

- Army Corps approved the project without quantifying how future conditions (extreme heat and drought) could undermine project feasibility; declined to model or even approximate future impacts.



### Court's reaction

- Court vacated permits/halted construction due to failure to account for foreseeable climate impacts, making the agency's analysis flawed.

*"If the Gross Reservoir has no extra water to impound...the project cannot possibly be practicable in a logistical sense."*



### Takeaway

- When a project's purpose depends on long-term environmental conditions, modeling future conditions should be done. Courts may expect that future climate risks are part of responsible, reasonable decision-making.

**MOVING FORWARD**

**Risk Management in an Uncertain Future**



# EVOLVING STANDARD OF CARE

## Leveraging climate data to better understand project risks and support clients



# RISK MANAGEMENT TAKEAWAYS

## 3-step framework



### See the Risks

Educate yourself on future-forward climate data.



### Say Something

Flag potential climate risks to clients AND give THEM the choice to act on resiliency measures.



### Save the Record/Shield Yourself

Document all discussions - having proof that you flagged risks protects you in liability claims and use contract provisions for extra protection.

# STEP 1: SEE THE RISKS

## Resilience & Climate Data Resources



### Codes & Standards

- **LEED v5 (2024-25)** -requires climate risk assessment for certification; signals a broader industry trend.
- **SEI/NIST/ASCE Forward-Looking Codes/Standards (2025 Workshops)**-developing guidance to inform the 2028 code cycle, expected to integrate non-stationary climate assumptions
- **ASTM E3429-24 (2024)** – *Standard Guide for Climate Risk Assessment for the Built Environment*. Provides a framework for assessing physical climate hazards at project sites and incorporating that into design and planning decisions.



### Federal Data

- **Atlas 15 (2027)** – Successor to NOAA Atlas 14 (precipitation frequency estimates). Atlas 15 will incorporate future climate projections instead of just historical rainfall data- important for stormwater and flood design.
- **Argonne National Laboratory— Open Energy Data Initiative** – provides dynamically downscaled hour future weather data at ~12 km resolution for most of North America. Intended to integrate into ClimRR (Climate Risk & Resilience Portal), a public-access tool for local climate risk insights.



### Climate Data Tools (free)

- **NOAA Climate Explorer** – Future temperature, precipitation, and drought data by location.
- **NOAA Sea Level Rise Viewer** – Visualizes coastal flooding scenarios.
- **USDA Wildfire Risk Portal** – Mapping of wildfire exposure for planning and design.
- **IPCC Data Portal** – Global climate scenarios (SSPs/RCPs) for forward-looking planning.



### Commercial Tools

- **WeatherShift** – Subscription based downscaled climate projections for site-specific use.
- **AIA Climate Screening Service** (launched June 2025) Affordable site-specific factsheets with projections through 2100; tailored for design professionals.



### Practice Guides


- **AIA Resilient Project Process Guide** – Practical process for integrating climate and hazard data into project design
- **Resilience Design Toolkit** – Step by step strategies for embedding resilience across engineering and design decisions.
- **Universal Taxonomy for Natural Hazard & Climate Risk (ARUP)** – Provides a standardized framework for assessing hazards across projects.
- **AIA Disaster Assistance Handbook** – Guidance on continuity and resilience in post-disaster recovery contexts.

# AIA CLIMATE SCREENING SERVICE

Climate Risk Factsheet: [www.theaiatrust/home/climate-factsheet/](http://www.theaiatrust/home/climate-factsheet/)



INSURANCE RETIREMENT LEGAL CONTINUING EDUCATION RESOURCES



**Climate Factsheet**  
Future-ready hazard insights for every site—exclusive to AIA members through AIA Trust.

[Order the Climate Factsheet](#)



Future-Proof Your Next Project



Cookie Info

# RISK MANAGEMENT TAKEAWAYS

## 3-step framework



### See the Risks

Educate yourself on future-forward climate data.



### Say Something

Flag potential climate risks to clients AND give THEM the choice to act on resiliency measures.



### Save the Record/Shield Yourself

Document all discussions - having proof that you flagged risks protects you in liability claims and use contract provisions for extra protection.

# Climate & Weather-Related Contract Clauses

## Mitigating Risk through Contract Provisions

### Climate Risk Screening Clause

- Design firm may offer early-stage climate screening to identify probable physical risks based on credible scientific data to inform early design discussions; client chooses whether to act. Clarify that results of modelling are not definitive forecasts nor do the results become design criteria unless explicitly incorporated into basic or additional services.

### Informed Consent & Client Decision Acknowledgement

- If the client declines to invest in resiliency measures, client acknowledges understanding of the flagged risks and accepts responsibility for resulting consequences

### Scope Limitations Aligned with Codes & Standards

- Design firm's services are based on current codes and regs; not required to design beyond them unless explicitly agreed.

### Risk Sharing and Indemnification

- Client agrees to indemnify design firm for claims arising from client's decision not to incorporate risk-informed recommendations.

### No Third-Party Beneficiaries

- Contract clarifies that duties are owed only to the client—not to future building occupants, lenders, or third parties who are not expressly identified and agreed upon in writing.



# Thank you

Policyholders can send questions to: [RiskManagement.US@VictorInsurance.com](mailto:RiskManagement.US@VictorInsurance.com)



This document is for illustrative purposes only and is not a contract. It is intended to provide a general overview of the program described. Please remember only the insurance policy can give actual terms, coverage, amounts, conditions and exclusions. Program availability and coverage are subject to individual underwriting criteria.

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